BY ORDER OF THE
SECRETARY OF THE AIR FORCE

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

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Flying Operations

F-15E--AIRCREW TRAINING

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This volume implements AFPD 11-2, *Aircraft Rules and Procedures*; AFPD 11-4, *Aviation Service*; and AFI 11-202V1, *Aircrew Training*. It establishes the minimum Air Force standards for training and qualifying personnel performing duties in the F-15E. Selected paragraphs of this publication do not apply to all Air Force units. This instruction does not apply to Air National Guard (ANG). 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. MAJCOMs/DRUs/FOAs are to forward proposed MAJCOM/DRU/FOA-level supplements to this volume to HQ USAF/XOOT, through HQ ACC/DOTO, for approval prior to publication IAW AFPD 11-2, paragraph **4.2.** Copies of MAJCOM/DRU/FOA-level supplements, after approved and published, will be provided by the issuing MAJCOM/DRU/FOA to HQ USAF/XOOT, HQ ACC/DOTO, and the user MAJCOM/DRU/FOA and NGB offices of primary responsibility. Field units below MAJCOM/DRU/FOA level will forward copies of their supplements to this publication to their parent MAJCOM/DRU/FOA office of primary responsibility for post publication review. **NOTE:** The terms Direct Reporting Unit (DRU) and Field Operating Agency (FOA) as used in this paragraph refer only to those DRUs/FOAs that report directly to HQ USAF. Keep supplements current by complying with AFI 33-360V1, paragraph 3.66 (periodic review). See paragraph **1.3.** for guidance on submitting comments and suggesting improvements to this publication.

This instruction requires the collection or maintenance of information protected by the Privacy Act of 1974. The authority to collect and maintain the records prescribed in this instruction are 37 USC 301a, Incentive Pay; Public Law 92-204 (Appropriations Act for 1973), Section 715; Public Law 93-570 (Appropriations Act for 1974); Public Law 93-294 (Aviation Career Incentive Act of 1974); DOD Directive 7730.57, *Aviation Career Incentive Act and Required Annual Report*; AFI 11-401, *Flight Management*; and E.O. 9397. System of records notice F011 AF XO A, Aviation Resource Management System (ARMS), applies. The reporting requirements in this instruction are exempt from licensing in accordance with paragraph 2.11.10 of AFI 33-324, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Inter-Agency Air Force Information Collections.* Ensure that all records

created by this AFI are maintained IAW AFMAN 37-123, *Management of Records*, and Disposed of IAW AFMAN 37-139, *Records Disposition Schedule.*

NOTE:

This instruction contains references to the following field (subordinate level) publications and forms which, until converted to departmental level publications and forms, may be obtained from the respective MAJCOM publication distribution office:

Publications: ACCPAM 10-453, AFTTP 3-1, ACCI 11-464, (MAJCOM) 11-301

SUMMARY OF REVISIONS

MAJCOM-specific guidance is embedded within the text and prefaced with the MAJCOM acronym. This revision incorporates RTRB inputs from 99-2 to 03-1. There are administrative changes and new ACC level office symbols incorporated throughout. Paragraphs have been renumbered where necessary to accomodate updates. RPI has been replaced by API. All ground training date frequencies in **Table 4.1.** have been changed from annual/number of years to months to clarify and align with RAP training cycles. API-8 aircrew non-RAP requirements have changed to allow for realistic accomplishment of API-8 assigned duties. All currencies still apply. Waiver authority for this regulation has been clarified. Combat edge training has been deleted. This training is accomplished at both the centrifuge and FTU prior to completion of IQT. A Range currency has been added (120/180 days). Numerous definitions have been added to **Attachment 1**. NVG upgrade syllabus has been incorporated. Air Defense syllabi have been added due to recent Operational Air Defense contingencies. The following abbreviations have been added: API, DEAD, MTC, NVG, SIM, SORTIE. The following abbreviations have been deleted: NVD, OFT, RPI. The LOWAT definition has been changed. The Verification and Visual Identification definitions have been expanded to include the official DoD definition. The following Tactical events have been updated: ECCM Intercept is now EA A/A, EC Event A/A is now EP A/A, EC Event A/G and EC Range have been combined into EW Range Event. **Chapter 6** of this AFI has changed significantly. A "|" indicates a revision since the last edition.

Chapter 1

GENERAL GUIDANCE

1.1. Abbreviations, Acronyms, and Terms. See **Attachment 1**.

1.2. Responsibilities:

1.2.1. HQ ACC/DO is designated as the responsible agency for this volume IAW AFPD 11-2, *Aircraft Rules and Procedures*. HQ ACC/DO will:

1.2.1.1. Chair semiannual ACC Realistic Training Review Boards (RTRBs) to review ground and flying training requirements/programs for CAF units. RTRB participants will include applicable ACC active and reserve component representatives. MAJCOM/DOs with major weapons systems for which ACC is lead command will be invited to send representatives and/or inputs.

1.2.1.2. Process all change requests.

1.2.2. All user Major Commands (MAJCOMs) will:

1.2.2.1. Determine training requirements to meet expected unit tasking.

1.2.2.2. Submit MAJCOM supplements to HQ USAF/XOOT, through HQ ACC/DOTO, for approval before publication. Provide HQ USAF/XOOT, HQ ACC/DOTO, and all applicable MAJCOM/DOs a copy of their supplements after publication.

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

1.2.3. Direct Reporting Units (DRUs) will:

1.2.3.1. Provide standard instructional texts to support operational weapons/tactics training. Forward two copies to each MAJCOM and NAF/DO, 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/groups will:

1.2.4.1. Develop programs to ensure training objectives are met. Assist subordinate units in management of training programs, ensure programs meet unit needs, and provide necessary staff support.

1.2.4.2. Attach API-6/8 flyers to a flying squadron.

1.2.4.3. Except when otherwise mandated, designate the training level to which each API-6/8 will train. Upon request provide MAJCOM/DO with a list of BMC and CMR manning positions. Review programs and manning position designations annually.

1.2.4.4. If applicable, forward supplements of this instruction and other supporting documents to the MAJCOM for review. Review supplements annually.

1.2.4.5. Identify training shortfalls that adversely impact combat capability. Units are required quarterly to submit anticipated shortfall reports to MAJCOM/DOT (info copy to NAF/DO or A3**,** due 31 Jan, 30 Apr, 31 Jul) and an annual summary shortfall report due at the end of the training

cycle (ref: paragraph **1.6.1.**). Prior to submitting the annual report, units are reminded to prorate incomplete training. For training report format; see **Attachment 5**, TRAINING SHORTFALL REPORT. Negative reports are required. .

1.2.5. Squadron supervision will:

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

1.2.5.2. Review 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 instruction have been met.

1.2.5.3. Ensure Ready Aircrew Program (RAP) missions are oriented to developing basic combat skills or practicing tactical employment simulating conditions anticipated in the unit mission. Provide guidance to ensure only effective RAP missions are logged as RAP sorties. See **Attachment 2** for RAP mission definitions.

1.2.5.4. Review qualifications and training requirements of FS/GLO and determine appropriate flight restrictions.

1.2.5.5. Determine utilization of BMC aircrew.

1.2.5.6. Determine how many and which BMC and CMR aircrew will carry special capabilities/ qualifications.

1.2.5.7. Identify the levels of supervision required to accomplish the required training, unless specifically directed.

1.2.5.8. Determine program for supervisory review of armament recordings.

1.2.5.9. Assist the wing/group in developing the unit training programs.

1.2.5.10. Monitor individual assigned/attached aircrew currencies and requirements.

1.2.5.11. Ensure aircrew only participate in sorties, events, and tasks for which they are adequately prepared, trained, and current.

1.2.6. Individual aircrew will:

1.2.6.1. Hand carry all available training records to assist the gaining unit in assessing qualifications and training requirements.

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

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

1.3. Processing Changes:

1.3.1. Forward recommendations for change to this volume to MAJCOM DO on AF Form 847, **Recommendation for Change of Publication**.

1.3.2. MAJCOMs will forward approved recommendations to HQ ACC/DO.

1.3.3. HQ ACC/DO will:

1.3.3.1. Coordinate all changes to the basic instruction with all MAJCOM/DOs.

1.3.3.2. Process recommendation for change after approval by HQ USAF/XO.

1.3.3.3. Address time sensitive changes by immediate action message.

1.3.4. MAJCOM/DO will determine training requirements for subordinate units. This includes making changes, additions, or deletions to this volume at any time. These changes may be via supplement or RAP tasking message. HQ ACC/DO will be an info addressee on all changes. HQ ACC/DO will include MAJCOM supplemental guidance in the next publication of the AFI.

1.4. Training. Training programs are designed to progress aircrew from Initial Qualification Training (IQT) (B-Course or Transition/Requalification Training [TX]), then to Mission Qualification Training (MQT), and finally to Continuation Training (CT).

1.4.1. IQT provides the training necessary to initially qualify aircrew in a basic position and flying duties without regard to a unit's mission. Upon completion of IQT, the aircrew attains Basic Aircraft Qualification (BAQ) status. BAQ is a prerequisite for MQT. Except for General Officers above wing level, BAQ is not a long term qualification status. Waiver authority for any crew member, other than general officers above the wing level, to remain BAQ is MAJCOM/DO.

1.4.2. MQT or the FTU INSTRUCTOR course provides the training necessary to initially qualify or requalify aircrew in a specific position and flying duties to perform the missions assigned to a specific unit. Aircrew maintains BAQ status until they complete MQT. Completion of MQT or FTU instructor course is a prerequisite for BMC and CMR.

1.4.3. **CT.** There are two aspects of CT. The first consists of aircrew training in the basic flying skills contained in **Table 4.2.** These skills (non-RAP requirements) ensure safe operation of the aircraft. The second consists of specific mission-related training required to accomplish the unit's assigned missions.

1.4.4. **Ready Aircrew Program (RAP).** The CT program is designed to focus training on capabilities needed to accomplish a unit's core tasked missions. Following completion of IQT and MQT, an aircrew will have received training in all the basic missions of a specific unit unless excepted in **Chapter 3.** The crew member will then be assigned to either a CMR or BMC position.

1.4.4.1. **Combat Mission Ready (CMR).** The minimum training required for aircrew to be qualified and proficient in all of the primary missions tasked to their assigned unit and weapons system.

1.4.4.2. All CC-coded unit active duty API-1/2 positions, 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-1/2 to CMR and designate the overage BMC. In this case, priority should be given to inexperienced aircrew with at least 50 percent, if available, designated CMR). CMR aircrew maintain proficiency and qualification in all core missions of the flying unit to which they are assigned or attached. CMR aircrew maintain currencies which affect CMR status, accomplish all core designated flight training (sorties and events), and all mission ground training. Failure to complete this training or maintain these currencies results in regression to non-CMR (N-CMR) status unless waived by appropriate authority. While N-CMR, aircrew

may perform missions (including exercise and contingencies) in which they are current, qualified, and either familiar or proficient, similar to BMC aircrew.

1.4.4.3. **Basic Mission Capable (BMC).** The minimum training required for aircrews to be familiarized in all, and may be qualified and proficient in some of the primary missions tasked to their assigned unit and weapons system.

1.4.4.4. All non-CMR active duty wing aircrew positions are designated BMC positions. BMC designations are assigned to aircrew who have a primary job performing wing supervision or staff functions that directly support the flying operation, or are FTU instructors, Weapons School instructors, or operational test aircrew. For those missions in which they maintain familiarization only, BMC aircrew must be able to attain proficiency and qualification in 30 days or less. BMC aircrew accomplish all mission related ground training designated by their attached SQ/CC. BMC aircrew may deploy and may participate in any mission for which they are proficient and qualified, without additional training, as determined by the SQ/CC. Failure to complete BMC required training results in regression to non-BMC (N-BMC) status. While N-BMC, SQ/CC will determine missions the aircrew may perform and supervision required.

1.4.4.5. **N-CMR/N-BMC.** Aircrew members that regress to N-CMR/N-BMC status will accomplish the requirements in accordance with paragraph **4.10.**

1.4.4.6. **Specialized Training.** Specialized training is training in any special skills necessary to carry out the unit's assigned missions that is not required by every aircrew member. Specialized training consists of upgrade training such as FLUG, IPUG, IWSO upgrade, etc., as well as CT to maintain proficiency and qualification in unit tasked special capabilities and missions. Specialized training is normally accomplished after an aircrew member is assigned CMR/BMC status; and is normally in addition to CMR/BMC requirements. Unless otherwise specified, aircrew in CMR or BMC positions may hold special capabilities/qualifications as long as any additional training requirements are accomplished.

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 instruction provides training guidelines and policies for use with operational procedures specified in applicable flying/operations publications.

1.5.2. ACC Training Support Squadron (ACC TRSS) will develop and validate training programs when/where tasked by the HQ ACC/DO. Other MAJCOMs may submit requests for training program support to the HQ ACC/DO. 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

briefing/debriefing). Tactical training will include use of inert and live ordnance, threat simulators, countermeasures, and dissimilar aircraft as much as possible.

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 may be required.

1.5.4.2. IPs and 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 he is already qualified or to help determine if the pilot is ready for FLUG. In either case, the IP or SQ supervisor is responsible for the flight.

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

1.6. Ready Aircrew Program (RAP) Policy and Management:

1.6.1. The aircrew training cycle is 12 months; 1 Oct through 30 Sep. Units will complete training requirements during the appropriate training cycle unless specifically excepted.

1.6.2. Each RAP qualification level is defined by a total number of RAP sorties, broken down into mission types, plus specific weapons qualifications and associated events as determined by the MAJCOM and unit commanders.

1.6.3. The total number of RAP sorties for a qualification level is the primary factor for maintaining an individual's qualification level. The breakout of sortie/mission types is provided as a guideline to be followed as closely as possible but minor variances (other than Red Air allocations) are authorized. However, SQ/CC may still use variations in sorties/mission types as a basis for regression.

1.6.4. An effective RAP training sortie requires accomplishing a tactical mission profile or a building block type sortie. Each profile or sortie requires successfully completing a significant portion of the events applicable to that sortie type as determined by the SQ/CC and **Attachment 2.**

1.6.5. The SQ/CCs first priority should be to train all designated aircrew to CMR. The following criteria are required to be CMR.

1.6.5.1. A 1-month lookback at the CMR sortie rate.

1.6.5.2. Qualification in all core missions and weapons events required at CMR.

1.6.5.3. Confirmation that CMR aircrew can complete the prorated number of sortie/event requirements remaining by the end of the training cycle.

1.6.5.4. Completion of mission-related ground training, to include a current verification or certification.

1.6.5.5. Squadron CC certification.

1.6.6. Progression from BMC to CMR requires:

1.6.6.1. A 1-month lookback at the CMR sortie rate.

1.6.6.2. Qualification in all core missions and weapons events required at CMR.

1.6.6.3. Confirmation that the progressed aircrew can complete the prorated number of sortie/event requirements remaining at CMR by the end of the training cycle.

1.6.6.4. Completion of mission-related ground training, to include a current verification or certification.

1.6.6.5. Squadron CC certification.

1.6.7. SQ/CCs will select aircrew to train for and maintain special capabilities or qualifications. Special capability/qualification sortie and event requirements are normally accomplished in addition to baseline CMR/BMC sortie/event requirements except for mission commander and flight lead training.

1.6.8. CMR and wing BMC aircrew will fly the required monthly sortie rate. If unable, refer to Regression, paragraph **4.7.**

1.6.9. End of Cycle training requirements are based on the aircrew's experience level on the last day of the current training cycle.

1.6.10. Units converting to another MDS may fly aircrew in CMR positions at the BMC rate until one month prior to the operationally ready date if CMR sortie rates cannot be supported. CMR aircrew should be flown at a CMR rate for the month prior to IOC. Active duty wings converting to new MDS are authorized one SQ equivalent (7/6 for 24/18 or less PAI) of additional API-6s during the conversion period. However, total wing staff flying the new aircraft shall not exceed total authorized for final conversion equipage.

1.7. Training Sortie Program Development:

1.7.1. RAP mission/sortie and event requirements (see **Attachment 2**) apply to CMR and BMC aircrew including those carrying special capabilities or qualifications and are IAW the RAP tasking message. The standard sortie requirements at **Table 1.1.** establish the minimum number of sorties per training cycle for BMC and CMR levels of training. The RAP tasking message takes precedence over this instruction and may contain updated sortie requirements or missions/events not yet incorporated in **Attachment 2**.

1.7.2. Non-RAP requirements (Inst/AHC) are in addition to RAP requirements. These sorties ensure basic aircrew skills are maintained. These sorties ensure that aircrew maintain their skills necessary to operate safely in the civil airspace environment.

1.7.3. Experiencing/Collateral sortie requirements must be considered when developing unit flying hour programs.

1.7.3.1. Experiencing sorties are additional training sorties necessary to achieve desired proficiency in optimum time. RAP sorties may not provide sufficient hours to experience aircrew members to achieve overall unit experience levels. The USAF sets a required number of hours to experience aircrew and a percentage goal of the unit aircrew that should meet these requirements.

1.7.3.2. 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, incentive/orientation flights, deployments, and air shows. For the annual training cycle, the MAJCOM allocates a block of sorties to the unit for these purposes.

1.7.4. Unit flying hour programs are allocated a number of attrition sorties that compensate for non-effective training sorties. Non-effective sorties are logged when a training sortie, RAP or

non-RAP, is planned, but a major portion 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 appropriately.

Table 1.1. F-15E Wing RAP Sortie Requirements.

CYCLE	BMC	CMR (ACC and PACAF)	CMR (USAFE)
RAP Total	72/60	106/94	108/96
3-Month Lookback	18/15	25/22	27/24
1-Month Lookback	6/5	9/8	9/8

1.8. Training Records and Reports:

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

1.8.1.1. AFI 11-202V1, *Aircrew Training.*

1.8.1.2. AFI 11-202V2, *Aircrew Standardization/Evaluation Program.*

1.8.1.3. AFI 11-401, *Aviation Management.*

1.8.1.4. AFMAN 37-139, *Records Disposition Schedule.*

1.8.1.5. ACCI 11-464, *Training Records and Performance Evaluation in Formal Flying Training Programs.*

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

1.8.2.1. Ground training.

1.8.2.2. Requirements and accomplishment of individual sorties, RAP sortie types, and events cumulatively for the training cycle.

1.8.2.3. RAP sortie requirements and accomplishment using 1-month and 3-month running totals for lookback.

1.8.2.4. Currencies.

1.8.2.5. Weapons employment records in sufficient detail to document all employment attempts as well as to compute Circular Error Probable (CEP) and event hit percentage histories.

1.8.3. Units will fill in ARMS with either the date of the last FTU or USAFWS equivalent training accomplished or the unit mission certification date.

1.9. Armament Recording:

1.9.1. Aircrew will use and assess all available training documentation such as ACMI, AVTR tapes, on all tactical missions. Aircrew will review their own tapes with their flight/element member(s).

1.9.2. As a guide, the following AVTR items should be reviewed: Titling, weapons parameters, accuracy, identification procedures, fragmentation clearance, adherence to Training Rules (TR), communications procedures and discipline, flight discipline, proper Anti-G Straining Maneuver IAW paragraph **4.14.** tactical employment, and instrument approaches.

1.10. Aircrew Utilization Policy:

1.10.1. Commanders will ensure that wing/group tactical aircrew (API-1/2/6s) fill authorized positions IAW unit manning documents 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, FEB/mishap board member, etc.), but must continually weigh the factors involved, such as level of aircrew tasking, flying proficiency, currency, and experience. For inexperienced aircrew in the first year of their initial operational assignment, supervisors will limit the non-flying duties to those related to combat activities.

1.10.2. Duties required by various publications that may be assigned to CAF API-1/2 aircrew are weapons and tactics officer, programmer, flying safety officer, SOF, mobility/contingency plans, training (except ARMS documentation), SQ Standardization/Evaluation Liaison Officer (SELO), squadron life support officer, electronic combat officer, and other duties directly related to flying operations. In some instances, such as squadron-assigned flying safety officers, 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 MAJCOM manpower standards documents and authorized in UMDs.

1.11. Sortie Allocation Guidance:

1.11.1. Inexperienced API-1/2 aircrew should receive sortie allocation priority over experienced aircrew. Priorities for sortie allocation are as follows:

1.11.1.1. **Formal Training Units and USAFWS.** Formal syllabus training, Instructor Upgrade, Instructor CT, authorized staff personnel not performing Instructor or SEFE duties (to include API-5 pilot physicians not on instructor orders).

1.11.1.2. **Combined Formal Training and Operational Units.** Formal syllabus training, CMR/API-1/2, MQT API-1/2, CMR API-6, MQT API-6, BMC, API-5 pilot physicians, others.

1.11.1.3. **Operational Units.** CMR API-1/2, MQT API-1/2, CMR API-6, MQT API-6, BMC (to include API-5 pilot physicians).

1.11.1.4. **Test and Test Evaluation Squadron (TES) Units.** Requirements directed by MAJCOM, training required to prepare for assigned projects/tasking, BMC training requirements that cannot be accomplished on primary missions, API-5 pilot physicians.

1.11.2. Wing API-6 authorizations are IAW unit manning documents.

1.11.3. For FTU-only wing, all API-6 aircrew will maintain instructor status (optional for WG/OG CC, FCF aircrew, and one other). These wings will fly API-1/2/6 aircrew as required by PFT. For wings consisting of both FTU and operational units, at least one of the following aircrew will maintain formal IP/IWSO status: WG/CC, WG/CV, OG/CC, OG/CD.

1.11.4. API-8 rated personnel flying authorizations and Test Unit aircrews will be IAW AFI 11-401 and MAJCOM guidance. They will fly the BMC sortie rate, however they are not required to complete BMC specific missions/events or meet monthly lookback requirements. 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. API 6 flyers will accomplish non-RAP requirements with allotted BMC sorties. API-8 flyers will strive to accomplish non-RAP requirements with allotted BMC sorties. If attached units cannot meet attached flyer requirements, they must request relief IAW AFI 11-401, as supplemented. Units requiring flying

hour adjustments for attached API-8 and applicable API-6 flyers must request program changes IAW MAJCOM directives.

1.11.5. There is no maximum sortie requirement for CMR aircrew. **Table 1.2.** defines the minimum and maximum sortie requirements for other aircrew. On occasion, unique operations may require aircrew to fly more than the maximum number of sorties authorized, but this may impact training of other aircrew.

Table 1.2. F-15E Annual Sortie Requirements for Other Than API-1/2 Aircrew.

API Level	CT Status (Minimum Sortie Requirement)	Unit's Aircraft Code	Organization Level	Maximum Sortie Allowance (Inexperienced/Experienced)
6	CMR	PMAI	Any	As required by qualifications
6	BMC	PMAI	Wing	96/84
6	BMC	PTAI	Wing	As required by PFT
6	BMC	PDAI	Wing	As determined by test program requirements
8	BMC	PDAI	Wing	86/74
8	BMC	PMAI, PTAI or PDAI	Above Wing	90/78
5	BMC	PMAI, PTAI or PDAI	All	If qualified and current in unit aircraft - 96/84. Otherwise, IAW AFI 11-202V1 as supplemented.
Any	BAQ	Any	Any	BMC Rate

1.12. Waiver Authority:

1.12.1. Unless specifically noted otherwise in the appropriate section, waiver authority for all requirements of the RAP tasking message and for all provisions in **Chapter 4**, **Chapter 5**, and **Chapter 6** of this volume is the OG/CC. This waiver is on a case by case basis considering the experience level of an individual aircrew. For all other provisions of this volume, the waiver authority remains the MAJCOM/DO IAW **1.3.4.**

1.12.2. Units subordinate to a NAF will forward requests directly to MAJCOM/DOT and provide their NAF/DO/OV/A3 with an information copy. Waivers from other than MAJCOM/DO will include their appropriate MAJCOM/DOT as an information addressee. All waivers will include HQ ACC/DOT as an information addressee.

Chapter 2

FORMAL TRAINING

2.1. General. This chapter outlines Initial Qualification Training (IQT) of aircrew into unit aircraft. IQT includes Basic (B-Course) and Transition/Requalification/Senior Officer (TX-Course) training and normally will be conducted during formal syllabus courses at a formal training unit (FTU) squadron whenever possible. In exceptional circumstances, when FTU training is not available within a reasonable time period, IQT may be conducted at the local unit IAW provisions of this chapter. This local IQT will normally be conducted using appropriate formal USAF Transition or Requalification Training Course syllabus tracks, flow programs, and requirements. When local IQT is authorized, the gaining MAJCOM assumes responsibility for the burden of providing this training locally. The following guidance applies only to other than formal course IQT.

2.2. Approval/Waiver for IQT:

2.2.1. MAJCOM/DO is approval authority to conduct local IQT, and is waiver authority to change the formal requirements of locally conducted IQT. Info HQ ACC/DOT.

2.2.2. MAJCOM/CC is the approval authority for non-formal course IQT for colonel selectees and above to be conducted at the unit to which the officer is assigned.

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

2.2.3.1. Justification for the local training in lieu of formal course training.

2.2.3.2. Summary of individual's flying 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 and instrument 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 (ETCA).

2.4. Ground Training. Ground training may be tailored to the individual's background and experience or peculiar local conditions. However, available and current reference materials, such as AFTTP 3-3, instructor guides, and audiovisual programs, should be used as supporting materials to the maximum extent possible. Simulator missions will be accomplished in a CFT or CPT if a WST is not available.

2.5. Flying Training:

2.5.1. Mission sequence and prerequisites will be IAW the appropriate formal course syllabus.

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

2.5.3. Aircrew in IQT will fly under IP/IWSO supervision (in the aircraft or chased) until completing the qualification checkride.

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 formal training courses for senior officers (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 and paragraph **2.2.2.**

2.6.3. If senior officers must be trained at the base to which they are assigned they will be in formal training status. Unit duties will be turned over to appropriate deputies or vice commanders until training is completed. Exceptions to this policy must be approved by MAJCOM/CC.

Chapter 3

MISSION QUALIFICATION TRAINING

3.1. General. Mission Qualification Training (MQT) is a unit developed training program that upgrades newly assigned aircrew to BMC or CMR to accomplish the unit mission. Guidance in this chapter is provided to assist SQ/CCs in executing an OG/CC approved MQT program. Squadrons are allowed to further tailor their programs for all aircrew, based on current qualification, experience, currency, documented performance, and formal training. Applicable portions of MQT may be used to create a requalification program for aircrew who have regressed from BMC or CMR to specifically address deficiencies which caused regression.

3.1.1. MQT will be completed within the time specified by each MAJCOM below. Timing starts at the aircrew member's first duty day at the gaining operational unit. If the aircrew elects to take leave prior to being entered into MQT, the timing will begin after the termination of the aircrew's leave. Training is complete upon SQ/CC certification to BMC or CMR.

3.1.1.1. For ACC and USAFE, notify HQ ACC/DO or HQ USAFE/DO, respectively, if training exceeds 90 calendar days.

3.1.1.2. For PACAF, notify the HQ PACAF/DO and NAF/DO if training exceeds 90 calendar days.

3.1.2. Air/Air refueling (AAR) and initial chemical warfare (CW) flight training will be completed NLT 90 days from completion of MQT. AAR accomplished in IQT may fulfill MQT requirements as determined by the SQ/CC. Failure to comply will result in regression to N-CMR/N-BMC until qualification is complete.

3.1.3. Aircrew in MQT will not fly in FLAG, AIR WARRIOR, COPE THUNDER exercises, Weapons School support deployments, WSEP, or equivalent type exercise.

3.1.4. Night MQT will satisfy any unaccomplished night training requirement from IQT. If night training was accomplished in IQT, the SQ/CC may certify aircrew to BMC/CMR without night MQT. All night training requires demonstrated proficiency and currency in similar day events, unless accomplished with an instructor. Night MQT may be combined with the NVG upgrade. This NVG upgrade can be combined with any upgrade. If not completed during MQT, night training will be accomplished NLT 180 days (ACC: 90 days) from completion of MQT.

3.1.5. Prior to CMR certification, if not accomplished during FTU training, aircrew must complete:

3.1.5.1. LASDT CAT I training. All LSDAT training completed by the FTU will count, subject to SQ/CC approval, towards completion of LSADT CAT I MQT syllabus missions. For example: the trainee completes LASADT 1 and 2 while in the FTU program; at SQ/CC discretion, only LASDT 3 is required in MQT training.

3.1.5.2. Initial qualification in all weapons delivery/employment events required QUAL at CMR/BMC.

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 from another MAJCOM requires the theater-specific portions of IRC before flying. MQT academics or the MQT Local Area Orientation (LAO) mission may satisfy this requirement.

3.2.2.1. (For USAFE) All aircrew will complete Theater Indoctrination (TI) ground training prior to flight training. The wing/group will develop the TI ground training program. The following blocks of instruction will be covered as a minimum:

3.2.2.1.1. **Instrument Training.** Accomplish a thorough review of theater unique instrument requirements and procedures to include but not limited to: NAVAIDS, European air traffic control, local publications and instructions, non-DoD approach procedures (Jeppesen), required instrumentation for specific approaches, flight planning, European weather phenomena (emphasis on local conditions), spatial disorientation.

3.2.2.1.2. Video Presentation. Jeppesen approach charts.

3.2.2.1.3. **Basic Airmanship Review.** Visual illusions, lost wingman procedures, route abort procedures, Safety Investigation Report training, command special interest items, USAFE local area exercise procedures.

3.2.3. **Initial Verification:**

3.2.3.1. Initial verification will be completed within 90 days after completing MQT. Failure to comply will result in regression to N-CMR until qualification is complete. Suggested briefing guides are at **Attachment 3** and **Attachment 4**. Each aircrew (not required for BMC) will demonstrate to a formal board a satisfactory knowledge of the squadron's assigned mission. Board composition will be established by the SQ/CC (OG/CC for composite wings). Desired composition is SQ/CC or SQ/DO (chairman), weapons, electronic combat, intelligence, and plans representatives.

3.2.3.2. **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 and* as supplemented. USAFE units will certify IAW *ACE Directive 75-6, Special Weapons Training for Strike Aircrew.* Aircrew who certify are exempt from verification requirements. Units with DOC core aircrew may elect to verify aircrew not identified as their core members.

3.2.3.3. Initial certification will be completed within 90 days after completing MQT. With OG/CC approval, aircrew unable to meet this requirement due to unit deployments will complete an initial verification IAW paragraph **3.2.3.**of this volume. Within 45 days of returning from the unit deployment, aircrew will certify IAW AFI 10-419/AD 75-6.

3.3. Simulator Training:

3.3.1. MQT aircrews should fly the mission profiles outlined in paragraph **3.3.2.** Each training device mission will include selected emergency procedures and unusual attitude/inadvertent weather entry procedures. WST MQT-1 is a prerequisite for the first MQT flight. If a WST is unavailable, the CFT may be used to accomplish appropriate switchology and emergency procedures training.

3.3.2. **MQT WST Profiles:**

3.3.2.1. **WST MQT-1--Local Area Orientation/Instruments.** Normal ground operations, standard departure(s), navigation, emergency airfield procedures and approaches, published penetra-

tion and approach to primary alternates and home base, emergency divert procedures, and emergency procedures to include departure recognition and recovery procedures for both autoroll and spin recoveries.

3.3.2.2. **WST MQT-2--Air-to-Air Procedures.** Trail departure, fence check, radar search techniques, horizontal conversions, slice/chandelle conversions 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, FDL operations, threat detection and defensive reactions, emergency procedures, instrument recovery and approach.

3.3.2.3. **WST MQT-3--Air-to-Surface Procedures.** Heavyweight takeoff, Low Altitude Navigation and Targeting Infrared for Night (LANTIRN) and Terrain Following (TF) procedures (including flyup procedures), weapons deliveries, jettison procedures, Electronic Combat (EC) equipment operation, FDL operations, threat recognition and defensive reactions, local range procedures, emergency divert procedures, hung ordnance procedures.

3.3.2.4. **WST MQT-4--Emergency Procedures Evaluation.** This evaluation will be administered by a SEFE IAW AFI 11-202V2, MAJCOM supplements, and unit directives.

3.4. Flying Training. The appropriate missions from those listed below will be used to upgrade to BMC or CMR. Unit-developed MQT programs should use profiles typical of squadron missions. Maximum use of armament recording assets and captive missiles is encouraged on all MQT missions. The OG/CC will approve the MQT program. Non-effective student non-progression "X" sorties are limited to 2 per phase and 4 total for MQT, continued MQT requires SQ/CC written approval in the training records.

3.4.1. **Supervision.** A SQ supervisor or instructor (IP/IW) in the element is required unless specified otherwise. On some sorties, more specific guidance is provided. The SQ/CC will determine the proper flight position of the supervisor/instructor unless specified otherwise**.**

3.4.2. If more than 14 calendar days elapse between sorties, an additional review sortie will be flown before continuing in the program.

3.4.3. All aircrew must conduct practice airborne emergency procedures training during any one of the MQT sorties. As a minimum, the training will consist of briefing, flying, and debriefing a simulated emergency procedure scenario to include airborne communication with the SOF.

3.4.4. **Sortie Requirements.** The LAO/AHC/Instrument mission is mandatory. The Mission Evaluation Checkride is also mandatory, if not previously accomplished in the MQT portion of formal training, or if the squadron commander accepts the aircrew's current mission evaluation checkride. The sorties listed in paragraphs **3.4.5.** ACBT Qualification, **3.4.6.** Low Altitude Step Down Training, and **3.4.7.** Air-to-Surface Training, are suggested mission profiles that the SQ/CC may use to develop the unit's MQT program based on unit tasking. The wing/group developed TI program will consist of a minimum of two sorties (one sortie for experienced aircrew). These sorties will emphasize basic airmanship skills (i.e., instruments, formation, etc.) while providing the aircrew a local area orientation (LAO). Individual TI events may be accomplished during MQT, however all TI events will be accomplished prior to CMR/BMC or theater certification. (USAFE only: USAFE Theater Indoctrination (TI) flight training may be combined with initial MQT sorties, but must be the first sorties flown in theater). Aircrew will demonstrate proficiency in the following minimum events:

-Trail departure

-Lost wingman

-Route abort

-Instrument approach (precision and non-precision):

-At least one approach will be flown at a non-USAFE base (USAFE).

-At least one approach will be flown at the unit's primary divert base.

-Radar Trail Arrival

3.4.4.1. **LAO/AHC/Instrument --Mission Objectives.** The LAO/AHC/ Instrument mission is mandatory, except for aircrew assigned to the 4 FW who have just completed FTU formal course training ***(IP in the aircraft for pilots, IP/SQ sup for WSOs)***. Mission Objectives: Practice aircraft handling characteristics, local area orientation, and local instrument procedures**.** Specific Mission Tasks: Local area familiarization, emergency airfield(s) overflight/approach(s), AHC and high Angle-of-Attack (AOA) maneuvering, instrument penetration/approach (home field), FDL procedures and normal and simulated emergency patterns and landings.

3.4.4.2. **Mission Evaluation Checkride (If Required).** The Mission Evaluation Checkride is also mandatory, unless the squadron commander accepts the aircrew's current mission evaluation checkride. This sortie will be flown IAW AFI 11-202V2 and AFI 11-2F-15EV2 on a mission representing the unit's primary mission tasking.

3.4.5. **ACBT Qualification.** A/A training programs will be based on unit tasking and conducted IAW AFI 11-214, *Air Operations Rules and Procedures*, and applicable instructions. Sorties should be flown in sequence with the following exception: defensive rides (Defensive Basic Fighter Maneuvers (D-BFM), Defensive Air Combat Maneuvering (D-ACM), Defensive Counter Air (DCA)) can be flown the ride prior to offensive rides (Offensive Basic Fighter Maneuvers (O-BFM), Offensive Air Combat Maneuvering (O-ACM), Offensive Counter Air (OCA)) of the same type, with SQ/CC approval. Adherence to training rules will be assessed throughout the phase.

3.4.5.1. **Aircraft Handling Characteristics (AHC)--Mission Objectives.** Familiarize aircrews with aircraft maneuvering capabilities and limitations by practicing advanced handling maneuvers. Mission Tasks: "G" warm-up exercise, 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.

3.4.5.2. **O-BFM--Mission Objectives.** Mission Objectives: Practice/Demo Pro offensive BFM and weapons employment. Mission Tasks: Weapons system checks, tactical formation, fence check, ranging/tracking exercise, intercepts, offensive BFM from low and medium aspect visual perch set-ups, weapons employment, Battle Damage (BD) check. NOTE: Introduce high aspect BFM as proficiency dictates.

3.4.5.3. **D-BFM--Mission Objectives.** Practice/Demo Pro defensive BFM. Mission Tasks: Weapons system checks, tactical formation, fence check, ranging exercise, intercepts, defensive BFM from low and medium aspect visual perch setups, weapons employment (if applicable), BD check. Note: Introduce/practice high aspect BFM.

3.4.5.4. **O-ACM--Mission Objectives.** Practice/Demo Pro 2V1 offensive air combat maneuvering. Mission Tasks: Weapons system checks, tactical formation, fence check, element attacks from visual perch and Beyond Visual Range (BVR) set-ups (emphasis on engaged/support fighter

responsibilities, attack coordination, directive/descriptive commentary, engaged maneuvering, mutual support, weapons employment, and separations), BD check.

3.4.5.5. **D-ACM--Mission Objectives.** Practice/Demo Pro 2V1 defensive air combat maneuvering against an adversary attacking from any quadrant. Mission Tasks: Weapons systems checks, tactical formation, fence check, 2V1 counter-offensive maneuvering from visual and BVR set-ups (emphasis on visual/radar lookout, directive/descriptive commentary, initial moves, mutual support, element maneuvering to negate an attack and bring weapons to bear or separate), BD check.

3.4.5.6. **DCA-Day 2 v X. Mission Objectives.** Practice/Demo Pro element tactics/maneuvering in an area/point defense scenario. Mission Tasks: Weapons system checks, tactical formation, fence check, Combat Air Patrol (CAP) procedures, radar plan (search/sort/target), FDL operations, visual lookout, tactical intercept, element maneuvering versus an adversary element, weapons employment, radio discipline, mutual support, CAP/Forward Edge of the Battle Field (FEBA) awareness, fuel awareness, AWACS/Ground Controlled Intercept (GCI) procedures (if available), separations, BD check.

3.4.5.7. **DCA-Night 2 v X. Mission Objectives.** Practice/Demo Pro element tactics/maneuvering in an area/point defense scenario. Mission Tasks: Weapons system checks, tactical formation, fence check, CAP procedures, radar plan (search/sort/target), FDL operations, visual lookout, tactical intercept, element maneuvering versus an adversary element, weapons employment, radio discipline, mutual support, CAP/FEBA awareness, fuel awareness, AWACS/GCI procedures (if available), separations, BD check.

3.4.5.8. **OCA Sweep 2 v X. Mission Objectives.** Practice/Demo Pro element tactics/maneuvering in a Sweep role. Mission Tasks: Weapon system checks, tactical formation, fence check, FDL operations, radar plan (search/sort/target), FDL operations, visual lookout, tactical intercept, element maneuvering versus an adversary element, weapons employment, radio discipline, mutual support, fuel awareness, AWACS/ GCI procedures (if available), separations, BD check.

3.4.5.9. **OCA Force Protection 2 v X. Mission Objectives.** Practice/Demo Pro element tactics/ maneuvering in a Force Protection role. Mission Tasks: Weapon system checks, tactical formation, fence check, radar plan (search/sort/target), FDL operations, visual lookout, tactical intercept, element maneuvering versus an adversary element, weapons employment, radio discipline, mutual support, fuel awareness, AWACS/GCI procedures (if available), separations, BD check.

3.4.6. **Low Altitude Step-Down Training (LASDT):**

3.4.6.1. To conduct low altitude operations safely, aircrews need to be knowledgeable of aircraft handling and performance characteristics, tactical formation, intercept, offensive maneuvering, defensive reactions, and navigation. The low altitude environment requires a well-supervised LASDT program, including initial certification and currency requirements. LASDT qualifies aircrews 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.

3.4.6.2. To provide a structured approach, the step-down training 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 step-down training program is based on IP/squadron supervisor assessment of aircrew performance, TR compliance, and judgment. All LASDT missions will be supervised by an IP/IWSO or FL-qualified SQ supervisor who has completed LASDT training and is current. All

previous low altitude training may be used to determine the required low altitude sorties and training required for LOWAT certification.

Table 3.1. LOWAT Categories.

Category	Altitude Block	Upgrade Sorties To Certify
I	1,000-500	1, 2, 3
II	500-300	4, 5, 6
III	300-100	7, 8, 9
(USAFE) NOTE: For the purposes of LASDT training, USAFE substitutes 250 foot for the listed 300 foot restrictions due to national requirements.		

3.4.6.3. Demonstrated proficiency down to 500 feet AGL is required for Category I certification and is normally accomplished during IQT and/or MQT. Units may accept a transfer aircrew's LOWAT qualification from other units. Category I qualification is a minimum requirement for CMR status.

3.4.6.4. 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 performed and proficiency demonstrated. The goal is proficiency down to the minimum altitude compatible with squadron mission. Upon successful completion of LASDT training, the SQ/CC will certify the aircrew to the minimum approved altitude of the LASDT category. With SQ/CC approval, low altitude training conducted at a formal course may be used to fulfill applicable requirements of this paragraph.

3.4.6.5. LASDT will be scheduled and briefed as a primary portion of the mission however, 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. Supervisors must be aware of the added stress and task loading associated with low altitude operations and provide breaks in training above the training altitude. Training profiles will be developed to avoid over-tasking the upgrading aircrew, and upgrade sortie continuity should be emphasized.

3.4.6.6. TRs will be IAW AFI 11-214 and AFI 11-2F-15EV3, *F-15E--Operations Procedures*. During LASDT, Knock It Off (KIO)s will include a climb to at least 1000 feet AGL.

3.4.6.7. **Ground Training** . The following ground training outline is applicable to all LASDT training. Coverage should support the mission and concept of operations of the squadron, incorporating appropriate portions of AFTTP 3-1, *Mission Employment Tactic;* and AFTTP 3-3, *Combat Aircraft Fundamentals*. All academic training will be completed prior to flight training/briefing.

3.4.6.7.1. **AHC.** Discussion of aircraft performance as it applies to the low altitude environment, to include: control response (low/high speed, over-G potential, speed brake use, stores effects); afterburner (fuel considerations, selection techniques), acceleration/ deceleration, level turns, vertical maneuvering, climb/dive/slice, recoveries, effects of gross weight, power settings, density altitude, G-loading, and bank angles; terrain avoidance (ridge crossings), HUD use, terrain clearance versus turning room, dangers inherent in overbanking during turns, importance of frequent cross check of aircraft attitude relative to horizon; and the videotape "How Low Can You Go?"

3.4.6.7.2. **Environmental Factors.** Discuss out-of-cockpit visibility and Field of View (FOV) restrictions, sun angle, terrain and G-excess illusions/ perceptions, weather (WX) considerations, and use of the HUD.

3.4.6.7.3. **Task Management.** Discuss low altitude tasks and task management/prioritization concept.

3.4.6.7.4. **Low Altitude Tactical Navigation (LATN).** Discuss system use and dead reckoning, pilotage, INS/EGI use/techniques, etc.

3.4.6.7.5. **Low Altitude Tactical Formation (LATF).** Discuss formations (including line abreast and wedge), hazards at low altitudes, task prioritization, tactical turns, visual lookout/ mutual support.

3.4.6.7.6. **Defensive Reactions.** Discuss visual lookout and mutual support, threat weapons systems envelopes, defensive maneuvering against air-to-air and surface-to-air threats, and flight member de-confliction.

3.4.6.7.7. **Low Level Awareness Factors.** Discuss factors affecting low level awareness: airspeeds and maneuverability, formation size and design, formation and aircrew responsibilities, environmental effects on visibility, factors influencing individual proficiency and airmanship, route familiarity and complacency, air turbulence, jet wash and bird strike, route obstacles, terrain features, planning and chum responsibilities, route abort procedures, techniques and considerations.

3.4.6.7.8. **Low Altitude Air-to-Air Employment.** Discuss intercepts (horizontal turn radii, preferred aspects, pursuit options), fuel rules of thumb, required turning room, maximum dive angle restrictions, low altitude weapons employment (weapons envelope/rules of thumb, weapons selection, missile pursuit curves, minimum launch altitudes), low altitude intercept (radar capabilities including detection, Line of Sight (LOS) problems, false targets, and sorting), low-to-high, high-to-low, and co-altitude intercepts (altitude, airspeed, and power considerations, vertical vice offset conversions, conversion aborts, high/low speed targets, use of HUD).

3.4.6.7.9. **Special Subjects.** Discuss training rules, WX abort procedures, aircraft emergencies, and separation/disengagement considerations.

3.4.6.8. **Flying Training:**

3.4.6.8.1. **LASDT-1 (Single Ship, or w/Chase)--Mission Objectives.** 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/flying qualities, vertical awareness exercise, climb/dive/slice maneuvers, nose low recoveries, attitude awareness maneuvers); G-awareness exercise; 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.

3.4.6.8.2. **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/flying qualities,

vertical awareness exercise, climb/dive/slice maneuvers; nose low recoveries, attitude awareness maneuvers); G-awareness exercise; 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.

3.4.6.8.3. **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/flying qualities, vertical awareness exercise, climb/dive/slice maneuvers, nose low recoveries, attitude awareness maneuvers); G-awareness exercise; low level navigation; fuel management; low level turns; LATF; 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.

3.4.6.8.4. **LASDT-4 (Single Ship, or w/Chase)--Mission Objectives.** Demonstrate proficiency in single-ship maneuvering in the low altitude environment above 500 feet AGL. Introduce low altitude operations down to a minimum altitude of 300 feet AGL. Specific Mission Tasks: AHC (low altitude handling/flying qualities, vertical awareness exercise, climb/dive/slice maneuvers, nose low recoveries, attitude awareness maneuvers); G-awareness exercise; 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.

3.4.6.8.5. **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: AHC (low altitude handling/flying qualities, vertical awareness exercise, climb/dive/slice maneuvers, nose low recoveries, attitude awareness maneuvers); G-awareness exercise; 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.

3.4.6.8.6. **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: AHC (low altitude handling/flying qualities, vertical awareness exercise, climb/dive/slice maneuvers, nose low recoveries, attitude awareness maneuvers); G-awareness exercise; low level navigation; fuel management; low level turns; LATF; 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 II.

3.4.6.8.7. **LASDT-7 (Single Ship, or w/Chase)--Mission Objectives.** Demonstrate proficiency in single-ship maneuvering in the low altitude environment above 300 feet AGL. Intro-

duce low altitude operations down to a minimum altitude of 100 feet AGL. Specific Mission Tasks: AHC (low altitude handling/flying qualities, vertical awareness exercise, climb/dive/slice maneuvers, nose low recoveries, attitude awareness maneuvers); G-awareness exercise; 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.

3.4.6.8.8. **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: AHC (low altitude handling/flying qualities, vertical awareness exercise, climb/dive/slice maneuvers, nose low recoveries, attitude awareness maneuvers); G-awareness exercise; 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.

3.4.6.8.9. **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: AHC (low altitude handling/flying qualities, vertical awareness exercise, climb/dive/slice maneuvers, nose low recoveries, attitude awareness maneuvers); G-awareness exercise; low level navigation; fuel management; low level turns; LATF; 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. Upon satisfactory completion of this mission, the SQ/CC can certify the aircrew to LOWAT Category III.

3.4.7. **Air-to-Surface** . Air-to-Surface training sorties consist of Basic Surface Attack Day (BSA) and night (BSAN), Surface Attack Tactics day (SAT) and night (SATN), Close Air Support (CAS), and Strike (STRK) type missions.

3.4.7.1. **BSA-1 (Instructor/Sq Supervisor in the AC)--Mission Objectives.** Practice low/ medium level navigation, Terrain Following Radar (TFR) operations, and conventional deliveries on a controlled range. Specific Mission Tasks: Route/threat planning, airborne systems checks, tactical formation (as applicable), visual/systems low level navigation, timing control, manual TF operations and flyup procedures, controlled range procedures, conventional deliveries from box, curvilinear, and pop patterns, BD check, recovery, Trail arrival (if available), armament recording and assessment procedures.

3.4.7.2. **BSA-2--Mission Objectives.** Demonstrate proficiency in low/ medium level navigation, TFR operations, and conventional deliveries on a controlled range. Specific Mission Tasks: Route/threat planning, airborne systems checks, tactical formation (as applicable), visual/systems low level navigation, auto TF operations, controlled range procedures, conventional deliveries from box/curvilinear and pop patterns, BD check, recovery and landing.

3.4.7.3. **SAT-1--Mission Objectives.** Practice low/medium level tactical formation, navigation, and conventional delivery on a tactical target. Specific Mission Tasks: Airborne systems checks, low level navigation in tactical formation, threat reactions, conventional deliveries as required on tactical targets, BD check, inflight report, recovery and landing.

3.4.7.4. **SAT-2--Mission Objectives.** Demonstrate proficiency in low/medium level tactical formation and navigation to a prescribed Time Over Target (TOT), and conventional delivery on a tactical target. **NOTE:** Upgraders will plan, brief, and debrief the mission through the first attack. Specific Mission Tasks: Mission planning, airborne system checks, low level navigation in tactical formation, threat reactions, conventional deliveries as required against tactical targets, egress, BD check, inflight report, recovery and landing.

3.4.7.5. **BSAN-1 (Instructor in Aircraft for Pilots; IP/Sq Supervisor in Aircraft for WSOs)--Mission Objectives.** Practice night low/medium level navigation, LANTIRN and TFR operations, and night conventional deliveries on a controlled range. Specific Mission Tasks: Radar trail departure, airborne systems check, low level navigation, LANTIRN and TFR operations, flyup procedures, night range orientation, level, loft, and high altitude deliveries as required, formation recovery, practice approach at divert airfield (time/fuel permitting), instrument approach and landing.

3.4.7.6. **BSAN-2--Mission Objectives.** Demonstrate proficiency in night low/medium level navigation, LANTIRN and TFR operations, and night conventional deliveries on a controlled range. Specific Mission Tasks: Radar trail departure, airborne systems check, low level navigation, LANTIRN and TFR operations, flyup procedures, night range orientation, level, loft, and high altitude deliveries as required, formation recovery, practice approach at divert airfield (time/fuel permitting), instrument approach and landing.

3.4.7.7. **SATN-1--Mission Objectives.** Practice night low/medium level navigation to a TOT, LANTIRN and TFR operations, and night conventional deliveries on a controlled range. **NOTE:** Upgraders will plan, brief, and debrief the mission through the first attack. Specific Mission Tasks: Airborne systems checks, low level navigation, threat reactions, LANTIRN operations, conventional deliveries as required, and instrument approach and landing.

3.4.7.8. **SATN-2--Mission Objectives.** Demonstrate proficiency in night low/medium level navigation to a TOT, LANTIRN and TFR operations, and night conventional deliveries on a controlled range. **NOTE:** Upgraders will plan, brief, and debrief the mission through the first attack. Specific Mission Tasks: Airborne systems checks, low level navigation, threat reactions, LANTIRN operations, conventional deliveries as required, and instrument approach and landing.

3.4.7.9. **CAS-(Day)--Mission Objectives.** Demonstrate proficiency in day tactical mission employment based on unit tasking. Specific Mission Tasks: Mission planning; threat detection and reactions (adversary desired); first-look attacks using simulated combat munitions, egress, safe recovery procedures, in-flight report, authentication procedures, use of a Forward Air Controller (FAC) is desired.

3.4.7.10. **CAS-(Night)--Mission Objectives.** Demonstrate proficiency in night tactical mission employment based on unit tasking. Specific Mission Tasks: Mission planning; threat detection and reactions (adversary desired); first-look attacks using simulated combat munitions, egress, safe recovery procedures, in-flight report, authentication procedures, use of a FAC and NVGs are desired.

3.4.7.11. **Low/Medium Level Strike** , if applicable, should be conducted prior to initial certification but not more than 30 days after initial certification. The sortie is not required to be flown prior to the MQT checkride. Mission Objectives: Practice nuclear procedures, low / medium level navigation, Terrain Following Radar (TFR) operations, and nuclear deliveries on tactical targets or a

controlled range. Specific Mission Tasks: Route/threat planning, message receipt/taxi/launch procedures, airborne system checks, navigation, timing control, threat reactions, loft and high altitude deliveries as required, recovery, inflight report, armament recording and assessment procedures. (Note: Two Person Control and BARON procedures should be simulated for this sortie)

3.5. Chemical Warfare (CW) Training. Accomplish IAW AFI 32-4001, *Disaster Preparedness Planning and Operations*; AFI 32-4002, *Hazardous Material Emergency Planning and Response Compliance*; and MAJCOM guidance. This training is intended to integrate aircrew training with other functional areas (maintenance, intelligence, security, etc.) required to conduct combat operations in a CW environment and is applicable to all CMR/BMC aircrews assigned or deployable to chemical threat areas.

3.5.1. **Initial CW Training (ICWT).** Is designed to ensure aircrew proficiency in the overall use of CW protective ensemble and to familiarize aircrews with combat capabilities while wearing CW equipment. Aircrews must complete ICWT NLT 90 days from MQT completion. Aircrews who achieved ICWT in previous tours in a Fighter/Attack/FAC MDS are not required the ICWT Flight.

3.5.2. **Ground Training.** All aircrews will complete Phase I and Phase II training IAW AFPD 32-40 and AFI's 32-4001/4002, and MAJCOM supplements. The following training will be accomplished prior to the first flight with CW gear:

3.5.2.1. Physiological effects/first aid of chemical agents and protective gear.

3.5.2.2. Equipment orientation/fitting of full aircrew ensemble.

3.5.2.3. Egress/hanging harness and water survival IAW MAJCOM guidance.

3.5.3. **WST CW-1.** Mission will be conducted in full ensemble (anti-exposure liners may be substituted for charcoal undergarment), harness, and G-suit. Mission will consist of emergency procedures, a tactical mission profile and doffing of simulated contaminated equipment. This mission should be conducted as close as possible to the day prior to flight, but not more than 30 days prior to initial flight.

3.5.3.1. The initial CW WST mission may be credited towards CW CT requirements for the training cycle in which they were accomplished.

3.5.4. **ICWT Flight.** Flight training must consider limitations of operating in CW equipment. Full donning and doffing procedures/sequence will be practiced in conjunction with the ICWT flight but the only CW equipment worn inflight will be AERP or mask, filter pack, and gloves.

3.5.5. **ICWT Flight Restrictions:**

3.5.5.1. Aircrews will be fully current and qualified in an event prior to accomplishing that event on a CW sortie.

3.5.5.2. Minimum formation spacing is route unless fingertip is required for safe mission accomplishment (i.e., WX penetration).

3.5.5.3. Minimum altitude is 500 feet AGL, except approaches and landing.

3.5.5.4. No Air Combat Training (ACBT) or night sorties. AAR requires an IP/IWSO in the flight.

3.5.5.5. Weather minimums are 1,500 feet ceiling and 3 miles (4.8 km) visibility for pilots in CW gear.

3.5.5.6. Formations are limited to two-ship. Only one aircrew per aircraft and no more than one pilot in the element can wear CW gear. Pilots in CW gear need an experienced aircrew member in the Rear Cockpit (RCP). Pilots wearing CW gear will not fly in dissimilar formations.

3.5.5.7. Operations supervision should not conduct flying CW training when, in their judgment, temperature/dew point conditions are not favorable to safe operations.

3.5.6. CW Certification. Aircrews will be CW certified upon the completion of all initial ground/ flight training.

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

3.6.1. **Ground Training.** Flight surgeons/GLO's who are assigned to units and who have not previously flown the unit-assigned aircraft will accomplish the following before the initial flight briefing: Aircraft general review; hanging harness training (as applicable); egress training, protective equipment training; Anti-G Straining Maneuver (AGSM) training (to include the review of "Anti-G Strain Technique Reinforcement and Assessment"), and an instrument/EP simulator (if available) with an instructor (1 hour minimum).

3.6.2. **Flight Training.** The first flight in the unit-assigned aircraft will be with an IP and may be flown in conjunction with other training sorties. The briefing 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 flying training requirements for CMR, BMC, and BAQ aircrews. Aircrews must be qualified IAW AFI 11-202V1 and AFI 11-202V2. Additionally, they must complete IQT to fly in BAQ status, MQT or FTU instructor upgrade to fly in BMC, or MQT to fly in CMR status.

4.2. Ground Training. Ground training will be accomplished IAW **Table 4.1.** Waiver authority for the ground training specified is IAW the reference directive. This list is intended as a single source reference. Where discrepancies exist, the reference directive takes precedence. Ground training accomplished during IQT/MQT may be credited toward continuation training (CT) requirements for the training cycle in which it was accomplished. The following programs comprise ground training only.

4.2.1. **Physiological Training.** IAW AFI 11-403, *Aerospace Physiological Training Program*; and MAJCOM supplements.

4.2.2. **Instrument Refresher Course.** IAW AFI 11-202V1; AFMAN 11-210, Instrument Refresher Course (IRC) Program; and MAJCOM supplements.

4.2.3. **Life Support.** Includes egress, ejection, hanging harness, wet drill, personal survival equipment, aircrew chemical warfare ensemble training, and local/deployment survival IAW AFI 11-301 and MAJCOM supplements.

4.2.3.1. Survival, Evasion, Resistance, and Escape (SERE) Code of Conduct Continuation Training (CoCCT). SERE CoCCT will be conducted IAW AFI 36-2209, *Survival And Code Of Conduct Training*; and MAJCOM supplements to AFI 11-301, *Life Support Program*; and AFI 14-105, *Unit Intelligence Mission and Responsibilities*, for all commands (ACC: Sup 1). SERE CoCCT will be a coordinated Intelligence, Life Support, and SERE Specialist effort.

4.2.4. **Weapon System Trainer (WST):**

4.2.4.1. **Table 4.2.** depicts the minimum WST training requirements. SQ/CC will determine the minimum number/type of training device CT missions that require supervision (instructor/contract instructor). Units should determine additional CT training device supervision requirements based on expected employment tasking, training device capabilities, and mission training objectives.

4.2.4.2. Units will develop scenarios that cover emergency and precision instrument procedures, and will develop other scenario requirements based on expected employment tasking and training device capabilities. Emphasis should be placed on training not readily attainable during daily flying activities. Units will review scenarios annually and update as required.

4.2.4.3. Unusual attitude and inadvertent weather entry procedures training and low altitude unusual attitude recovery training will be accomplished during all Aircrew Training Device (ATD) training. Unusual attitude training will include recognition of HUD limitations, and non-HUD recoveries. During EP WST missions, departure recognition and recovery procedures will be accomplished to include both autoroll and spin recoveries.

4.2.4.4. Aircrews may receive credit for training accomplished in special devices such as the Advanced Simulator for Aircrew Training (ASPT), Simulator for Air-to-Air Combat (SAAC), or Higher Headquarters (HHQ)-directed simulator test support, etc., if approved by the SQ/CC.

4.2.4.5. Tactical missions may be accomplished in either the WST or Unit Training Device (UTD) (if applicable). EP and CW missions will be accomplished in the WST. If a unit does not have access to a WST, EP and CW missions will be accomplished in the CFT.

4.2.4.6. A WST in full CW gear (anti-exposure suit liner may be substituted for charcoal undergarment), harness, and G-suit will be accomplished once each training cycle within each combat coded unit. Within the mission profile, practice doffing simulated contaminated equipment. CW WST missions are intended to complement existing WST mission profiles. CW missions are not additive to WST requirements. Units without a WST will use a CFT, egress trainer, or aircraft cockpit for CW training.

4.2.5. **Situational Emergency Procedures Training (SEPT):**

4.2.5.1. This training is not an evaluation, but a review of abnormal/emergency procedures and aircraft systems operations/limitations during realistic scenarios. One aircrew should present a situation and another performs or discusses actions necessary to cope with the malfunction and carry it to a logical conclusion. Squadron special interest items should be emphasized. Incorporate the following elements into squadron SEPT training programs:

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

4.2.5.1.2. Develop SEPT scenarios using F-l5E mishaps/incidents as baseline cases.

4.2.5.1.3. Discuss at least two EPs for each phase of flight during the SEPT session.

4.2.5.1.4. Accomplish two SEPTs each training cycle with an instructor or SQ supervisor to include minimum fuel and emergency divert training.

4.2.5.2. SEPT training will be accomplished each calendar month. Failure to accomplish by the end of the month will result in grounding until subsequently completed.

4.2.5.3. SEPTs will be accomplished in a WST, if available. If a WST is not available, SEPTs should be accomplished in a CFT as the primary alternative. If no training device is available then SEPTs can be accomplished using one-on-one tabletop discussions. Small flight-sized groups are allowable as long as all members participate to the full extent and share equal time responding to emergency situations.

4.2.5.4. Formal course student SEPTs may satisfy the monthly SEPT requirement for the IP/IWSO who administers this training.

4.2.6. **Weapons/Tactics Academic Training.** Units will establish a weapons/ tactics academic training program to satisfy MQT and CT requirements. Training is required in each training cycle. Audiovisual programs may be used in place of academic instruction. The program will require successful completion of an examination (85 percent minimum to pass). Use testing to validate qualification to the maximum extent possible throughout the training program. Aircrews successfully scoring 85 percent or greater may be given training credit in lieu of ground CT, where authorized by the governing publication.

4.2.6.1. Academic instructors should be USAFWS graduates or have attended the applicable academic portion(s) of school, if possible.

4.2.6.2. Instruction and tests should include (as applicable), but are not limited to:

4.2.6.2.1. Conventional Air-to-Surface and/or Air-to-Air Weapons. Description, operation, parameters, fuzing, limitations, preflight, tactics, normal and emergency procedures /techniques.

4.2.6.2.2. Nuclear Weapons. Description and effects, safety and security, operation, delivery considerations, preflight, arming/dearming, normal and emergency procedures.

4.2.6.2.3. ACBT. Principles of aerodynamics, maneuverability, AHC, formations, G-induced Loss of Consciousness (GLOC), Radio Terminology (RT), tactical intercept principles, alert procedures and scrambles, use of GCI/AWACS, and enemy capabilities.

4.2.6.2.4. Electronic combat equipment, capabilities, operation, checks, procedures, Infrared Missile Defense (IRMD)/Radar Missile Defense (RMD), and hostile ECM/friendly ECCM tactics (to include vertical notch with emphasis on altitude awareness during dive recovery).

4.2.6.2.5. Specialized training to support specific weapons, tactics (to include threat VID tactics), mission capabilities, authentication, wartime ROE, on-scene commander (OSC) procedures and safe passage procedures.

4.2.6.2.6. Low altitude flying academics review IAW paragraph **3.4.6.8.**, LASDT Ground Training.

4.2.6.2.7. NVG academics review IAW paragraph **4.2.14.**for all NVG qualified aircrews.

4.2.6.2.8. CAS/JMO/TST refresher training as applicable.

4.2.7. **Verification.** Continuation verification updates aircrews on their squadron's wartime mission. Each aircrew will participate in a squadron initial/continuation verification every 18 months as a briefer, board member, or seminar participant. Aircrews who participate in a unit deployment to a tasked theater of operations may receive credit for continuation verification.

4.2.8. **Continuation Certification.** Aircrews assigned to nuclear-tasked squadrons will certify IAW AFI 10-419 or AD 75-6. Aircrews who certify are exempt from verification requirements.

4.2.9. **Intelligence Training.** The intelligence training program will be closely aligned with the unit weapons and tactics training program. The focus and extent of academic training will be determined by the OG/ CC and will be aligned with projected wartime tasking, threats, and unit equipage. In addition to threat knowledge, aircrew training will include:

4.2.9.1. **Visual Recognition (VR).** Aircrews must be able to visually identify aircraft (rotary and fixed-wing, including joint/allied assets) they are likely to encounter by name or numerical designator and determine whether the aircraft is a threat or non-threat (training should incorporate all aspects/angles, theater-specific paint schemes/fin flashes, and various configurations). Identify ground equipment, and determine major categories of naval vessels. Completion of VR training is required IAW local VR directives.

4.2.9.2. **Escape and Recovery (E&R).** E&R training will prepare aircrew for the possibility of evasion, captivity and escape in hostile territory.

4.2.9.3. **Collection and Reporting (C&R).** C&R training will enable aircrew to initiate pilot-originated reports (INFLTREP, CIRVIS, etc.) and will familiarize them with the information requirements of the intelligence-generated MISREP and INTREP.

4.2.9.4. Current Intelligence is mandatory and will cover significant military/political developments (including threat updates) in the squadron's mission areas of interest.

4.2.9.5. Use guidance contained in AFI 14-105 to develop and manage unit intelligence training programs. The OG/CC will determine aircrew testing requirements for intelligence and EC training.

4.2.10. **Nuclear Surety (If Required).** IAW AFI 91-101, *Air Force Nuclear Weapons Surety Program*; and MAJCOM supplements.

4.2.11. **US/Russia Prevention of Dangerous Military Activities.** Initial, annual refresher, and predeployment training for the prevention of Dangerous Military Activities will be conducted to ensure that all aircrews are familiar with the agreement and the implementing provisions contained in CJCS 2311.01. The procedures for the Prevention of Dangerous Military Activities between the U.S. and Russia section of the Flight Information Handbook.

4.2.12. **Crew Resource Management (CRM).** Units will participate in MAJCOM established CRM CT. Training builds upon the basic cockpit management skills taught in SUPT/SUNT and FTUs. Each aircrew is required to participate in one session every 24 months.

4.2.13. **Anti-G Straining Maneuver.** Assess IAW AFI 11-404, *Centrifuge Training for High-G Aircrew*.

4.2.14. **Night Vision Goggle Refresher Academics.** Refresher training as a minimum will consist of common NVG hazards, F-15E specific hazards, limitations, performing preflight adjustment procedures and focusing on an eye chart or the use of a Hoffman 20/20 tester. The use of a mock-up terrain display is encouraged for this training.

Table 4.1. Ground Training.

MOBILITY TRAINING These items required for mobility units or units that generate in place.				
SUBJECT	**FREQUENCY**	**REFERENCE DIRECTIVE**	**GROUNDING**	**AFFECT CMR/BMC**
Chemical Warfare Defense Training Ground Crew Ensemble (N/A CB and TF coded units)	Initial and Refresher 12 months	AFPD 32-40, AFI 32-4001, AFI 32-4002	No	No
Handgun Training	Initial and Requal every 24 months	AFI 36-2226	No	Yes
ISOPREP Review	6 months	AFI 14-105	No	Yes
Intelligence Training	12 months	AFI 11-2F-15E V1, AFI 14-105 and AFI 14-105 Sup 1	No	Yes
Air Force Anti-terrorism/ Force Protection	12 months	AFI 31-210	No	No

AIRCREW TRAINING				
SUBJECT	**FREQUENCY**	**REFERENCE DIRECTIVE**	**GROUNDING**	**AFFECT CMR/BMC**
Physiological Training (Altitude Chamber)	Every 3 or 5 years as applicable	AFI 11-403	Yes	No
Instrument Refresher	PERIODIC	AFMAN 11-210 and AFI 11-202 V2, as supplemented	No	No
Life Support Training		AFI 11-301 as supplemented		
a. Egress/Ejection Training	6 months		Yes	No
b. Hanging Harness	6 months		Yes	No
c. Life Support Equip Training	12 months		No	No
d. Combat Survival Training (CST) (N/A CB and TF coded units)	36 months		No	Yes
e. Water Survival Training	36 months		No	No
f. Local area Survival Training	Initial/PCS		Yes	No
Initial Chemical Warfare Defense Training Aircrew Ensemble (N/A CB and TF coded units)	Prior to 1st CW Flight	AFI 11-2F-15E V1, **Chapter 3**	No	Yes
Annual Chemical Warfare Defense CT Aircrew Ensemble and egress (N/A CB and TF coded units)	12 months	AFI 11-2F-15E V1, **Chapter 4**	No	Yes
Simulator (WST) Training	IAW **Table 4.2.**, this volume	AFI 11-2F-15E V1, **Chapter 4**	No	Yes
Situational Emergency Procedures Training (SEPT)	1 month	AFI 11-2F-15E V1, **Chapter 4**	Yes	No
Verification	18 Months	AFI 11-2F-15E V1	No	Yes (no BMC)
Weapons/Tactics Academics	12 months	AFI 11-2F-15E V1	No	Yes
Marshaling Exam	Initial/PCS	AFI 11-218	No	No
Flying Safety Training	Once per quarter	AFI 91-202	No	No
Supervisor Safety Training	Initial Only	AFI 91-301	No	No
SUBJECT	**FREQUENCY**	**REFERENCE DIRECTIVE**	**GROUNDING**	**AFFECT CMR/BMC**

VR Training	6 months	AFI 11-2F-15E V1, **Chapter 4**	No	No
CRM	24 months	AFI 11-2F-15E V1, **Chapter 4**	Yes (waiverable by OG/CC)	No
NVG Academics	12 months	AFI 11-202 V1	No	No
AIR FORCE AWARENESS PROGRAM TRAINING				
SUBJECT	**FREQUENCY**	**REFERENCE DIRECTIVE**	**GROUNDING**	**AFFECT CMR**
Protection of the President and Others	PCS	AFI 71-101 V2	No	No
US/Russia Prevention of Dangerous Military Activities	Initial/12 months and Predeployment	CJCS 2311.01 Flight Information Handbook	No	No
Fire Extinguisher	Initial/PCS	AFOSHSTD 9156	No	No
Code of Conduct	24 months	AFI 36-2209	No	No
Law of Armed Conflict	12 months	AFPD 51-4, AFI 51-401	No	No
Substance Abuse Education	After PCS	AFI 44-121	No	No
Military Equal Opportunity Newcomers' Orientation	After PCS	AFI 36-2706	No	No

4.3. Flying Training. All aircrews except API-8 will accomplish the requirements as shown on **Table 4.2.** API-8 flyers will strive to accomplish the requirements as shown on **Table 4.2.** Failure to accomplish these requirements will not affect BAQ, BMC, or CMR status but may require additional training as determined by the SQ/CC. If any sortie or event requirement from **Table 4.2.** is subsequently added in the RAP tasking message, it becomes a requirement for BMC and CMR status. In addition, the following are required:

4.3.1. **Basic Aircraft Qualification (BAQ) Requirements:**

4.3.1.1. Qualification Evaluation IAW AFI 11-202V2.

4.3.1.2. Currencies (as applicable) IAW paragraph **4.6.**

4.3.1.3. BAQ aircrews will fly a supervised sortie with a squadron supervisor or an IP/IWSO 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 an IP/IWSO.

4.3.1.4. BAQ aircrews 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: MAJCOM DO).

4.3.2. **Basic Mission Capable (BMC) Requirements:**

4.3.2.1. Mission Evaluation IAW AFI 11-202V2 and AFI 11-2F-15EV2.

4.3.2.2. Currencies (as applicable) IAW paragraph **4.6.**

4.3.2.3. Sortie rate (lookback) IAW **Table 1.1.** and paragraph **4.7.1.** (N/A for API-8).

4.3.2.4. BMC aircrews will accomplish ground training requirements related to applicable RAP sorties/events.

4.3.2.5. LASDT Cat I Certification.

4.3.2.6. RAP sorties, mission types, and events, including weapons qualifications IAW the procedures set forth in this volume and the MAJCOM RAP tasking message.

4.3.3. **Combat Mission Ready (CMR) Requirements:**

4.3.3.1. Performance satisfactory to the SQ/CC.

4.3.3.2. Mission Evaluation IAW AFI 11-202V2 and AFI 11-2F-15EV2.

4.3.3.3. Sortie rate (lookback) IAW **Table 1.1.** and paragraph **4.7.1.**.

4.3.3.4. RAP sorties, mission types, and events, including weapons qualifications IAW the procedures set forth in this volume and the MAJCOM RAP tasking message.

4.3.3.5. Currencies (as applicable) IAW paragraph **4.6.**

4.3.3.6. LASDT Category I certification.

4.3.3.7. Ground Training IAW **Table 4.1.**

4.3.3.8. Nuclear Surety Training (tasked units).

4.3.3.9. Verification/Certification IAW unit tasking.

4.3.4. **Special Capabilities/Qualification Requirements:**

4.3.4.1. Specialized training IAW **Chapter 6** and guiding syllabi.

4.3.4.2. Sortie requirements IAW the RAP tasking message.

4.3.4.3. Failure to accomplish the requirements specified in this document or the RAP tasking message requires loss of designation/qualification

4.3.4.4. Re-certification/requalification is IAW paragraph **4.8.4.**.

4.3.5. **Designated Training (TF-Coded)/Designated Test (CB-Coded) Aircraft Unit Requirements:**

4.3.5.1. Aircrews assigned/attached to TF or CB coded units will fly at the BMC rate and accomplish the non-RAP BMC requirements as shown on **Table 4.2.**, as applicable. For instructors, failure to accomplish these requirements will not affect instructor status, but will require additional training as determined by the SQ/CC prior to performing instructor duties in the delinquent event.

4.3.5.1.1. (ACC) Aircrews assigned/attached to CB-coded units and the 475 Weapons Evaluation Group (WEG) need not maintain instructor status.

4.3.5.2. **Weapons Events.** Instructors must be initially qualified in the weapons events they plan to instruct.

4.3.5.2.1. (ACC) Air-to-Surface aircrews assigned/attached to AWFC, 422 TES, 85 Test Sq, and 86 FWS will maintain appropriate weapons delivery currencies.

4.3.5.2.2. (ACC) 83 FWS pilots will maintain ACBT currency and at the 83 FWS/CC's discretion, may fly in the RCP of aircraft participating in WSEP.

4.3.5.3. **Ground Training.** Training as directed by the SQ/CC.

4.3.5.3.1. (ACC) (For AWFC and USAFWTC aircrews) WST requirements do not apply. Night flying and AAR requirements are waived unless required for syllabus requirements or to meet program objectives.

4.3.5.4. Mission/Instructor Evaluation, as applicable, IAW AFI 11-202V2 and AFI 11-2F-15EV2.

4.3.5.5. (ACC) Aircrews assigned to AWFC and USAFWTC only require annual mission ground training as determined by the unit CC.

4.3.5.6. **(ACC) Visits/Deployments.** Only qualified Weapons Instructor Course (WIC) instructors will be sent on weapons school visits/deployments. During these visits, WIC instructors may perform Flight Lead (FL) and instructor duties during tactical missions if they fly in the aircraft in which they are qualified. When flying with students during deployments to FTUs, USAF/WS IPs will occupy the Front Cockpit (FCP).

Table 4.2. Basic Skills (NON-RAP) Annual Training Requirements.

REQUIREMENT	BAQ	BMC	CMR	REMARKS
AHC Sortie	2	2	2	
Instrument Sortie	4	4	4	
Trail Departure	0	8	8	
Night Sortie	4	4	4	See definition at **Attachment 1**
Penetration (+)	12	12	12	IAW AFMAN 11-217, 4 of 12 will be flown no HUD
Precision Approach (+)	16	16	16	(ACC/USAFE/PACAF) 6 of 16 will be flown no HUD. (PACAF) At least two must terminate by circling to land/low approach on a runway different than the one the approach was flown to, not including a side-step to a parallel runway.
Non-Precision Approach (+)	16	16	16	6 of 16 will be flown no HUD
Trail Arrival	0	4	4	
Emergency Patterns	12	12	12	
Minimum Total Sorties	48	See **Table 1.1.**	See **Table 1.1.**	84 Sorties for TF/CB Coded Units.
WST Total Sorties (Inexp/ Exp)	8/6	8/6	10/6	
Tactical WST(Inexp/Exp)	4/2	4/2	6/2	
Chemical Warfare WST	0	1	1	May be conducted in conjunction with other WST requirements for units
Emergency Procedures WST	4	4	4	Units who do not have access to a WST should utilize the CFT. Sim Instructors and SEFEs may accomplish 2 of the 4 EP WST's by administering WST/ CFT EPE missions. (ACC): Will be supervised by an Instructor.
(+) Items do not apply to WSOs.				

4.4. Special Categories:

4.4.1. **Flight Surgeon (FS)/Ground Liaison Officer (GLO):**

4.4.1.1. FS may fly selected missions to enhance understanding of tactical missions with which they are directly associated. GLO's will fly with an experienced pilot. Initial checkouts will be IAW para **3.6.**.

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

4.4.2. **MAJCOM and NAF API-8 Aircrews** :

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 division chiefs and NAF/DO 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 aircrews to participate in MDT.

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

4.4.2.2. HHQ flying personnel maintaining BMC 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 aircrews will:

4.4.2.3.1. Review accomplishments and currencies for accuracy.

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

4.4.2.3.3. Evaluate the demands of each mission scenario, and in coordination with SQ/CC, SQ/DO, or authorized squadron supervisor, determine that their ability/proficiency will not be exceeded.

4.4.2.4. Instructor-qualified aircrews may perform instructor duties with the concurrence of the OG/CC, if qualified and current for the applicable missions/events.

4.5. Multiple Qualification/Currency:

4.5.1. MAJCOM DO may authorize qualification in more than one mission design series (MDS) aircraft for aircrews only when such action is directed by command mission requirements and is economically justifiable. This authority cannot be delegated below MAJCOM level. Unless required for unit mission accomplishment, commanders must not permit aircrews qualified in primary mission aircraft to maintain qualification in support aircraft. Individuals assigned to positions covered by **4.5.2.** have MAJCOM DO approval, and do not need to submit specific requests.

4.5.1.1. Submit multiple qualification requests through command channels to MAJCOM DO. All requests must contain full justification. Approval for multiple qualification request must be provided to the appropriate host base aviation management office; flight accomplishments are not authorized until aircraft assignment is updated into 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 DO.

4.5.2. Multiple qualification is not appropriate for senior wing supervisors of units with different types of aircraft. Wing commanders will qualify in only one of their wing's aircraft. Either the wing/CV or OG/CC should qualify in another of the wing's aircraft (not the same aircraft selected by the WG/CC). (For ACC, see ACCI 11-450 for policy on Senior Supervisor Familiarization Flights.)

4.5.3. Multiple Requirements. Aircrew will satisfy at least 50 percent of the sorties requirements of their primary aircraft in that aircraft. If CMR, they will meet all RAP sortie/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 fill their non-RAP 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. Aircrew must complete conversion training IAW an approved syllabus.

4.6. Currencies/Recurrencies/Requalification:

4.6.1. **Currency.** **Table 4.3.** defines currency requirements for aircrew. If an aircrew loses a particular currency, that sortie/event may not be performed except for the purpose of regaining currency as noted.

4.6.2. Recurrency is required whenever a aircrew exceeds a currency requirement in this instruction.

4.6.2.1. Overdue training requirements must be satisfied before the aircrew is considered qualified to perform tasks applicable to the type of training in which delinquent. Training annotated as affecting CMR status will require regression to N-CMR until appropriate training as specified by SQ/CC is accomplished. Training identified as not affecting CMR status does not require regression from CMR although it may result in grounding until training is completed (e.g., life support training). The duration of grounding and status of sortie lookback will determine the effect on CMR status.

4.6.2.2. Unless otherwise specified, supervisory requirements pertaining to recurrency may be satisfied in the cockpit or flight position that offers the best control of the mission, as determined by the SQ/CC.

4.6.3. **MAJCOM Currency Requirements.** Units will comply with AFMAN 11-217V1, *Instrument Flight Procedures,* for additional currencies required for the flight delivery of aircraft coordinated through ACC AOS.

4.6.4. **Landing/Sortie Recurrency:** Loss of Landing/Sortie Currency. Requires the following action (timing starts from the last landing).

4.6.4.1. 31-90 Days (46-90 Days--Experienced). Regain landing currency.

4.6.4.2. 91-135 Days. Same as above, plus instructor supervised WST (tactics, normal and emergency procedures for CMR aircrews; normal, instrument, and emergency procedures for BMC aircrews).

4.6.4.3. 136-210 Days. Same as above, plus qualification and tactical written examinations and EP evaluation.

4.6.4.4. 211 or More Days. IQT, landing recurrency, LASDT re-qualification, and appropriate weapons event initial qualification.

4.6.5. **Loss of Instructor Status.** Instructors will be decertified if:

4.6.5.1. They fail a flight check. To regain instructor status, they must successfully complete a flight check IAW AFI 11-202V2 and AFI 11-2F-15EV2.

4.6.5.2. They fail a qualification, instrument, or tactical examination. To regain instructor status, the instructor must successfully reaccomplish the written exam.

4.6.5.3. Their instructor currency expires. To regain status, see **Table 4.3.**.

4.6.5.4. They become noncurrent in an event/sortie which causes removal from CMR/BMC status and the SQ/CC deems that loss of currency is of sufficient importance to require decertification. If the SQ/CC does not elect this option or if the instructor becomes noncurrent in events/sorties which do not require removal from CMR/BMC status, instructor status may be retained, but the instructor will not instruct in that event/sortie until the required currency is regained.

4.6.6. **ACBT Recurrency.** Aircrews losing currency in ACBT must accomplish the following sorties:

4.6.6.1. 61-90 Days (91-120 Experienced). Either O-BFM or D-BFM.

4.6.6.2. 91-180 Days (121-180 Experienced). AHC, and either O-BFM or D-BFM.

4.6.6.3. Over 180 Days. Accomplish a tailored program as directed by the SQ/CC.

4.6.7. **NVG Demanding Mission Recurrency.** Aircrew losing NVG demanding mission currency must accomplish the following events prior to unrestricted night operations:

4.6.7.1. 2-ship basic formation work / light drills and unit specific mission elements.

4.6.7.2. Tactical turns and maneuvers.

4.6.7.3. Minimum of one of the following night profiles/sorties:

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

4.6.7.3.2. BSA above 5000 feet AGL or MSA whichever is higher (unless on TFR), or

4.6.7.3.3. Unopposed SAT above 5000 feet AGL or MSA whichever is higher IAW NVG 4 profile (unless on TFR).

4.6.7.4. Aircrew must accomplish 15 minutes of flight above 5000 AGL or MSA whichever is higher, prior to conducting any training below MSA (unless on TFR).

Table 4.3. F-15E Aircrew Currencies.

Event	To Update Fly:	INEXP	EXP	Affects CMR	To Regain Currency:	NOTES
DEMANDING SORTIE	Sortie	21	30	No	Non-Demanding	1
LANDING (Appropriate Cockpit) (+)	Landing	30	45	No	Landing	2
NIGHT LANDING (+)	Day or Night Landing	21	30	No	Day Landing	
ACBT	ACBT	60	90	Yes	IAW **4.6.6.**	3,4,11
WEAPONS DELIVERY (WD)	WD Event	60	90	Yes	WD Event	4,10
RANGE	Event	120	180	No	Event	10,13
Night (NT) TFR	TF Event (Day or NT)	45	60	No	TF Event (Day and NT)	10
LOW A/A	LOW A/A Event	60	90	No	LOW A/A Event	3,4,6,8,11
LOW ALT	LOW ALT Event	60	90	No	LOW ALT Event	3,4,7,8,11
AAR (+)	Day or Night AAR	180	180	Yes	AAR	3
FORMATION T/O (+)	Event	60	90	No	Event	2,5
FORMATION LAND ING (+)	Event	60	90	No	Event	2,5
PRECISION APPROACH (+)	Event	30	45	No	Event	12
INSTRUCTOR	Event	NA	60	No	Event	9
NVG DEMANDING MISSION	NVG Event	90	120	NO	Non-demanding NVG mission IAW **4.6.7.**	3,14,15
(+) Items do not apply to WSOs.						

NOTES:

1. See **Attachment 2** for demanding/non-demanding sortie definitions. In addition, BAQ aircrews will fly in a supervised status (with a SQ supervisor or IP) any time a non-demanding sortie is required.
2. Recurrency supervision level is IP in aircraft or chase, qualified and current in event. To regain RCP IP landing currency, FCP must be occupied by a BMC/CMR pilot current and qualified in landing.
3. Recurrency supervision for pilots will be an IP/IWSO/FL Squadron Supervisor, qualified and current in event (AAR requires a IP or FL Sq Supervisor). Recurrency supervision for WSOs will be an experienced pilot, qualified and current in the event.
4. Performance or instruction will update currency. For formal course instructors: CT and exercise participation require above currencies; formal syllabus training missions require 180 days currency.
5. Flight leaders may update currency from either lead or wing position. Recurrency will be accomplished from wing position. Wingmen may only update currency from wing position.
6. LOW A/A - Event is defined as performing realistic, mission oriented air-to-air operations while in a LOWAT certified low altitude block. Event includes skills necessary to seek out, and engage offensively, an aerial target at low altitude.
7. LOW ALT - Event is defined as performing realistic, mission oriented low altitude operations while in a LOWAT certified low altitude block. Events include low altitude navigation, tactical formation, defensive maneuvering to avoid or negate threats, and air-to-surface attacks.
8. Currency is required in the aircrew's low altitude category for operations at or below 1000 feet (Category I, II, III) Loss of currency requires regression to the next higher category in which 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.
9. Instructor currency is 60 days. Non-currency for 61-180 days requires an instructor recurrency flight with another instructor (same element). Over 180 days requires a Stan/Eval flight check. IP rear cockpit landing currency is 45 days. WIC student sorties count as instructor sorties for currency.
10. Recurrency supervision for pilots will be an IP/IWSO current in the event. Recurrency supervision for WSOs will be an experienced pilot current in the event. FTU instructors will regain currency IAW the syllabus. For NT TFR recurrency a day TF event will be accomplished prior to flying the supervised NT TFR event.
11. For IPs, accomplishing or instructing the event from either C/P will update currency.
12. Supervision will be dual or on the wing/chase. If day Visual Flight Rules (VFR), the supervision level is a pilot, current and qualified in the event; all other times require an IP IAW AFI 11-202V3, *General Flight Rules*.
13. Updated by an actual weapons release on a class A/B/C range.
14. Refer to paragraph **4.6.7.**
15. An NVG academic review is required prior to the NVG non-demanding sortie.

4.7. Regression:

4.7.1. **BMC/CMR Regression for Failure to Meet Lookback.** Only RAP training and Contingency Operations sorties may be used for lookback. If an aircrew does not meet lookback requirements throughout the training cycle, SQ/CC can either: regress the aircrew to Non-CMR/Non-BMC level, as applicable; remove the aircrew from a BMC/CMR manning position; or initiate action to remove the aircrew from active flying status.

4.7.1.1. Failure to meet 1-month RAP/Contingency Operations sortie lookback requires a review of the aircrew's 3-month sortie history. If the 3-month lookback has been met, aircrews may, at SQ/CC discretion, remain in CMR/BMC status. Failure to meet the 3-month lookback will result in regression to Non-CMR/Non-BMC as appropriate, 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. (See **Figure 4.1.**.)

4.7.1.2. CMR/BMC aircrews regressed to N-CMR/N-BMC for lookback, must complete a SQ/CC approved re-certification program to return the aircrew to CMR/BMC standards. Upon completion of the re-certification program, the CMR/BMC aircrews must also meet the subsequent 1-month lookback requirement prior to reclaiming CMR/BMC status. The sorties and events accomplished during the re-certification program may be credited towards their total/type sortie and event requirements for the training cycle as well as for their monthly sortie requirement.

4.7.1.3. 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 Weapons Qualification.** Failure to maintain RAP tasked weapons qualification at the end of the training cycle will require:

4.7.2.1. **For events tasked as Qual at CMR/BMC.** Regression to Non-CMR/Non-BMC. To regain CMR/BMC, the aircrew must re-achieve initial qualification in the deficient weapons event (See paragraph **5.2.**.). Events accomplished for this initial qualification may count toward the cumulative CT event qualification required at the end of the next training cycle.

4.7.2.2. **For events tasked as FAM at CMR/BMC** . Regression to Non-CMR/ Non-BMC. 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 for this initial qualification may count toward the cumulative CT event qualification required at the end of the next training cycle.

4.7.3. Regression for Failed Evaluations. Aircrews who fail an aircraft qualification, mission, or instrument evaluation will be handled IAW AFI 11-202V2 and AFI 11-2F-15EV2. Aircrews will regress to Non-CMR/Non-BMC as applicable. These aircrew will remain Non-CMR/Non-BMC until successfully completing required corrective action, a re-evaluation, and are re-certified by the Sq/CC.

4.8. End of Cycle Requirements. Aircrew who fail to complete sortie and/or event requirements of this instruction by the end of training cycle may require additional training depending on the type and magni-

tude of the deficiency. Refer to paragraph **4.9.** to see if some of these requirements can be prorated. In all cases, report training shortfalls IAW paragraph **1.2.4.5.**.

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

4.8.2. Aircrew who fail to meet annual non-RAP sortie and/or event requirements may continue CT at CMR/BMC determined by lookback. The SQ/CC will determine if additional training is required.

4.8.3. Failure to meet RAP sortie type requirements will result in one of the following:

4.8.3.1. Regression to Non-CMR/Non-BMC if the SQ/CC determines the sortie type deficiency is significant. To regain CMR/BMC, the aircrew will complete all deficient sortie types. These sorties may be counted against the total requirements for the new training cycle.

4.8.3.2. Continuation at BMC/CMR if total RAP sorties and lookback are maintained and the sortie type deficiencies are deemed insignificant by the SQ/CC.

4.8.4. Failure to accomplish sorties required for Special Capabilities/Qualifications will result in loss of that qualification. The SQ/CC will determine re-qualification requirements.

4.9. Proration of End-of-Cycle Requirements. At the end of the training cycle, the SQ/CC may prorate all training requirements when Duties Not Involving Flying (DNIFs), emergency leaves, COT leaves, non-flying TDY/exercises, combat/contingency operations, preclude training for a portion of the training period. Normal annual leave will not be considered as non-availability. Extended bad weather, which precludes 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 only be used to adjust for genuine circumstances of training non-availability, not to mask training or planning deficiencies.

4.9.2. Proration is based on cumulative days of non-availability for flying in the training cycle. Use **Table 4.4.** to determine the number of months to be prorated based on each period of cumulative calendar days of non-flying.

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 training.

4.9.4. **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 flying).

4.9.5. Prorated numbers resulting in fractions of less than 0.5 will be rounded to the next lower whole number, but no requirement may be prorated below one.

4.9.6. Newly assigned/converted aircrews and aircrews 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 sorties must be completed in CT.

4.9.7. 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.

4.9.8. An aircrew's last month on station prior to departing Permanent Change of Station (PCS) may be prorated provided 1 month's proration is not exceeded. Individuals departing PCS 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.

Table 4.4. Proration Allowance.

CUMULATIVE DAYS OF NON-FLYING	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

4.9.9. CMR aircrews who attend USAF Weapons school in TDY-and-return status may be reported throughout the TDY as CMR. Upon return, those aircrews will accomplish a prorated share of sortie/event requirements (See **Table 4.4.**).

4.9.10. **Contingency Operations.** Contingency operations can have a positive or negative impact on a unit's CT program, as emphasis is on supporting the actual contingency. A potential lack of training opportunities while supporting contingency operations can place a burden on the unit, forcing it to accomplish the majority of its CT program in a reduced period of time or with reduced assets. The following proration procedures are intended to provide flexibility in accomplishing the unit's CT program.

4.9.10.1. Normally, all sorties flown during contingency operations will be logged as contingency operations sorties. These sorties do not count toward annual RAP requirements but may be used for lookback purposes. Except AAR, RAP events logged during contingency operations sorties do not count toward annual RAP requirements but may be used to update currencies. Upon relief from contingency operations, units will prorate RAP sorties and events for the period of time each individual was tasked. Additionally, proration is authorized for deployment preparation and deployment recovery time where home station flying is reduced by the MAJCOM.

4.9.10.2. 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 sor-

ties. Events accomplished on these sorties count toward RAP event requirements, and these sorties/events may not be prorated.

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

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 and/or event requirements, requalification 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.** The aircrew must complete Sq/CC directed re-certification program in accordance with paragraph **4.7.1.2.**. 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 qualification and tactical written examinations.

4.10.2.3. **181 Days and Beyond.** Reaccomplish MQT.

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

4.11.1. Capt Smith is an experienced CMR aircrew in ACC with a 1 and 3 month lookback requirement of 8 and 23 RAP sorties respectively. On Feb 3, he flew an ACBT sortie 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 sortie, failing the 1 month lookback. The Flt/CC then performed a 3 month lookback (Dec, Jan, Feb). This showed that he flew only 20 sorties for this period. Had he flown three more sorties, his SQ/CC could continue Capt Smith at CMR. However, with 20 sorties, 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.

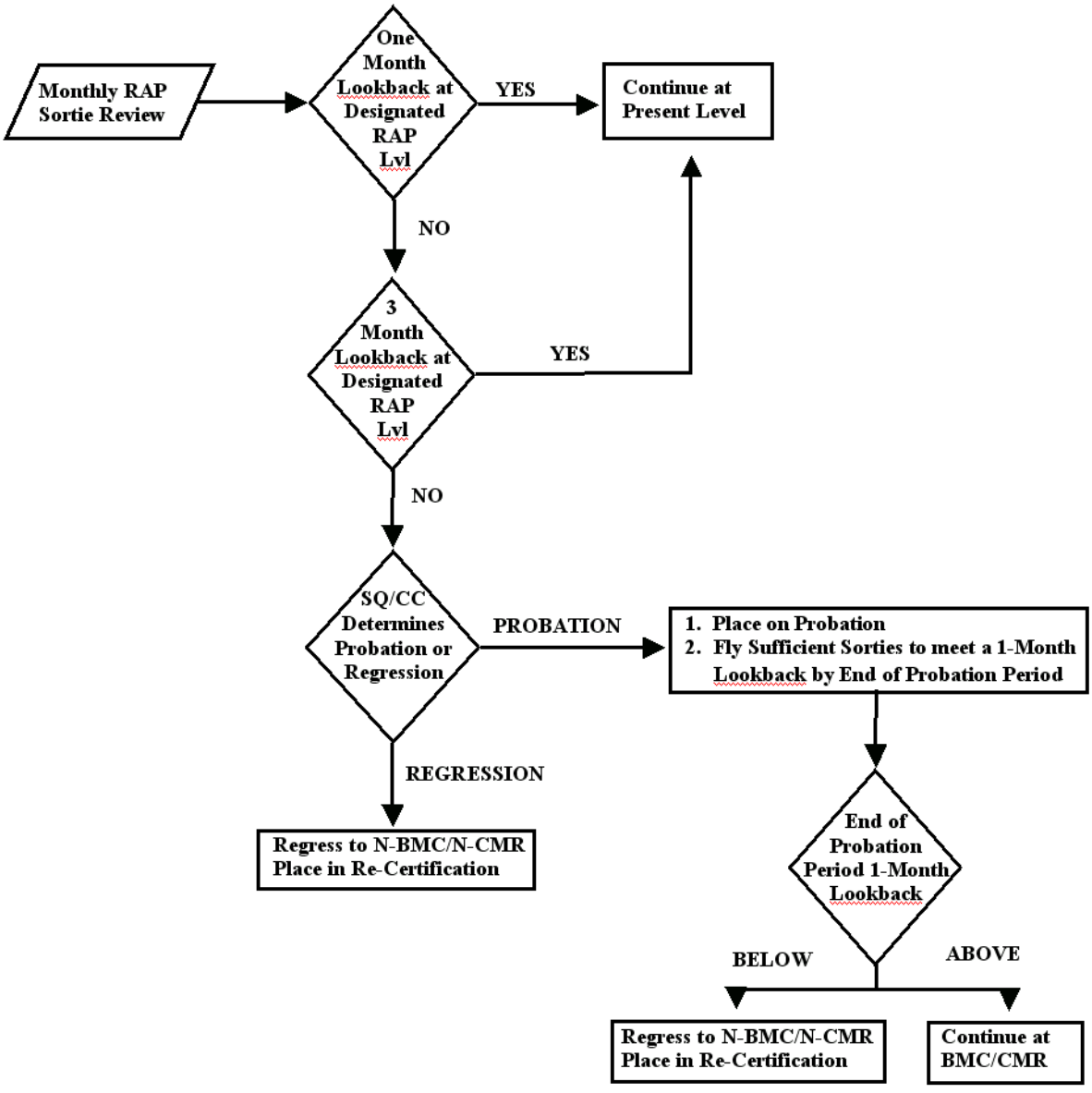
4.11.1.2. The SQ/CC decided to carry Capt Smith on 1 month probation. On 1 Apr, Capt Smith's 1 month lookback (Mar) was 0 sorties. The SQ/CC must now regress Capt Smith to N-CMR. When Capt Smith returns, the SQ/CC will have to place him in a re-certification program. Upon completing this program, Capt Smith will need to re-establish his 1-month lookback by 1 May. Failing to do so would force him to be reported N-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 sorties 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 sortie category. The SQ/CC could regress Capt Smith to N-CMR if the deficiency was deemed significant. After accomplishing the tailored recertification program (the deficient sorties), the SQ/CC would re-certify Capt Smith to CMR. This training counts for the new training cycle.

Figure 4.1. Regression Flow Chart.



4.12. Chemical Warfare (CW) Continuation Training (CT). CW CT flight requirements are IAW MAJCOM supplements (if any). Restrictions include:

4.12.1. Aircrews must be fully current and qualified in an event prior to accomplishing that event on a CW sortie.

4.12.2. Minimum altitude is 500 feet AGL (day) and 1,000 feet AGL (night) except for takeoffs, approaches, and landings.

4.12.3. Night AAR is unauthorized. A/A training is restricted to "limited maneuvering" training rules.

4.12.4. CT Weather minimums for pilots in CW gear are 700 feet ceiling and 2 miles (3.2km) visibility.

4.12.5. Four ship formations may be flown, but only one pilot in an element, and only one aircrew member per aircraft can be in CW gear.

4.12.6. CW mask, filter pack, and gloves are required for CW CT flight credit.

4.12.7. A CWCT flight fulfills the annual CWCT WST requirement.

4.13. Low/Slow Speed EID/VID Procedures:

4.13.1. For Strategic Defense Units and units specifically tasked to perform the strategic defense mission or counter drug role, comply with current approved guidance.

4.13.2. For all other units, the objective of this low/slow EID/VID training is to expose aircrews to problems associated with intercepting low/slow flying aircraft (rotary and fixed wing) for visual identification practice in a threat environment. Emphasis should be placed on dissimilar adversaries below 5000 feet AGL and 250 KIAS (helicopters are desired). Training will be conducted IAW AFTTP 3-1, AFI 11-2F-15EV3, and AFI 11-214.

4.13.2.1. Unit-developed ground training programs will be designed for unit specific equipage and employment taskings. Academic sessions should be conducted during weapons and tactics training and maximum use of the visual recognition program is encouraged.

4.13.2.2. Flying training missions should, to the maximum extent possible, include helicopter operations and considerations. Creation of a realistic environment to stimulate the aircraft EID/VID suite is essential to the conduct of low/slow VID procedures. Units must make every effort to maximize effective use of limited assets as well as to instill awareness and actions appropriate to this training. SQ/CC's will determine the depth of ground and flying training necessary prior to participating in exercises and contingency operations.

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

4.14.1. The basis of this program is to give each FL, SQ supervisor, instructor, and flight surgeon the skills needed to evaluate a flight member's AVTR to ensure a proper L-1 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 AVTR assessment while reviewing other tactical portions of the mission.

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

4.14.2.1. AGSM technique and assessment will be incorporated into the squadron FLUG, IPUG, IWUG, and CT programs. Emphasis will be placed on briefing, debriefing, and assessing the L-1

AGSM using the AVTR in the debrief on a daily basis. FLs, instructors, SQ supervisors, and flight surgeons should become adept at assessing and teaching the correct AGSM. The video, "Anti-G Strain Technique Reinforcement and Assessment", will be made an integral part of FL, IP and IWSO upgrade ground training.

4.14.2.2. Units will include "AGSM effectiveness" on MQT and "AGSM assessment" on FLUG and IPUG grade sheets. These areas will be evaluated on upgrade sorties where more than five Gs are pulled.

4.14.2.3. FLs will emphasize G-awareness during appropriate portions of the flight briefing.

4.14.2.4. G-awareness exercises will be filmed in HUD only and in hot mic. The second turn of the G-awareness exercise for A/A sorties will be a minimum of 180 degrees of turn.

4.14.2.5. The tactical portion of all basic missions (BFM, SA, 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 breathing and AGSM technique in the debrief. For high task sorties (Dissimilar Air Combat Tactics (DACT), Composite Force Training (CFTR), etc.), it is highly desired for aircrews to fly in hot mic. The purpose of this is to identify break-downs in the AGSM that commonly occur during high task portions of a mission.

4.14.2.6. Flight Leads/instructors will assess the AGSM effectiveness of flight members during mission debriefings. This assessment should not be limited to the G-awareness exercise. It is imperative to evaluate the AGSM after the aircrew has had the time to fatigue, as this is usually when the AGSM breaks down and GLOC occurs. The intent of this requirement is to get an honest assessment of a aircrew's AGSM during a tactically and G- demanding portion of flight. The same AGSM should be performed anytime G is applied; only the intensity of the maneuver is varied. Therefore, the AGSM should also be evaluated under relatively low intensity G such as A/S sorties.

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

4.14.4. The involvement of the aerospace medical team is important to the success of this program. All SQ flight surgeons assigned to fighter/attack/Forward Air Controller (Airborne) (FAC(A))/Recce/ FTU are required to complete centrifuge training IAW AFI 11-404. During centrifuge training they will receive instruction on AVTR review.

4.14.5. The squadron will develop a program to ensure an A/A mission tape for each aircrew is reviewed each training cycle by the squadron FS and a squadron supervisor.

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 air-to-surface weapons and the employment of air-to-air weapons. Refer to "Glossary of Events" at **Attachment 2** for further guidance on weapons events.

5.2. Initial Qualification:

5.2.1. Aircrews must accomplish initial qualification in any weapons event requiring qualification 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. If not otherwise specified, initial qualification in a weapons event is satisfied when the aircrew has achieved a minimum of 3 hits out of 6 consecutive record deliveries.

5.2.3. **Strafe/conventional.** Deliveries may be accomplished from basic or tactical deliveries. Prior to initial qualification in strafe, there is no limit to the number of hot passes.

5.2.4. **Maverick** . Deliveries must be accomplished from tactical deliveries.

5.2.5. Initial A/A missile employment qualification is achieved by meeting the Qualification (QUAL) 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.

5.2.6. Initial A/A gun employment qualification is achieved by scoring an individual (i.e., element/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. Any DART pattern defined in AFI 11-214 is authorized. If DART/AGTS are not available, gun qualification may be accomplished via VTR assessment.

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/escape, recovery using applicable safe escape maneuver, egress, etc. CT air-to-surface weapons event requirements will be accomplished on scoreable tactical ranges to the maximum extent possible.

5.3.3. Weapons qualification will be maintained by completing a minimum number of record hits, and record deliveries (if required), and also by achieving appropriate qualification percentage during the training period.

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 Non-BMC/Non-CMR and entered into re-certification until 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 qualification. If qualified, the aircrew's qualification is valid through the following training period.

5.3.6. Each aircrew's air-to-air weapons employment will be assessed for validity IAW AFTTP 3-1 criteria and the results in each category (AIM 7/9/120 and gun) will be recorded for the current training period. Qualification requires 75 percent valid shots for AIM-120/7/9 at pickle and 50 percent hit rate for gun (excluding snap shots).

5.3.7. Unless otherwise specified, qualification criteria is 12 record hits and an overall record hit rate of 50 percent. Additional guidance:

5.3.7.1. **Strafe.** Multiple strafe for the same type event is authorized if cockpit rounds count is declared between events, the appropriate total number of rounds are set in the limiter, and different target arrays are used (i.e. a different range or at least 90 degrees heading change). Aircrews will be charged actual rounds fired or rounds set per event, whichever is greater, for each event.

5.3.7.2. **Maverick.** If a unit is equipped with both Electro-Optical (EO) and Infrared (IR) mavericks, 12 hits are required and should be equitably divided between types based on unit equipage and expected tasking.

5.3.7.3. **DART/AGTS.** Aircrews will use basic or tactical patterns, as defined in AFI 11-214, and must achieve a hit. DART/AGTS qualification criteria (other than initial) using combat/tactical patterns, is one hit on DART/AGTS as sole shooter; or at least one hit during sequential attack tactics when both shooters have fired on DART (N/A for AGTS) and VTR reviews verify that sufficient tracking was accomplished during actual time of fire to warrant crediting a hit to each element member.

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 AFI 11-F-15EV3 and AFI 11-214.

5.4.1.1. **High Angle Strafe (HAS).** Event is scored on a point target from a dive angle greater than 15 degrees. Minimum recovery altitude is 1,500 feet AGL. Maximum number of passes is 2. Aircraft rounds limiter will be set to provide 100 scoreable rounds. Hit criteria: On any pass, bullet dispersion within 75 feet of point target with independently observed impacts on the target.

5.4.1.2. **DART.** One bullet impact is required. Also, a hit will be credited to each element member when at least one bullet impact occurs during sequential attack tactics when both shooters have fired on DART and VTR reviews verify that sufficient tracking was accomplished during actual time of fire.

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

5.4.2. **Free Fall Ordnance Events:**

5.4.2.1. **Loft Event** . Loft event is a low altitude climbing delivery using appropriate aircraft systems for target acquisition, tracking, and weapons release while maximizing standoff range or weapons effects. Minimum run-in/recovery altitude is the aircrew's minimum low altitude qualification or range/target area restrictions, whichever is higher. Hit criteria: 345 feet (105m).

5.4.2.2. **Level Events:**

5.4.2.2.1. **Visual Level Delivery (VLD).** Visual Level is a delivery with less than five degrees of climb or dive at weapons release (non-maneuvering) using any means of delivery with visual target acquisition/designation. Minimum run-in/recovery altitude is safe separation/escape/fuze arm for ordnance being delivered/simulated, aircrew minimum low altitude qualification, or range/target area restrictions, whichever is higher. Hit criteria: 130 feet (40m).

5.4.2.2.2. **Systems Level Delivery (SLD).** Systems Level is a delivery with less than five degrees of climb or dive at weapons release (non-maneuvering) using any means of delivery without visual target acquisition/designation. Minimum run-in/recovery altitude is safe separation/escape/fuze arm for ordnance being delivered/simulated, aircrew minimum low altitude qualification, or range/target area restrictions, whichever is higher. Hit criteria: 195 feet (60m).

5.4.2.3. **Dive and Toss Events:**

5.4.2.3.1. **Low Angle High Drag (LAHD).** Dive angle is less than 30 degrees. Minimum recovery altitude 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) for computed deliveries.

5.4.2.3.2. **Low Angle Low Drag (LALD).** Dive angle is less than 30 degrees. Minimum recovery altitude 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).** Dive angle is 30 degrees or greater. Minimum recovery altitude 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) for computed deliveries.

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

5.4.2.3.5. **High Altitude Release Bomb (HARB).** Any aircraft system may be used for target designation and weapon release. Minimum recovery altitude is 10,000 feet AGL. Hit criteria: 255 feet (78m) for computed deliveries.

5.4.2.3.6. **Low Altitude Toss (LAT).** A 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. Minimum recovery altitude is the aircrew's low altitude qualification or range/target area restrictions, whichever is higher. Any system may be used for target designation and weapon release. If this delivery is used for a Laser Guided Bomb (LGB) event, use para **5.4.3.3.** Hit criteria is: 175 feet (53m).

5.4.3. **Precision Guided Munitions Events:**

5.4.3.1. **Maverick.** A delivery initiated from a level, diving, or pop-up maneuver to achieve line-of-sight to the target(s). Acquisition, missile lock-on and launch, or 2 seconds stable lock-on in "No launch" conditions, followed by a tactical escape maneuver is required. Hit criteria: either actual target impact or valid, recorded Training Guided Munitions (TGM) simulated weapon release within launch parameters with stabilized target tracking.

5.4.3.2. **EGBU-15/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. Hit criteria for an actual EGBU-15/AGM-130 delivery is 33 feet (10m). Hit criteria for simulated release is: Target locked on at termination of the data link delivery profile (with manual steering, target in field of view at termination of the data link delivery profile). Note: An aircrew delivering (but not guiding) a EGBU-15/AGM-130 does not receive credit for a EGBU-15/AGM-130 delivery. VTR tape in the data link aircraft will be used to evaluate delivery accuracy (target within field of view prior to guidance commands).

5.4.3.3. **Laser Guided Bomb (LGB) Event.** An event using aircraft systems to determine pull-up/ release point and simulated/actual laser designation on the target. Delivery of ordnance, actual or training, is not required. Note: An aircrew delivering (but not guiding) a LGB does not receive credit for a LGB delivery. Minimum run-in/recovery altitudes will be based upon delivery profile used and for ordnance being simulated/delivered. Hit criteria for all LGB delivery profiles is 33 feet (10m) for actual ordnance. Simulated deliveries will be scored a hit if the weapon was released within planned allowable parameters and a laser tracking accuracy of 1.8 mils, with valid laser ranging (actual or simulated), is demonstrated during the last 8 seconds of flight.

5.4.4. **Air-to-Air Weapons Event (AIM-7/9/120 and Gun).** A hit is IAW AFTTP 3-1 shot criteria, determined by VTR review or actual delivery.

5.5. Full Scale/Live Ordnance. Full Scale/Live ordnance training is essential to aircrew combat capability. Every attempt should be made to give each aircrew the opportunity to deliver/employ as many types of weapons inventoried on the unit's UCML. To provide this opportunity, as a goal, all CMR aircrews should expend the following ordnance (IAW AFI 36-2217, *Munitions Requirements for Aircrew Training*):

5.5.1. For units tasked with AI, CAS, Suppression of Enemy Air Defenses (SEAD), OCA Air-to-Surface (OCA-S), and/or SA missions: One free fall ordnance Full Scale Weapons Delivery (FSWD) and one Precision Guided Munitions (PGM) delivery per year.

5.5.2. For units tasked with DCA, Strategic Defense, and/or OCA Air-to-Air missions: One live A/A missile event per year.

Chapter 6

SPECIALIZED TRAINING

6.1. General Guidance. This chapter outlines duties and responsibilities for units to upgrade, qualify, and maintain proficiency/currency for special capabilities and special qualifications. These capabilities and 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 qualifications covered in this chapter include:

6.2.1. Flight Lead Upgrade(FLUG).

6.2.2. Instructor Pilot Upgrade (IPUG).

6.2.3. Instructor Weapons Systems Officer Upgrade (IWUG).

6.2.4. Simulator Instructor Upgrade.

6.2.5. Mission Commander Upgrade.

6.2.6. Maverick Upgrade.

6.2.7. EGBU-15/AGM-130 Upgrade.

6.2.8. Pre-Deployment Spin-up Training

6.2.9. Night Vision Goggle Qualification

6.2.10. Air Defense Augmentation

6.2.11. Combat Search and Rescue

6.3. Flight Lead Upgrade. SQ/CCs will select only highly qualified, motivated, and responsible aircrews 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 2 aircraft until certified as a 4-ship FL. The SQ/CC will determine when a 2-ship FL may train toward larger, more complex formations (3 or 4-ship, mission commander, etc.). FL training should place appropriate emphasis on 4-ship tactical employment.

6.3.1. **Entry Flying Hour Requirements** . The following minimum flying hours are required prior to entering FL upgrade training:

6.3.1.1. 300 hours PAI, or

6.3.1.2. 400 hours IP/MP/FP in an 11Fxx/11K3C/11K3D AFSC of which 200 hours are PAI, or

6.3.1.3. 50 hours PAI, if previously qualified 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, squadron training objectives.

6.3.2.2. **Mission Preparation.** Mission objectives, wingman requirements and responsibilities, currencies, capabilities, delegation of mission planning duties, and briefing preparation.

6.3.2.3. **Conduct of Flight Briefings and Debriefings** . Objectives, use of briefing guides and audiovisual aids, flight member involvement, briefing techniques, debriefing/questioning techniques, tape review responsibilities and procedures.

6.3.2.4. **Conduct of Missions.** Control of flight, flight discipline, emergency procedures, training rules, and responsibilities to SQ/CC.

6.3.2.5. **AGSM Techniques.** Briefing, debriefing, and AVTR assessment. Review the video, Anti-G Strain Technique Reinforcement and Assessment.

6.3.2.6. IFEs and Emergency Diverts.

6.3.3. **Flying 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 as necessary to meet unit and/or upgradee specific needs. Missions may be flown in any order provided day training precedes respective night training. SQ/CCs will determine which sorties are required based on a review of previous experience and may certify a flight lead with appropriate restrictions based on training not accomplished (i.e., no AAR, etc.). An evaluation sortie is required. Two formation takeoffs and landings, a trail arrival, and an aerial refueling (as flight lead, day or night) will be accomplished during the program. Tape review/assessment, to include a review of AGSM, will be accomplished on every sortie. All FLUG training will be under the supervision of an IP, flight lead qualified squadron supervisor, WSO SQ/DO or WSO SQ/CC accompanied by a flight lead. FLUG-14 is the minimum required for 4-ship FL upgrade. Conduct FLUG NVG training in accordance with paragraph **6.11.**

6.3.3.1. **FLUG-1, BFM--Mission Objectives.** Practice leading and controlling 1v1 BFM mission. Mission Tasks: Briefing (emphasis on pursuit curves, weapons employment zones, high AOA maneuvering, departure/loss of control prevention/recovery, and GLOC awareness), formation takeoff (lead), weapons system checks, tactical formation, offensive and defensive BFM from visual perch setups, weapons employment, BD check, formation landing (lead), mission reconstruction/debriefing, tape review/assessment.

6.3.3.2. **FLUG-2, ACM (Offensive)--Mission Objectives.** Practice leading and controlling a 2v1 ACM mission. Mission Tasks: Briefing (emphasis on engaged/support fighter responsibilities, attack options/coordination, radio procedures, and engaged maneuvering techniques), weapons system check, tactical formation, fence check, radar/visual lookout, element offensive maneuvering against a single adversary, mutual support, radio discipline, weapons employment, separations, BD check, mission reconstruction/debriefing, tape review/ assessment.

6.3.3.3. **FLUG-3, ACM (Defensive)--Mission Objectives.** Practice leading and controlling a 2v1 counter-offensive ACM mission. Mission Tasks: Briefing (emphasis on radar/visual lookout, descriptive/directive commentary, initial moves, and engaged maneuvering techniques), formation takeoff (lead), weapons system checks, tactical formation, fence check, radar/visual lookout, element counter-offensive maneuvering to negate an attack and bring ordnance to bear or separate, mutual support, radio discipline, weapons employment, separations, BD check, formation landing (lead), mission reconstruction/ debriefing, tape review/assessment.

6.3.3.4. **FLUG-4, (D)ACT--Mission Objectives.** Practice leading and controlling a 2v2 ACT mission in a counterair scenario. Mission Tasks: Briefing, weapons system checks, tactical forma-

tion, fence check, BVR set-ups for point/area defense scenarios (as appropriate), radar/visual lookout, tactical intercepts, engaged maneuvering as an element, radio discipline, mutual support, weapons employment, separations, BD check, mission reconstruction/debriefing, tape review/ assessment.

6.3.3.5. **FLUG-5, Dart/AGTS (If Applicable)--Mission Objectives.** Practice leading and controlling a gun employment mission. Mission Tasks: Briefing (emphasis on gun preflight, BIT checks, systems check, pattern procedures, firing procedures/techniques, training rules and foul criteria, degraded system considerations and gun malfunction procedures), ground ops (arming/ dearming, etc.), departure, weapons system check, gun employment (preferably tactical intercept to combat pattern), BD check, hot gun recovery, mission reconstruction/debriefing, tape review/ assessment.

6.3.3.6. **FLUG-6, BSA--Mission Objectives.** Practice leading and controlling a 2-ship conventional weapons delivery mission to a controlled range. Mission Tasks: Briefing (emphasis on low altitude awareness, conventional range procedures/training rules, weapons delivery pattern procedures/parameters, delivery modes, recovery maneuvers), weapons system check, tactical formation, low level navigation, controlled range procedures, weapons deliveries (climbing/diving/ level), strafe, hot gun/hung ordnance recovery, mission reconstruction/ debriefing, tape review/ assessment.

6.3.3.7. **FLUG-7, BSAN--Mission Objectives.** Practice leading and controlling 2-ship night weapons delivery mission to a controlled range. Mission Tasks: Briefing (emphasis on night range procedures, and night weapons deliveries), trail departure, weapon system check, low level navigation (if possible), controlled range procedures, weapons deliveries (level/climbing/diving), formation recovery and instrument approach, mission reconstruction/debriefing.

6.3.3.8. **FLUG-8, SAT--Mission Objectives.** Practice leading and controlling an element as number three of a 4-ship tactics mission to a tactical range/working area in a medium/high threat scenario (IP will fly as number four). Specific Mission Tasks: Trail departure, 2 v X low altitude intercepts, tactical ingress, medium/high threat target area tactics, tactical egress, Communications Jamming (COMM JAM) procedures.

6.3.3.9. **FLUG-9, SAT--Mission Objectives.** Demonstrate proficiency in leading and controlling a 2-ship mission to a tactical range in a high threat scenario. Mission Tasks: Briefing (emphasis on low altitude awareness, high threat area ingress, tactics range procedures, visual/radar lookout, threat reactions, egress), weapons system check, tactical formation, low level navigation, target area ingress, threat reactions, weapons delivery tactics, egress, BD check, mission reconstruction/ debriefing, tape review/assessment.

6.3.3.10. **FLUG-10, Commander's Evaluation (2-ship)--Mission Objectives.** Evaluation (by squadron commander or designated representative) of flight lead abilities in a tactical mission scenario based on unit tasking. Mission Tasks: Briefing, mission accomplishment, flight management and control, mission reconstruction, assessment, and critique.

6.3.3.11. **FLUG-11, (D)ACT--Mission Objectives.** Practice leading and controlling a 4vX (D)ACT mission in a counterair scenario. Mission Tasks: Briefing, tactical formation, BVR set-ups for point/area defense scenario, element/flight control and employment tactics, fuel awareness, radio discipline, weapons employment, rejoin, BD check, 4-ship recovery (conditions permitting), mission reconstruction/debriefing, tape review/assessment.

6.3.3.12. **FLUG-12, BSA--Mission Objectives.** Practice leading and controlling a 4-ship weapons delivery mission to a controlled range. Mission Tasks: Briefing, formation takeoff, low level tactical formation/navigation, controlled range procedures, weapons deliveries, rejoin, BD check, hot gun/hung ordnance recovery, mission reconstruction/debriefing, tape review/assessment.

6.3.3.13. **FLUG-13, SAT--Mission Objectives.** Practice leading and controlling a 4-ship conventional weapons delivery mission to a tactical range in a high threat scenario. Mission Tasks: Briefing, low level tactical formation/navigation, threat reactions (surface/air), tactical ingress, element attack coordination, egress, BD check, mission reconstruction/debriefing, tape review/assessment.

6.3.3.14. **FLUG-14, Commander's Evaluation (4-Ship)--Mission Objectives.** Evaluation (by squadron commander or designated representative) of flight lead abilities in a tactical mission scenario based on unit tasking. Mission Tasks: Briefing, mission accomplishment, flight management and control, mission reconstruction, assessment and critique.

6.3.4. **Flight Lead Certification.** Following successful completion of FLUG-10 and/or 14, 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., Dart, AAR, etc.) need not delay certification. The SQ/CC will certify new flight lead's status, including any restrictions, in appropriate written format (letter, gradeslips, ARMS, etc.).

6.4. Instructor Pilot (IP) Upgrade. This program establishes the minimum guidelines for those pilots identified by the SQ/CC to upgrade to IP. 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 sorties will be supervised by an IP or an OG/CC designated Weapons School Graduate IWSO.

6.4.1. **Entry Flying Hour Requirements** . Pilots selected for IP upgrade must be 4-ship FLs with either:

6.4.1.1. 1,000 hours IP/MP/FP time of which 300 hours are PAI, or

6.4.1.2. 700 IP/MP/FP hours in a 11Fxx AFSC of which 100 hours are PAI, or

6.4.1.3. 600 IP/MP/FP hours in an 11Fxx AFSC of which 200 hours are PAI, or

6.4.1.4. 500 IP/MP/FP hours in an 11Fxx AFSC of which 300 hours are PAI.

6.4.1.5. Pilots selected for the FTU Instructor Upgrade Training Course, F15EIQ, must be current in the F-15E, have a minimum of three months operational experience as a fully qualified F-15E 4-ship flight lead, and meet the entry flying hour requirements outline above.

6.4.2. **Ground Training.** Upgrading pilots must satisfactorily complete the following unit-developed blocks of instruction prior to certification as IPs:

6.4.2.1. **Principles of Instruction** . Learning objectives, instructor responsibilities, IP/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 Briefing.** Training objectives, order of presentation, use of briefing guides and audiovisual aids, debriefing techniques.

6.4.2.4. **Conduct of Phase Briefings.** Techniques for briefing, use of visual aids, review of applicable phase briefings.

6.4.2.5. **AGSM Techniques.** Briefing, debriefing, and AVTR assessment. Review the video, Anti-G Strain Technique Reinforcement and Assessment.

6.4.2.6. **Student Evaluations.** Grading systems and preparation/use of gradesheets.

6.4.3. **Simulator Training.** A minimum of one WST mission will be accomplished in the rear cockpit to familiarize the upgrader with RCP switchology and avionics.

6.4.4. **Flying Training.** Training will be conducted according to mission outlines listed below in any order. OG/CC may waive selected missions based on previous experience. Accomplishment may be as configuration and scheduling permit. AAR may be completed on any mission. Failure to complete specific training events (i.e., Dart, AAR, etc.) need not delay certification. In such cases, SQ/CC will certify IPs with appropriate limitations to preclude performance of duties in which training is incomplete. IPUG-1, 2, 7, and 8 must be flown in the rear cockpit with an IP in the front cockpit.

6.4.4.1. **IPUG-1, Day Transition--Mission Objectives.** Introduce Upgrading Instructor Pilot (UIP) to rear cockpit instruction, aircraft handling, instrument approaches, and patterns and landings (normal/no-flap/Simulated Single Engine (SSE)). Mission Tasks: Briefing, rear cockpit takeoff, departure, selected aerobatics, confidence maneuvers, advanced handling maneuvers, instrument recovery/approach, normal/no-flap/SSE touch-and-go landings, closed patterns, full stop landing, debriefing.

6.4.4.2. **IPUG-2, Night Transition--Mission Objectives.** Brief and instruct night transition, AAR, and intercept procedures. Mission Tasks: Briefing, rear cockpit takeoff, trail departure, join-up, tanker rendezvous, NAAR, basic formation, intercepts (straight through/stern conversions/ no-locks), night formation approach (lead), debriefing.

6.4.4.3. **IPUG-3, BFM--Mission Objectives.** Brief and instruct 1v1 offensive and defensive BFM. Mission Tasks: Briefing, formation takeoff (lead), weapons system check, tactical formation, offensive and defensive BFM from visual perch set-ups, weapons employment, formation approach and landing, debriefing (emphasis on accurate reconstruction and error analysis), tape review/assessment.

6.4.4.4. **IPUG-4, D/ACM--Mission Objectives.** Brief and instruct offensive and counter-offensive ACM from visual and/or radar set-ups. Mission Tasks: Briefing (emphasis on positive flight control, radar/visual lookout, radio discipline, engaged/support fighter responsibilities, training rules), departure, weapons system checks, tactical formation, offensive and counter-offensive engagements, descriptive/directive commentary, initial moves, element maneuvering, weapons employment, mutual support, rejoin, recovery, debriefing (emphasis on accurate reconstruction and error analysis), tape review/assessment.

6.4.4.5. **IPUG-5, D/ACT--Mission Objectives.** Brief and instruct a 2v2 air combat tactics mission. Mission Tasks: Briefing, formation takeoff (lead), departure, weapons system check, tactical formation, GCI/AWACS procedures (if available), CAP procedures, commit criteria, visual/ radar lookout, search/sort responsibilities, tactical intercepts, radio discipline, engaged maneuvering tactics, weapons employment, mutual support, separations, rejoin, formation recovery and landing, debriefing (emphasis on accurate reconstruction and error analysis), tape review/assessment.

6.4.4.6. **IPUG-6, Dart/AGTS (If Applicable)--Mission Objectives.** Brief and instruct a gun employment mission. Mission Tasks: Briefing (emphasis on gun preflight, PACS set-up, BIT checks, pattern procedures, training rules, normal/degraded system firing procedures/techniques, fouls, gun malfunction procedures), ground ops, departure, Dart/AGTS patterns/ procedures, gun employment, BD check, hot gun recovery, debriefing, tape review/assessment. (**NOTE:** Upgraders will be exposed to both basic and combat dart patterns.)

6.4.4.7. **IPUG-7, BSA--Mission Objectives.** Brief and instruct a surface attack mission on a controlled range. Mission Tasks: Briefing, weapons system check, LASDT, tactical formation, low level navigation, controlled range procedures, weapons deliveries (basic and tactical patterns), simulated hung ordnance recovery, debriefing, tape review/assessment.

6.4.4.8. **IPUG-8, BSAN--Mission Objectives.** Brief and instruct a night surface attack mission on a controlled range. Mission Tasks: Briefing, weapons system check, TFR operations including TF confidence check and flyup procedures, night low level navigation, controlled range procedures, weapons deliveries (level/climbing/diving), formation recovery/approach, debriefing.

6.4.4.9. **IPUG-9, SAT--Mission Objectives.** Brief and instruct a surface attack tactics mission in a low/medium threat scenario. Mission Tasks: Briefing (emphasis on tactical range procedures, patterns, deliveries), tactical formation, low level navigation, ingress, target area tactics, weapons deliveries, egress, BD check, recovery, debriefing, tape review/assessment.

6.4.4.10. **IPUG-10, SAT--Mission Objectives.** Brief and instruct a surface attack tactics mission in a high threat scenario. Mission Tasks: Briefing, weapon system check, tactical formation, low level navigation, EC procedures, high threat target area ingress, threat reactions, target area tactics, weapons deliveries, egress, BD check, recovery, debriefing, tape review/assessment.

6.4.4.11. **IPUG-11, Low/Medium Level Strike (If Applicable)--Mission Objectives.** Brief and instruct strike mission planning and execution to a first run simulated nuclear delivery. Mission Tasks: Strike mission planning, briefing, low level navigation, visual and radar loft and laydown deliveries (to include emergency release procedures) to a specific TOT, systems update and timing procedures, Identification Friend or Foe (IFF)/Selective Identification Feature (SIF) procedures, execution message authentication procedures, recovery, debriefing, tape review/assessment.

6.4.4.12. **IPUG-12, IP Flight Evaluation.** IAW AFI 11-202V2 and unit requirements.

6.5. Instructor Weapons System Officer (IWSO) Upgrade. CCs will select only the most qualified WSOs as instructors, considering ability, judgment, technical knowledge, skill and experience. OG/CC may waive selected missions based on previous experience/qualifications. FTU instructors will complete a formal syllabus course as defined in AFCAT 36-2223. Upgrade sorties will be supervised by a IP/IWSO

6.5.1. **Entry Flying Hour Requirements.** Instructor WSO flying time prerequisites are:

6.5.1.1. 700 total hours of which 100 hours is PAI, or

6.5.1.2. 600 total hours of which 200 hours are PAI, or

6.5.1.3. 500 total hours of which 300 hours are PAI.

6.5.1.4. WSOs selected for the FTU Instructor Upgrade Training Course, F15EIQ, must be current in the F-15E and have successfully completed this IWSO Upgrade program.

6.5.2. **Ground Training.** Upgraders must satisfactorily complete the following unit developed blocks of instruction prior to certification as an IWSO.

6.5.2.1. **Principles of Instruction.** Learning objectives, instructor responsibilities, instructor/student relationship, training facilities and publications.

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

6.5.2.3. **Conduct of Flight Briefings.** Training objectives, order of presentation, use of briefing guides and audiovisual aids, debriefing techniques.

6.5.2.4. **Conduct of Phase Briefings.** Techniques for briefing, use of visual aids, review of applicable phase briefings.

6.5.2.5. **AGSM Techniques.** Briefing, debriefing, and AVTR assessment. Review the video, Anti-G Strain Technique Reinforcement and Assessment.

6.5.2.6. **Student Evaluations.** Grading systems and preparation/use of gradesheets.

6.5.3. **Simulator Training.** A minimum of one WST mission will be flown in the front cockpit to familiarize the Upgrading IWSO (UIWSO) with FCP switchology and avionics.

6.5.4. **Flying Training.** Training will be conducted according to mission outlines listed below. Missions may be flown in any order. Air refueling may be accomplished on any mission. Failure to complete specific training events (i.e., AAR) need not delay certification. In such cases, squadron commanders will certify IWSOs with appropriate limitations to preclude performance of duties in areas in which training is incomplete. All missions will be supervised by an IP in the aircraft with the upgrading IWSO, or with a SQ/CC approved IWSO in the element.

6.5.4.1. **IWUG-1, BFM/ACM--Mission Objectives.** Practice briefing and instructing BFM and/or ACM. Mission Tasks: Briefing (emphasis on crew coordination, radar procedures, descriptive/directive commentary), weapons system check, AGSM, self set-up/GCI directed intercepts, engagements, directive/descriptive commentary, debriefing (emphasis on accurate reconstruction and error analysis).

6.5.4.2. **IWUG-2, D/ACT--Mission Objectives.** Practice briefing and instructing a 2v2 air combat tactics mission. Mission Tasks: Briefing, tactical game plan, weapons system check, AGSM, tactical intercepts to 2v2 engagements, radar procedures, crew coordination, directive/descriptive commentary, separations, debriefing (emphasis on accurate reconstruction and error analysis).

6.5.4.3. **IWUG-3, BSA--Mission Objectives.** Practice briefing and instructing a surface attack mission on a controlled range. Mission Tasks: Briefing (emphasis on crew coordination, range procedures/patterns, training rules, fouls), LASDT, BD check, recovery, debriefing (emphasis on accurate reconstruction and error analysis).

6.5.4.4. **IWUG-4, BSAN--Mission Objectives.** Practice briefing and instructing night AAR and controlled range operations. Mission Tasks: Briefing, trail departure, tanker rendezvous, night AAR, TFR operations including TF confidence check and flyup procedures, night low level navigation, night weapons deliveries on a controlled range, recovery, debriefing (emphasis on accurate mission reconstruction and error analysis).

6.5.4.5. **IWUG-5, SAT--Mission Objectives.** Practice briefing and instructing a weapons delivery mission in a medium/high threat scenario. Mission Tasks: Briefing (emphasis on crew coordination, ingress/egress tactics, EC operations), departure, low level navigation, tactical formation, target area ingress, target area tactics, weapons deliveries, egress, EC operations, threat reactions, rejoin, BD check, recovery, debriefing (emphasis on accurate mission reconstruction and error analysis).

6.5.4.6. **IWUG-6, LLS (If Applicable)--Mission Objectives.** Practice briefing and instructing strike mission planning and execution to a first run simulated nuclear attack. Mission Tasks: Strike mission planning, briefing (emphasis on crew coordination procedures, route control/timing procedures, weapon enabling procedures, delivery options), departure, weapons system check, low level navigation, visual and radar/system deliveries (level and loft), emergency release procedures, min-risk departure and recovery procedures, IFF/SIF procedures, execution message authentication, recovery, debriefing (emphasis on accurate mission reconstruction and error analysis).

6.5.4.7. **IWUG-7 IWSO Flight Evaluation.** This mission will be flown IAW AFI 11-202V2 and unit requirements.

6.6. Simulator Instructor (SI) Upgrade. The following WST mission profiles should be used to train and qualify selected simulator instructor upgradees to operate the Instructor Operator Station (IOS). The contractor simulator instructor program will be IAW the appropriate contract. SQ/CCs will determine the number of SIs required to perform unit mission. The required supervision for this upgrade program is an IOS-qualified/current WST instructor.

6.6.1. **Academic Training.** Prior to the first IOS mission, the Upgrading Simulator Instructor (USI) will complete the following unit developed blocks of instruction:

6.6.1.1. **Principles of Instruction.** Learning objectives, instructor responsibilities, instructor relationship, training facilities, and publications.

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

6.6.1.3. **Conduct of Flight Briefing.** Training objectives, order of presentation, use of briefing guides and audiovisual aids, debriefing techniques.

6.6.1.4. **Conduct of Phase Briefings.** Techniques for briefing, use of visual aids, review of applicable briefings.

6.6.1.5. **Evaluations.** Grading systems and preparation/ use of gradesheets.

6.6.2. **Mission Profiles (Based on Simulator Capabilities):**

6.6.2.1. **SIMI-1--IOS Operations.** Mission initialization, Cathode Ray Tube (CRT) page review and modification, keyboard operation, light pen operation, emergency shutdown, record/playback, hard copy, performance, and procedures monitoring.

6.6.2.2. **SIMI-2--IOS Operations.** Tactics mission file, console-operated air intercepts and options, A/A weapons scoring, ground threats and modifications, A/S weapons scoring, surface-to-air engagement scoring, program and simulator freeze, mission parameter modifications.

6.6.2.3. **SIMI-3--Practical Exercise.** The USI will conduct a regularly scheduled simulator mission from the IOS under supervision of an IOS-qualified instructor.

6.6.3. **Simulator Instructor Certification.** Following successful completion of SIMI-3, the SQ/CC will certify the aircrew's SI status in appropriate written format (letter, ARMS, gradesheet, etc.).

6.7. Mission Commander (MCC) Upgrade. This program establishes the minimum guidelines for upgrade to MCC.

6.7.1. **MCC Responsibilities.** The MCC is responsible for planning coordinating, briefing, executing, and debriefing joint/composite force employment packages. Mission commanders, once certified, are authorized to lead joint/composite force missions. MCCs may delegate authority and responsibility for a portion of the mission to a secondary MCC. For example, a MCC flying in an A/S weapons system may designate a MCC in an A/A weapons system to be in charge of the A/A portion of the mission.

6.7.2. **MCC Prerequisites.** Squadron commanders will consider ability, judgment, technical expertise, skill, and experience when selecting crewmembers for mission commander upgrade. Minimum qualifications are 4-ship FL or IWSO.

6.7.3. **Ground Training.** Upgrading MCCs must satisfactorily complete the following unit developed blocks of instruction prior to certification as a MCC:

6.7.3.1. **Mission Planning Considerations.** Range space and availability, Air Traffic Control (ATC) restrictions/considerations/flight plans, air refueling operations, inter-unit coordination, air-to-air and air-to-surface force integration, IADS penetration/avoidance, on-range controlling agencies coordination, GCI coordination.

6.7.3.2. Review appropriate AFTTP 3-1 volumes for specific mission commander checklists and considerations.

6.7.4. **Flying Training.** As a minimum, the upgrading MCC will observe a certified MCC during the planning, briefing, flight, and debriefing of at least one composite force mission. Prior to certification, the upgrading MCC will then plan, brief, fly, and debrief a minimum of one mission under the supervision of an IP, IWSO, or squadron supervisor who is MCC qualified. This program establishes the minimum guidelines for upgrade to MCC.

6.7.4.1. Unit tasking should drive force composition, adversaries, and minimum flight size.

6.7.4.2. The MCC will determine overall upgrade mission effectiveness in case of fallout.

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

6.8. Maverick (MAV):

6.8.1. **Ground Training.** Initial ground training will include instruction that covers types of MAV missiles (EO, IR, or both) employed by the unit and will cover principles of EO systems; IR theory; mission planning to include effects of weather; AGM-65 guidance, control, capabilities, limitations, system interfaces, operation and switchology; video symbology; system anomalies; tracking and lock-on techniques; employment considerations; tactics; and weapons effects.

6.8.2. **Flying Training.** Initial flying training for EO and/or IR MAV will consist of the MAV missions outlined below. AGM-65 programs for aircrews with previous fighter experience may be tailored, based on familiarity and knowledge of the Maverick system, and documented performance. Emphasis for these aircrews will be on learning the differences between the new type Maverick and the one in which they are already qualified and/or differences in switchology and tactics between old and new aircraft. All sorties will be supervised by a designated Maverick instructor as determined by the SQ/CC.

6.8.2.1. **MAV 1, Orientation--Mission Objectives.** Practice mission planning, preflight and inflight operations. Specific Mission Tasks: Mission planning; operating limitations; switchology; preflight; initialization and system checks; boresight check; low altitude visual and TFR target attacks; medium altitude attacks; maximum standoff attacks.

6.8.2.2. **MAV 2, Tactical Employment--Mission Objectives.** Demonstrate proficiency in tactical mission planning, preflight and ground operations, and tactical employment. Specific Mission Tasks: Demonstrate proficiency in MAV 1 tasks and tactical employment with preplanned element attack profiles against first-look targets.

6.8.2.3. **MAV 3, Night Proficiency and Tactics--Mission Objectives.** Demonstrate proficiency in night employment. Specific Mission Tasks: Demonstrate proficiency in night TFR attacks and tactics with preplanned element attack profiles against first-look targets.

6.8.3. **CT Training:**

6.8.3.1. CT ground training will consist of elements listed above for initial ground training.

6.8.3.2. CT flying training requires use of an operable TGM-65 or the launch of an actual AGM-65.

6.9. Guided Bomb Unit (EGBU)-15/Air-to-Ground Missile (AGM)-130. Units tasked by MAJCOM to perform the GBU-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.

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

6.9.1.1. Principles of EO/IR systems.

6.9.1.2. EO/IR mission planning-sun angle, shadows, weather, terrain, target size, FOV, etc.

6.9.1.3. **EGBU-15/AGM-130.** Guidance and control, capabilities and limitations to include flying, warhead/weaponeering, and release envelope, system power-up procedures and restrictions, target contrast/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.

6.9.1.4. **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.

6.9.2. **Simulator Training.** The simulator training program is designed to expose the upgrading WSO and pilot to the hardware and procedures in the operation of the EGBU-15/AGM-130 weapon

system. This should be done in the WST, if available and certified for this training. As a minimum, all upgrading WSOs will accomplish WST-1 prior to the first flight. Pilots will practice day and simulated night AGM/EGBU profiles in the simulator prior to flight. WST-1/WST-2 may be combined.

6.9.2.1. **WST-1, 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 is introduced to video break-up problems (if available), reduced target visibility, and limited ceilings.

6.9.2.2. **WST-2, 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 again experience video break-up problems (if available), reduced target visibility, and limited ceilings.

6.9.3. **Mission Conduct for AGM-130/EGBU-15 Training:**

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

6.9.3.2. Sorties scheduled for upgrade may accomplish either AGM or EGBU training on the first two upgrade sorties, after that upgrade missions may be combined.

6.9.3.3. Upgrading aircrews will accomplish at least AGM/EGBU-4. Aircrews may be proficiency advanced at the discretion of the SQ/CC or operations officer.

6.9.3.4. If more than 2 weeks elapses between upgrade sorties, the previous sortie will be reaccomplished. A simulator mission may be flown in lieu of an additional sortie.

6.9.3.5. If the upgrading pilot is not a FL, the instructor will brief and lead all missions. On AGM/EGBU-4, the upgrading aircrew will brief all aspects of the system-specific portions of the sortie, and the bomb profile, with the IP briefing ground ops, enroute, and Return to Base (RTB) procedures.

6.9.4. **Flying Training.**

6.9.4.1. **AGM or EGBU-1, Introduction to EGBU-15 Attacks--Mission Objectives.** Utilizing independent DL and captive weapon equipped aircraft, the pilot and WSO will perform high and low altitude indirect and direct attacks. 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.

6.9.4.2. **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). 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.

6.9.4.3. **AGM/EGBU-3, Combat Tactics Planning--Mission Objectives.** Same as EGBU-2 with the introduction of Low Altitude Pop Indirect Attacks (LAPIA), and stand-off tactics. Tasks: Same as 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, briefing, and debriefing for the sortie.

6.9.4.4. **AGM/EGBU-4, Tactics--Mission Objectives.** Demonstrate proficiency in performing EGBU-15 combat tactics. 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 performing the EGBU-15 mission.

6.9.5. **EGBU-15/AGM-130 Instructor Upgrade.** Only the most qualified EGBU-15/AGM-130 aircrew will upgrade to instructor. They should review all ground training and simulator requirements, paying particular attention to the switchology in the opposite cockpit from which they will be flying (i.e., upgrading WSOs should fly at least one WST in the FCP and upgrading ACs at least one WST in the RCP for optimum training). Flying training profiles will follow these guidelines:

6.9.5.1. **EGBUI-1, EGBU-15 Systems/Tactics Instruction-- Mission Objectives.** Perform and instruct GBU-15 tactics. Tasks: Demonstrate the ability to instruct in 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.

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

6.9.6. **EGBU-15/AGM-130 Continuation Training:**

6.9.6.1. **Academics.** Semiannual EGBU-15/AGM-130 academics is required for all EGBU-15 qualified aircrews.

6.9.6.2. **Simulator Training.** If a WST certified for EGBU-15/AGM-130 training is available, EGBU-15/AGM-130 aircrews will devote at least 1.5 hours of WST 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 WST is not available, the contractor simulator should be used, if practical.

6.9.6.3. **Continuation Flying Training.** Profiles are at the discretion of the unit 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.

6.10. Pre-Deployment Spin-Up Training. This training will be conducted prior to deploying in support of contingency operations (if time permits) or exercises. The objective of this training is to ensure the aircrews' ability to conduct all missions in support of expected tasking. For contingency operations, units are responsible for contacting appropriate gaining command/operations to determine expected mission taskings. For exercises, units are responsible for referring to appropriate EXPLANS and contacting appropri-

ate exercise POCs prior to deployment to determine expected mission taskings. These EXPLANS include COMACC EXPLANS 80 for Red, Maple, and Coalition Flags, EXPLANS 323 for Air Warrior 1, and EXPLANS 163 for Air Warrior 2. This assures the units are prepared for the appropriate tasking and allows the responding OG/CC to tailor this training for the theater, threat, and tactics for the assigned task. The SQ/CC is then responsible for implementation of this spin-up, prosecuting the required missions, and determining the specific requirements necessary to reach the desired level of proficiency. Emphasis will be placed on training needed for missions not accomplished in daily operations. This training will be conducted IAW all applicable instructions.

6.10.1. **Non-Assigned Aircrews.** If an aircrew is not assigned to the deploying squadron, they must receive spin-up training as determined by the deploying SQ/CC. This applies to all attached aircrew (OG/WG/HQ staffs, etc.), and all aircrew augmenting from other squadrons (operational, FTU, weapons school, test, etc.). The objective of this training is to ensure attached/augmenting aircrew are proficient to conduct all missions in support of expected tasking. The deploying SQ/CC will determine the amount of spin-up training required for each attached/augmenting aircrew based on the aircrews level of proficiency, currency, qualification, experience, etc. For augmenting aircrew, once the amount of spin-up training is determined, the augmentee's SQ/CC is responsible for ensuring the spin-up training is accomplished.

6.10.2. **Ground Training.** All applicable aircrew will complete academic training prior to deployment.

6.10.2.1. **Academics.** Units will brief exercise SPINS, ROE/Training Rules, command and control, engagement authority and procedures, and visual identification. MAJCOM/IN will assist the unit's intelligence functions in the development of threat assessments and visual recognition training materials.

6.10.2.2. **Visual Recognition.** Aircrew must be able to visually identify aircraft (rotary and fixed-wing, including joint/allied assets) they are likely to encounter by name or numerical designator and determine whether the aircraft is a threat or non-threat (training should incorporate all aspects/angles, theater-specific paint schemes/fin flashes, and various configurations), identify ground equipment, and determine major categories of naval vessels.

6.10.3. **Flying Training.** Spin-up training will be tailored to ensure all deploying aircrew are proficient, current, and qualified in all expected mission taskings.

6.10.4. **Responsibility.** OG/CCs are responsible for ensuring all participating aircrew are ready to deploy and are proficient to conduct all missions in support of expected tasking.

6.11. Night Vision Goggle (NVG) Qualification Program: The intent of this program is to produce fully qualified aircrew and instructor pilots/WSOs/Flt leads**. If units require a two-ship qualification, the program should be tailored to accomplish required tasks ref. 6.11.2.2.** Units may combine NVG qualification with MQT upgrade training at the OG/CCs discretion.

6.11.1. **Status upon Completion:** Completion of the qualification training allows the aircrew to perform missions under NVGs IAW AFI 11-214.

6.11.2. **Qualifications:**

6.11.2.1. **NVG Upgrade.** Must be a current and qualified F-15E Pilot/WSO selected by the squadron commander.

6.11.2.2. **NVG Flight Lead Upgrade.** Must be a current and qualified F-15E Flight Lead selected by the squadron commander.

6.11.2.3. **NVG Instructor Upgrade.** Must be a current and qualified F-15E Instructor selected by the squadron commander.

6.11.3. **Ground Training.** Upgrading NVG aircrew must satisfactorily complete the following requirements prior to NVG-1.

6.11.3.1. **Academics.** Academic instruction must include Air Force Research Labs (AFRL) or equivalent NVG academics, F-15E specific academics, and an NVG Phase Brief. Each Operations Group is required to have 1 AFRL/NVG school house certified instructor to teach these academics. This instructor may certify additional instructors within the Operations Group.

6.11.3.2. **Device Training.** Device training will include:

6.11.3.2.1. **NCT (Night Cockpit Trainer-If Available)-1--Mission Objectives.** Introduce NVG Cockpit Set-up, NVG procedures, and emergency situations. Specific Tasks: NVG ground operations, use of interior and exterior aircraft lighting, Taxi/Take-off, enroute formations, NVG procedures, and emergency/egress procedures. Special attention should be focused on recognition/prevention of spatial disorientation, unusual attitude recoveries, night/NVG instrument crosscheck that uses NVGs as a secondary means of maintaining SA, task saturation/prioritization, and potential FOD hazards associated with NVG use.

6.11.4. **Special Instructions (SPINS).**

6.11.4.1. UP/UW attempt to fly at least 1 low illumination sortie.

6.11.4.2. NVG FLUG/IPUG/IWUG sorties can be flown in conjunction with unit FLUG/IPUG/IWUG programs.

6.11.4.3. NVG sorties will be flown in prescribed order: NVG-1, 2, 3, 4; or, NVG1, 3, 2, 4 (NTR-2, SAN-2, NVG-2, 4).

6.11.4.4. NVG Instructor: Instructors must give NVG instruction on at least one sortie after NVG-1 and fly a total of 10 sorties with NVGs before being qualified to perform instructor duties on NVG upgrade sorties.

6.11.4.5. NVG Certification. Following successful completion of required ground and flight training, the squadron commander may certify the individual to perform flight duties as a NVG aircrew.

6.11.4.6. NVG Flight lead**:** Qualified NVG pilots who upgrade to Flight Lead need one supervised (IP/IWSO) flight as a Flight Lead on an NVG sortie before performing unsupervised NVG flight lead duties.

6.11.4.7. The minimum altitude for all NVG sorties specified by this syllabus is IAW, AFI 11-214 and MAJCOM directives.

6.11.4.8. NVG time may only be logged while actually using goggles. All NVG flying time will be recorded on Form 781.

6.11.4.9. SYLLABUS TAILORING: Squadron commanders may tailor this syllabus to meet specific individual needs as required. For example, if an individual has accomplished NTR-2 and/or SAN-3 (equivalent to NVG-1 and NVG-3 respectively) during IQT, NVG-1 and/or NVG-3 are not

required. Or if an individual was previously NVG qualified in the F-15E or another MDS with a significant number of NVG hours, one sortie must be flown as a reorientation/orientation, but at the squadron commander's discretion, the remainder are not required.

6.11.5. **Flying Training.** All NVG syllabus sorties will be under the supervision of a qualified NVG IP/IWSO. Upgrade sorties will be dedicated to use of NVGs IAW the following sorties.

6.11.5.1. **NVG-1, Basic NVG Familiarization. NVG-1 must be flown with an NVG instructor in the aircraft. (NOTE: If NTR-2 was successfully accomplished during IQT with appropriate NVG orientation events, SQ/CC, SQ/DO, or appropriate squadron supervisor may waive NVG-1.)**

6.11.5.1.1. **Mission Objectives.** Primary emphasis of NVG 1 is to introduce the capabilities and limitations of NVGs and the night environment to the student. Introduce and practice NVG adjustment procedures, cockpit preparation, confidence maneuvers and basic formation flying skills. Demonstrate proficiency in various administrative and tactical 2-ship formation positions with a mixture of external lighting options including covert lighting, reduced lighting and lights out. Emphasize NVG basics with an introduction to baseline intercepts.

6.11.5.2. **NVG-2, Practice NVG aided intercepts.**

6.11.5.2.1. **Mission Overview:** Primary focus of this sortie is to introduce and practice 2 v X air-to-air employment with NVGs. Primary emphasis should be placed on how NVGs enhance night air-to-air element employment. Additional emphasis should be placed on single ship and element radar missile defense procedures with NVGs. Focus the briefing on NVG tactical formation, employment and air-to-air threat reactions with NVGs.

6.11.5.3. **NVG-3, 2-Ship Basic Surface Attack. (NOTE: If SAN-2 or 3 was successfully accomplished during IQT with appropriate NVG orientation events, SQ/CC, SQ/DO, or appropriate squadron supervisor may waive NVG-3.)**

6.11.5.3.1. **Mission Objectives:** Introduction to the low altitude environment using NVGs to aid in formation position keeping and weapons delivery on a controlled range. Primary focus of this sortie is to practice NVG basic air to ground attacks and 2-ship NVG formations. Focus the briefing on weapons employment and threat reactions with NVGs and basic NVG 2-ship employment.

6.11.5.4. **NVG-4, 2/4-Ship Surface Attack Tactics.**

6.11.5.4.1. **Mission Objectives:** Practice night tactical employment using NVGs to aid in navigation, target identification, weapons deliveries and threat reactions. Primary focus of this sortie is to execute unit/mission specific tactics. Units are required to develop their own missions tasks that reflect unit doctrine and tactical employment procedures.

6.12. Air Defense Augmentation. This program applies to all aircrews tasked to augment CINCNORAD in the Air Defense role for Peacetime Alert, NORAD ConPlan 3310 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.

6.12.1. **MQT/Recertification.** The following minimum training requirements should be incorporated into the MQT and Air Defense Certification programs for units identified to augment NORAD ConPlan 3310 or apportioned to CINCNORAD in the unit Designed Operational Capabilities (DOC)

statement. Units who anticipate Air Defense tasking (i.e. AEF scheduling) during their normal training cycle will certify aircrew using the minimum training requirements outlined below within 6 months of actual tasking:

6.12.1.1. Academic training covering NORAD/ACC mission and 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.

6.12.1.2. Two simulator missions dedicated to an Air Defense scenario including a SOCC scramble, handover, voice authentication and controller-directed VID profiles, low altitude intercepts below 1,000 feet AGL, CAP procedures/employment, ECCM intercepts, and command and control procedures.

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

6.12.2.1. Academic training covering appropriate areas as listed in paragraph **6.12.1.** above.

6.12.2.2. Aircrew will maintain LOWAT currency IAW **Table 4.3.**

6.12.2.3. Tactical simulator missions should include various ADF elements as listed in paragraph **6.12.1.2.** above.

6.12.3. **Short Notice SpinUp.** Units with no "pre-planned" tasking under NORAD CONPLAN 3310 and/or not apportioned to CINCNORAD in their unit DOC statement, who are tasked to augment NORAD in the Air Defense role, should complete the training as outlined in paragraph **6.12.1.**. at the unit's earliest convenience and the simulator missions, time permitting, listed in paragraph **6.12.1.2.**

6.12.4. **Air Defense Training Resources.** All necessary training materials listed in paragraph **6.12.1.1.**, NORAD/CONR/Sector guidance, and Air Defense mission "Smart Packs" can be obtained from the 1 AF/DO Classified Web page.

6.13. Combat Search and Rescue (CSAR). CSAR is a special capability, if tasked, to support various types of operations for rescue of downed aircrew in both peacetime and combat environments. This support includes on scene command, electronic and visual search, threat suppression, helicopter escort and protection, and communications relay. Once CSAR qualified, qualification is retained with aircraft qualification. The program below outlines the minimum requirements to upgrade aircrews for CSAR operations. CSAR upgrade training will be accomplished under the supervision of a CSAR qualified IP/IWSO.

6.13.1. To upgrade to a CSAR wingman (position 2 or 4), the aircrew must accomplish CSAR 1 and 2.

6.13.2. To upgrade to a CSAR flight lead (position 1 or 3), the pilot must be a four/two ship flight lead (respectively) and a qualified CSAR wingman, and must accomplish CSAR 3 and 4. To perform instructor duties, instruct a CSAR3 or 4 mission and document the qualification.

6.13.3. CSAR upgrade/refresher training will,if tasked, be included as part of the Pre-Deployment Spin-up Training for units tasked for CSAR during contingency operation deployments.

6.13.4. Initial academic training will include the following:

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

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

6.13.4.3. **Helicopter Escort.** Rendezvous, escort, and hover cover.

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

6.13.5. **Initial Flying Training.** SQ/CCs will specify refresher training for previously qualified CSAR aircrew, based on the aircrew experience and currency. The mission profiles listed below may be modified as necessary to maximize training. **NOTE:** Actual on-ground personnel, acting as simulated survivor(s), are required on CSAR-1 and either CSAR-3, or CSAR-4. Helicopter is required on either CSAR-1 or CSAR-2, and on CSAR-3 and CSAR-4.

6.13.5.1. **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: IP/IWSO introduces search procedures and helicopter escort. Ground personnel will demo ground marking techniques.

6.13.5.2. **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: IP/IWSO demonstrates on-scene command procedures using Number 2 as the communication focal point. Conduct search and suppression phases of a classic CSAR. Practice helicopter escort.

6.13.5.3. **CSAR-3 (Two to Four Aircraft, Survivor Required on CSAR-3 or CSAR-4, Helicopter Required)--Mission Objective.** 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.

6.13.5.4. **CSAR-4 (Two to Four Aircraft, Survivor Required on CSAR-3 or CSAR-4, Helicopter Required)--Mission Objective.** Practice procedures and tactics necessary to coordinate and control an opposed CSAR. Specific Mission Tasks: Lead a CSAR to include search, on-scene command, 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.

6.13.6. Upon completion of CSAR-1 and CSAR-2, pilots may fly as a CSAR wingman. Upon completion of CSAR-3 and CSAR-4, flight leads may lead CSAR missions. Flight leads must be previously four-ship qualified to fly as number one of a CSAR four-ship. Either CSAR-3 or CSAR-4 should be briefed and flown as a four-ship before aircrew fly four-ship CSAR missions. To be CSAR-IP/IWSO qualified after completing CSAR-4, aircrews must be current and qualified as IP/IWSOs. If initial IP/IWSO qualification is achieved after completing CSAR 1-4, aircrew must perform primary IP/IWSO duties for a CSAR-3 or CSAR-4 four-ship mission with a qualified CSAR-IP/IWSO in the four-ship.

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Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AD 75-6, *Special Weapons Training for Strike Aircrew*

AFI 10-704, *Military Deception Program*

AFI 10-419, *Dual Capable Aircraft Nuclear Tasking, Planning and Operational Procedures: F-15E/F-16*

AFPD 11-2, *Aircraft Rules and Procedures*

AFI 11-2F-15EV1, *F-15E--Aircrew Training*

AFI 11-2F-15EV2, *F-15E--Aircrew Evaluation Criteria*

AFI 11-2F-15EV3, *F-15E--Operations Procedures*

AFI 11-202V1, *Aircrew Training*

AFI 11-202V2, *Aircrew Standardization/Evaluation Program*

AFI 11-202V3, *General Flight Rules*

AFMAN 11-210, *Instrument refresher Course (IRC) Program*

AFI 11-214, *Aircrew and Weapons Director Procedures for Air Operations*

AFI 11-218, *Aircraft Operations and Movement on the Ground*

AFMAN 11-217V1 (AFM 51-37), *Instrument Flight Procedures*

AFI 11-290, *Cockpit/Crew Resource Management Training Program*

AFI 11-301, *Life Support Program*

AFPD 11-4, *Aviation Service*

AFI 11-401, *Aviation Management*

AFI 11-403, *Aerospace Physiological Training Program*

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

AFI 13-212V1, *Weapons Ranges*

AFI 13-212V2, *RANGE CONSTRUCTION AND MAINTENANCE*

AFI 13-212V3, *SAFE-RANGE PROGRAM METHODOLOGY*

AFI 14-105ACC Sup 1 (formerly ACCR 200-1), *Unit Intelligence Mission and Responsibilities*

AFI 16-402, *Aerospace Vehicle Assignment, Distribution, Accounting and Termination*

AFPD 32-40, *DISASTER PREPAREDNESS*

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

AFI 32-4002, *Hazardous Material Emergency Planning and Response Compliance*

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

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

AFPAM 36-2211 (AFP 50-11), *Guide for Management of Air Force Training Systems*

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

AFCAT 36-2223, *USAF Formal Schools*

AFI 36-2226, *Combat Arms Training and Maintenance (CATM) Program*

AFMAN 37-139, *Records Disposition Schedule*

AFI 51-401 (formerly AFR 110-32), *Training and Reporting to Ensure Compliance with the Law of Armed Conflict*

AFI 91-101, *Air Force Nuclear weapons Surety Program*

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

AFTTP 3-1, *Mission Employment Tactics*

AFTTP 3-3, *Combat Aircraft Fundamentals*

ACCI 11-464, *Training Records and Performance Evaluation in Formal Flying Training Programs*

Abbreviations and Acronyms

A/A—Air-to-Air

A/S—Air-to-Surface

AAR—Air/Air Refueling

AAW—Anti-Air Warfare (US Navy)

AAMD—All Aspect Missile Defense

AB—Afterburner

(D)ACBT—(Dissimilar) Air Combat Training

ACC—Air Combat Command

(D)ACM—(Dissimilar) Air Combat Maneuvering

ACMI—Air Combat Maneuvering Instrumentation

(D)ACT—(Dissimilar) Air Combat Tactics

ADA—Air Defense Alert, Air Defense Asset

ADL—Aircraft Data Link

ADS—Air Demonstration Squadron

AF—Air Force

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

ANG—Air National Guard

AOA—Angle of Attack

AOC—Air Operations Center

AOS—Air Operations Squadron

API—Aircrew Position Indicator

ARC—Air Reserve Components

ARM—Anti-Radiation Missile

ARMS—Aviation Resource Management System

ARP—Armament Recording Program

ASC—Air Strike Control

ASD—Average Sortie Duration

ASLAR—Aircraft Surge Launch and Recovery

ASUW—Anti-surface Warfare (US Navy)

ATC—Air Traffic Control

ATD—Aircrew Training Device

AVTR—Aircraft Video Tape Recorder

AWACS—Airborne Warning and Control System

BAI—Backup Aircraft Inventory

BAQ—Basic Aircraft Qualification

BD—Battle Damage

BDA—Battle Damage Assessment

(D)BFM—(Dissimilar) Basic Fighter Maneuvers/Maneuvering

BMC—Basic Mission Capable

BSA—Basic Surface Attack

BSAN—Basic Surface Attack Night

BVR—Beyond Visual Range

C3I—Command, Control, Communications, and Intelligence

C&R—Collection and Reporting

CAF—Combat Air Forces

CALF—Chart Amendment Low Flying

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

CCIP—Constantly Computed Impact Point

CCRP—Continuously Computed Release Point

CD—Counterdrug

CD—Deputy Commander

CDIP—Continuously Displayed Impact Point

CE—Combat Edge

CEP—Circular Error Probable

CFT—Cockpit Familiarization Trainer

CFT—Conformal Fuel Tank

CFTR—Composite Force Training

CHUM—Chart Update Manual

CIRVIS—Communication Instructions Reporting Vital Intelligence Sighting

CMR—Combat Mission Ready

CMS—Combat Mission Section

COMM—JAM Communications Jamming

COMSEC—Communications Security

CPT—Cockpit Procedures Trainer

CRM—Cockpit Resource Management

CRT—Cathode Ray Tube

CSAR—Combat Search and Rescue

CT—Continuation Training

CV—Vice Commander

CW—Chemical Warfare

DART—Deployable Aerial Reflective Target

DB—Dive Bomb

DCA—Defensive Counter Air

DCAN—Defensive Counter Air Night

DEAD—Destruction of Enemy Air Defenses

DMPI—Desired Mean Point of Impact

DNIF—Duty Not Involving Flying

DOC—Designed Operational Capability

DR—Dead Reckoning

DRU—Direct Reporting Unit

DTOS—Dive Toss

E&R—Escape and Recovery

EC—Electronic Combat

ECCM—Electronic Counter Countermeasures

ECM—Electronic Countermeasures

ECO—Electronic Combat Officer

ECR—Electronic Combat Range

EEI—Essential Elements of Information

EGI—Embedded INS/GPS

EO—Electro-Optical

EP—Emergency Procedure

EPE—Emergency Procedures Evaluation

EW—Electronic Warfare

EWO—Electronic Warfare Officer

EWWS—Electronic Warfare Warning Set

EXP—Experienced

FAC—Forward Air Controller

FAC(A)—Forward Air Controller (Airborne)

FAM—Familiarization

FCF—Functional Check Flight

FCP—Front Cockpit

FDL—Fighter Data Link

FE—Flight Examiner

FEB—Flying Evaluation Board

FEBA—Forward edge of the Battle Field

FEF—Flying Evaluation Folder

FL—Flight Lead

FLIR—Forward Looking Infrared

FLUG—Flight Lead Upgrade

FMT—Full Mission Trainer

FOT&E—Follow-on OT&E

FOV—Field of View

FP—First Pilot

FPA—Flight Path Angle

FPM—Flight Path Marker

FS—Fighter Squadron, Flight Surgeon

FSCL—Fire Support Coordination Line

FSWD—Full Scale Weapons Delivery

FTR—Fighter

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

GP—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

HVAA—High Value Airborne Asset

IAGTS—Improved AGTS

IAW—In Accordance With

ICDT—Initial Counterdrug Training

ICWT—Initial Chemical Warfare Training

ID—Identify/Identification

IEWO—Instructor EWO

IFF—Identification Friend or Foe

IFR—Instrument Flight Rules

IIR—Imaging Infrared

ILS—Instrument Landing System

IMC—Instrument Meteorological Conditions

INFLTREP—Inflight Report

INS—Inertial Navigation System

INTREP—Intelligence Report

IOC—Initial Operational Capability

IOS—Instructor Operator Station

IP—Instructor Pilot, Initial Point

IPUG—Instructor Pilot Upgrade

IQT—Initial Qualification Training

IR—Infrared

IRC—Instrument Refresher Course

IRCM—Infrared Counter Measures

IRMD—Infrared Missile Defense

ISD—Instructional Systems Development

ISOPREP—Isolated Personnel Report

ITFR—IMC (or night) Terrain Following Radar

IWSO—Instructor WSO

IWUG—Instructor WSO Upgrade

JAAT—Joint Air Attack Team

JFT—Joint Force Training

JMO—Joint Maritime Operations (Air)

JUNT—Joint Undergraduate Navigator Training

JVID—Joint Visual Identification

KCAS—Knots Calibrated Airspeed

KIAS—Knots Indicated Airspeed

KIO—Knock It Off

KS—Killer Scout

KTAS—Knots True Airspeed

LAD—Low Altitude Delivery

LADD—Low Angle Drogue Delivery

LADT—Low Altitude Dive Toss

LAHD—Low Angle High Drag

LAI—Low Altitude Intercept

LALD—Low Angle Low Drag

LANTIRN—Low Altitude Navigation and Targeting Infrared for Night

LAO—Local Area Orientation

LASDT—Low Altitude Step Down Training

LASTE—Low Altitude Safety and Targeting Enhancement

LAT—Low Altitude Toss

LATF—Low Altitude Tactical Formation

LATN—Low Altitude Tactical Navigation

LGB—Laser Guided Bomb

LLLD—Low Level Low Drag

LLS—Low Level Strike

LOC—Limited Operational Capability, Lines of Communication

LOS—Line of Sight

LOW A/A—Low Altitude Air-to-Air

LOW ALT—Low Altitude

LOWAT—Low Altitude Training

LRDT—Long Range Dive Toss

LRS—Long Range Strafe

LSO—Life Support Officer

LTDSS—Laser Target Designator Scoring System

MADT—Medium Altitude Dive Toss

MAJCOM—Major Command

MAV—Maverick

MCC—Mission Commander

MDS—Mission Design Series

MDT—Mission Directed Training

MIJI—Meaconing, Intrusion, Jamming and Interference

mil—Milliradian

MIL—Military Power

MISREP—Mission Report

MOA—Military Operating Area

MP—Mission Pilot

MQF—Master Question File

MQT—Mission Qualification Training

MRM—Medium Range Missile

MSA—Minimum Safe Altitude

MTC—Mission Training Center

MTT—Multi Tactics Trainer

MW—Mission WSO

N/A—Not Applicable

NAAR—Night Air Refueling

NAF—Numbered Air Force

NAV—Navigation

NCO—Noncommissioned Officer

NGB—National Guard Bureau

NLT—Not Later Than

NT—Night

NVG—Night Vision Goggles

OCA—Offensive Counterair

OCA-A—Offensive Counterair Air-to-Air

OCA-S—Offensive Counterair Air-to-Surface

OFT—Operational Flight Trainer

OG—Operations Group

OPR—Office of Primary Responsibility

OPS—Operations

OPSEC—Operations Security

ORI—Operational Readiness Inspection

OTD—Operations Training Development

OT&E—Operational Test and Evaluation

PACAF—Pacific Air Forces

PAI—Primary Aircraft Inventory

PAR—Precision Approach Radar

PCS—Permanent Change of Station

PDAI—Primary Development/Test Aircraft Inventory

PFT—Programmed Flying Training

PGM—Precision Guided Munitions

PMAI—Primary Mission Aircraft Inventory

POAI—Primary Other Aircraft Inventory

PPB—Positive Pressure Breathing

PPG—Positive Pressure Breathing for G

PTAI—Primary Training Aircraft Inventory

PTT—Partial Task Trainer

PUP—Pull Up Point

PW—Paveway

QUAL—Qualification

RAP—Ready Aircrew Program

RBS—Radar Bomb Scoring

RCO—Range Control Officer

RCP—Rear Cockpit

RCS—Radar Cross Section

RECCE—Reconnaissance

RF—Radio Frequency

RFMDS—Red Flag Mission Debriefing System

RMD—Radar Missile Defense

RMU—Runway Monitoring Unit

ROE—Rules of Engagement (Combat only)

ROM—Runway Operations Monitor

RT—Radio Terminology

RTB—Return to Base

RTRB—Realistic Training Review Board

RTT—Realistic Target Training

RW—Reconnaissance Wing

RWR—Radar Warning Receiver

RX—Rockets

SA—Situational Awareness, Strategic Attack

SAFE—Selected Area For Evasion

SAR—Search and Rescue

SAT—Surface Attack Tactics

SATN—Surface Attack Tactics Night

SCAR—Strike Control and Reconnaissance

SCL—Standard Conventional Load

SCP—Set Clearance Plane

SEAD—Suppression of Enemy Air Defenses

SEFE—Stan/Eval Flight Examiner

SELO—Stan/Eval Liaison Officer

SEPT—Situational Emergency Procedure Training

SI—Simulator Instructor

SIF—Selective Identification Feature

SIM—Simulator (MTC, WST)

SLD—Systems Level Delivery

SNP—Student Non Progression

SOCC—Sector Operations Control Center

SOF—Supervisor of Flying

SORTS—Status of Resources and Training System

SORTIE—In Air Operations, An Operational Flight By One Aircraft

SQ/CC—Squadron Commander

SRM—Short Range Missile

SSE—Simulated Single Engine

STR—Strategic Training Range

SUPT—Specialized Undergraduate Pilot Training

TA—Terrain Avoidance

TACAN—Tactical Air Navigation

TACS—Theater Air Control System

TAI—Total Active Inventory

TD—Tactical Deception (AFI 10-704, *Military Deception Program*)

TDY—Temporary Duty

TES—Tactics Eval Sq/Test & Evaluation Squadron

TEWS—Tactical Early Warning System

TF—Terrain Following

TF—Coded--Designated Training Aircraft

TFR—Terrain Following Radar

TGM—Training Guided Munitions

TGP—LANTIRN, LITENING II or SNIPER (ATP) Targeting Pod

TGT—Target

TOD—Time of Detonation, Time of Day

TOT—Time Over Target

TR—Training Rules

TTR—Tactics and Training Range

TX—Transition

UCML—Unit Committed Munitions List

UE—Unit Equipped

UIP—Upgrading Instructor Pilot

UIWSO—Upgrading IWSO

UMD—Unit Manning Document

UNITREP—Unit Status and Identity Report

USAF—United States Air Force

USAFE—United States Air Forces in Europe

USAFWS—United States Air Force Weapons School

USAFWTC—United States Air Force Weapons Test Center

USI—Upgrading Simulator Instructor

UTD—Unit Training Device

UTE—Utilization Rate

VFR—Visual Flight Rules

VID—Visual Identification

VLD—Visual Level Delivery

VMC—Visual Meteorological Conditions

VR—Visual Recognition

VRD—Vision Restricting Device

VTR—Video Tape Recorder

WD—Weapons Delivery

WDL—Weapon Data Link

WG—Wing

WIC—Weapons Instructor Course

WS—Weapons School

WSEP—Weapon Systems Evaluation Program

WSO—Weapon Systems Officer

WST—Weapon System Trainer

WSTO—Weapons System Training Officer

WTT—Weapons and Tactics Trainer

WW—Wild Weasel

WX—Weather

Terms

Air Combat Training (ACBT)—A general term which includes (D)BFM, (D)ACM, and (D)ACT . The prefix (D) refers to the type of adversary assets. When the prefix is present, dissimilar is optional. When the prefix is missing, similar is assumed as flown/required. When present without parenthesis, dissimilar is assumed flown or required. This convention corresponds to all facets of ACBT (i.e., BFM, ACM, ACT).

Air Combat Tactics (ACT)—Training in the application of BFM, ACM, and tactical intercept skills to achieve a tactical air-to-air objective. (AFI 11-214)

Basic Mission Capable (BMC)—The status of an aircrew who has satisfactorily completed training (MQT) prescribed to be fully qualified to perform the basic unit operational missions but does not maintain CMR status. Aircrew accomplishes training required to remain familiarized in all, and may be qualified and proficient in some, of the primary missions of their weapon system and unit. These aircrew members may also maintain special capabilities (refer to paragraph **4.3.**).

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 qualification except for General Officers above the wing level, and any other crew members specifically authorized by MAJCOM DO. Aircrews are not authorized to perform RAP-tasked combat event/ sorties without instructor aircrew or SQ supervisor supervision. Flight duties will be limited to those identified in paragraph **4.3.**

Certification—The process of certifying aircrew tactical employment and special weapons capabilities, procedures, and rules. Replaces verification for nuclear tasked units.

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 in which the controls, switches, and instruments do not have to respond to trainee inputs. Used for checklist use, normal procedures, and emergency procedures.

Cockpit Procedures Trainer (CPT)—A training device in which instruments and displays are activated to respond to trainee inputs.--Used--for safety of flight, instrument, normal, and emergency procedures.

Combat Edge (CE)—A positive-pressure breathing-for-G (PPG) system which provides pilots/WSOs additional protection against high positive G accelerations experienced during flight. The system consists of aircrew equipment (high-pressure mask, counter-pressure suit, G-suit), and aircraft equipment (oxygen regulator, G-valve, and interfacing sense line). At 5-G and above, regulated air and oxygen are supplied to the system to provide automatic mask tensioning, vest inflation, and positive pressure breathing to the mask.

Combat Mission Ready (CMR)—A status of an aircrew member who has satisfactorily completed training (MQT) prescribed to be fully qualified to perform the basic unit operational missions, and maintains qualification and proficiency in these missions. All active duty API-1/2's, Squadron Commander, Operations Officers, and OG/CC designated API-6 manning positions are required to maintain this qualification level. Exception: If a unit is over-manned, they may elect to train the front line of their UMD to CMR with the overage designated as BMC. Approximately 50% of the aircrew selected for CMR must be inexperienced.

Composite Force Training (CFTR)—Scenarios employing multiple flights of the same or different types of aircraft, each under the direction of its own flight leader, performing the same or different roles.

Continuation Training (CT)—Training to maintain proficiency and improve aircrew capabilities to perform unit missions and aircrew proficiency sorties not flown in formal syllabus missions, tests, or evaluations. Applicable to CMR and BMC aircrew.

Currency—The minimum frequency required to perform an event or sortie safely.

Delivery Parameters—Data reflecting current delivery considerations for general purpose ordnance as well as tactical survivability. Appropriate aircraft/ weapons Tech Orders must be consulted for live ordnance safe escape criteria and -1 performance charts for recovery altitudes.

Dissimilar ACBT (DACBT)—ACBT in conjunction with another MDS aircraft as adversary. The connotation (D)ACBT refers to either similar or dissimilar ACBT. These connotations correspond to all facets of ACBT (i.e., BFM, ACM, ACT).

Emergency Procedures Evaluation (EPE)—An evaluation of aircrew knowledge and responsiveness to critical and non-critical EPs conducted by a SEFE in an OFT, CPT, CFT or aircraft cockpit.

Experienced Aircrew (EXP)—For pilots: hours are FP/IP/MP and fighter time is defined as FP/IP/MP hours logged in aircraft with an assigned an AFSC of 11FX. OA-10 is considered fighter time. For WSOs, fighter time is hours logged in aircraft assigned an AFSC of 12F3x or 12F4X. An experienced aircrew has: 500 hrs PAI, or 1,000 hrs (FP/IP/MP), of which 300 are PAI, or 600 fighter hrs, of which 200 hrs are PAI, or previously fighter EXPERIENCED and 100 hrs PAI.

Flight Lead (FL)—As designated on flight orders, the individual responsible for overall conduct of mission from preflight preparation/briefing to postflight debriefing, 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.

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

Full Scale Weapons Delivery (FSWD)—Delivery of live or inert ordnance representing a typical combat configuration or SCL in a tactical scenario.

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

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

Killer Scout (KS) Operations—The employment of armed attack fighters in an Interdiction or Strategic Attack scenario for a specified geographic location flown to validate tasked targets, mark targets, and direct dedicated ground attack fighters against lucrative targets. Killer Scouts are normally used as part of the Command, Control, Communications, and Intelligence (C3I) interface, to coordinate flights, identify or neutralize targets and enemy air defenses, and provide Battle Damage Assessment (BDA).

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

LITENING II/ER—Second generation targeting pod with unique built in capabilities such as laser marker, charge couple device (day use camera), laser spot search and track mode and lase ability above 25,000'.

Low Altitude Navigation and Targeting Infrared for Night (LANTIRN)—A navigation and targeting system that provides tactical aircraft with a low-altitude, under-the-weather, day and night operational capability.

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.

Low Altitude Intercept (LAI)—An intercept conducted below 5,000 feet AGL.

Low/Slow Speed Threat VID Intercept—Tactical intercept performed to accomplish the tactical objective (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 weapons engagement zones, consider environmental factors, attain turning room and energy at end game, practice ID/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.

Mission Qualification Training (MQT)—Training required to achieve a basic level of competence in unit's primary tasked missions. This training is a prerequisite for CMR or BMC status.

Operational Flight Trainer (OFT)—A training device which dynamically simulates flight characteristics. Used for normal, emergency, and instrument procedures, to include safety of flight, warfighting tasks, and skill integration training.

Primary Aircraft Inventory (PAI)—Aircraft authorized for performance of the operational mission. The PAI forms the basis for allocation of operating resources to include manpower, support equipment, and flying-hour funds. The operating command determines the PAI required to meet their assigned missions. (See AFI 16-402, *Aerospace Vehicle Assignment, Distribution, Accounting and Termination*.)

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.

Specialized Training—Training in specialized tactics, weapons systems, or flight responsibilities such as flight lead, instructor, LASDT, etc. This training may be conducted in MQT or CT, as required.

Squadron Supervisor—Squadron Commander, Asst/Operations Officers, Flight 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).

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

Threat VID—Visual identification of a bogey in a threat environment IAW AFTTP 3-1.

Verification—Applies to procedure aimed at verifying and refreshing aircrew tactical employment knowledge, emphasizing conventional operations and mobile targets. Verification is conducted in both initial and follow-on phases. Initial verification phase is a formal board proceeding convened to verify individual aircrew knowledge. Continuation training is to reinforce, refresh, and update aircrews on unit wartime mission/tasking, tactics, and procedures. (DoD) 1. In arms control, any action, including inspection, detection, and identification, taken to ascertain compliance with agreed measures. 2. In computer modeling and simulation, the process of determining that a model or simulation implementation accurately represents the developer’s conceptual description and specifications.

Visual Identification (VID)—Often required to positively identify an aircraft using visual means. (DoD, NATO) In a flight control system, a control mode in which the aircraft follows a radar target and is automatically positioned to allow visual identification.

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

Weapons and Tactics Trainer—A PTT device used primarily for warfighting tasks, and skill integration training.

Attachment 2

GLOSSARY OF MISSION/SORTIE AND EVENT DEFINITIONS

A2.1. Mission/Sortie Definitions:

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

A2.1.2. **Aircraft Handling Characteristics (AHC).** Basic skills sortie. Training for proficiency in utilization 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. (AFI 11-214)

A2.1.3. **Attrition Sortie.** A sortie planned and launched as a RAP training sortie, Non-RAP sortie, or collateral sortie, that, due to some circumstance (weather, IFE, maintenance, etc.), fails to accomplish the planned mission. It is imperative that units log these sorties properly. Improper accounting of these sorties will result in improper sortie allocation, stresses to the unit schedule, and negative impacts to the quality of unit training programs.

A2.1.4. **Basic Fighter Maneuvers/Air Combat Maneuvers (BFM/ACM).** Building block sorties. BFM (1v1) Training 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. ACM (2v1)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. (AFI 11-214)

A2.1.5. **Basic Surface Attack (Day) [BSA-(Day)].** Building block sortie. Training designed to achieve proficiency in day medium/low altitude tactical navigation and air-to-surface weapons delivery events.

A2.1.6. **Basic Surface Attack (Night) [BSA-(NT)].** Building block sortie. Training designed to achieve proficiency in night medium/low altitude tactical navigation and air-to-surface weapons delivery events.

A2.1.7. **Close Air Support (CAS).** Mission sortie flown in support of ground forces under the control of a Forward Air Controller (FAC), 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 inflight 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 (nominally 200 per fighter unit), adjusted for local conditions and circumstances. These sorties are not required for RAP training purposes.

A2.1.9. **Commander Option Sortie.** Sortie allocated by the unit commander to support individual training requirements and unit training objectives. BMC pilots may log any type mission listed in Sec-

tion 1 or 2 of the RAP tasking message as a Commander Option Sortie. CMR pilots may log any type mission, with the exception of a Red Air Sortie, listed in Section 1 or 2 of the RAP tasking message as a Commander Option Sortie.

A2.1.10. **Contingency Sortie.** A mission 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 may be used for lookback and the events may be used to update currencies.

A2.1.11. **Defensive Counter Air (Day) [DCA (Day)].** Mission sortie designed to develop proficiency in day 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 inflight report.

A2.1.12. **Defensive Counter Air (Night) [DCA (NT)].** Mission sortie designed to develop proficiency in night 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 inflight report.

A2.1.13. **Demanding Sortie--** Sorties that task the aircrew to the extent that flying frequency and continuity are most critical. Authorized sorties/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, JFT, night missions, instructor duties, JAAT, aerial demonstrations, etc. SQ/CCs may add sorties/events to the demanding sortie list, depending on unit tasking and the individual's capabilities. Also see Non-demanding Sortie.

A2.1.14. **Flight Lead 4-Ship (FL 4-Ship) Sortie.** Special qualification sortie. Sortie where FL lead a flight of 4 or more. May be logged in conjunction with baseline training requirements.

A2.1.15. **Force Protection.** Mission sortie 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 inflight report.

A2.1.16. **EGBU-15 Sortie.** Special Capability sortie. Training designed to achieve proficiency in the employment of the EGBU-15. Includes tactical mission planning, execution, and simulated/actual weapons delivery..

A2.1.17. **Instructor Pilot (IP) Sortie.** Special qualification sortie. Sortie where the IP acted in an instructional capacity and was not able to obtain valid combat training because of instructor duties.

A2.1.18. **Instructor WSO (IWSO) Sortie.** Special qualification sortie. Sortie where IWSO acted in an instructional capacity and was not able to obtain valid combat training because of instructor duties.

A2.1.19. **Instrument Sortie.** Basic skills sortie. Training designed to ensure instrument proficiency. RAP events may be accomplished on an instrument sortie provided accomplishment does not interfere with the primary goal of instrument training. Units are allocated sorties for every aircrew to accomplish their minimum basic skill, Non-RAP, requirements.

A2.1.20. **Maverick Sortie.** Special Capability sortie. Training designed to achieve proficiency in the employment of the Maverick. Includes tactical mission planning, execution, and simulated/actual weapons delivery.

A2.1.21. **Mission Commander (MCC) Sortie.** Special qualification sortie. Sortie where aircrew acted in the capacity of a MCC 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 baseline training requirements.

A2.1.22. **Night Sortie.** Sortie on which either takeoff or landing and at least 50 percent of flight duration or 1 hour, whichever is less, occur between the period of official sunset to official sunrise.

A2.1.23. **Non-demanding Sortie.** A day sortie that provides the aircrew with the opportunity to regain basic flying proficiency without excessively tasking those skills that have been under used during the non-flying period. Authorized events flown on a nondemanding sortie are: Instruments, AHC, low level navigation at or above 500 feet AGL, basic weapons delivery, basic intercepts, BFM, etc. SQ/CCs may delete sorties/events from this non-demanding sortie list, depending on unit tasking and the individual's capabilities.

A2.1.24. **Red Air Sortie.** A/A sortie where tactics, aircraft simulation, weapon systems, and/or maneuvering is limited to the extent that complete own MDS training is not accomplished. Restrictions which limit aircraft capabilities to some level which might be encountered in combat do not require logging the sortie as Red Air. Red Air sortie allocations in the tasking message are a maximum cap on degraded training. Unused Red Air allocations should be flown in one of the other A/A training mission categories.

A2.1.25. **Surface Attack Tactics (Day) [SAT-(Day)].** Mission sortie designed to develop proficiency in day Surface Attack Tactics (SAT). 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. Missions types include: Strategic Attack (SA), Air Interdiction (AI), Offensive Counterair Air-to-Surface (OCA-S), and Suppression of Enemy Air Defenses (SEAD).

A2.1.26. **Surface Attack Tactics (Night) [SAT-(NT)].** Mission sortie designed to develop proficiency in night Surface Attack Tactics (SAT). 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 night. Simulated attacks may be conducted against realistic targets IAW local restrictions. Missions types include: Strategic Attack (SA), Air Interdiction (AI), Offensive Counterair Air-to-Surface (OCA-S), and Suppression of Enemy Air Defenses (SEAD).

A2.1.27. **Sweep Sortie.** Mission sortie designed to develop proficiency in OCA-A 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/limited maneuvering missions that fulfill the above criteria may be logged as RAP sorties.

A2.2. Events Definitions. Unless otherwise specified in these event descriptions, units will determine the necessary parameters for fulfilling and/or logging tasked events. Event is defined in one of the following manners:

A2.2.1. A specific type of weapon delivery (defined by aircraft flight path, ordnance delivered, delivery method, or target struck) performed during a sortie.

A2.2.2. Expending of ordnance against a target according to predetermined flight path parameters and delivery methods. A single delivery constitutes an event except for strafe and dart, which require satisfaction of additional criteria.

A2.2.3. Accomplishment of a specific training element, function, or task (i.e., tactical formation, AAR, Maverick, etc.).

A2.3. Weapons Delivery Events:

A2.3.1. 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 (Maverick, 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 recorded, but not necessarily as a "record" delivery. There are two types of deliveries:

A2.3.1.1. **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.

A2.3.1.2. **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, MAV, and climbing deliveries may exceed 5 seconds. All tactical deliveries will normally include recovery to egress parameters.

A2.3.2. A delivery constitutes a weapons delivery event based on two categories: by record keeping (Record or Non-Record), and by RAP tasking (FAM and QUAL):

A2.3.2.1. **Record Keeping:**

A2.3.2.1.1. **Non-Record.** Basic or Tactical weapons delivery accomplishments not credited toward weapons qualification provided the aircrew declares non-record prior to beginning event.

A2.3.2.1.2. **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 record deliveries may be accomplished during a sortie from a single run-in heading. Additional record deliveries may be accomplished from headings differing by at least 90 degrees or on different targets/ranges and may not be preceded by non-record deliveries in the event on the same sortie. The first two deliveries will be considered record unless otherwise declared prior to the roll-in to final. Scores will be documented by CEP and clock position. Additional guidelines are:

A2.3.2.1.2.1. **Basic.** Must be scored on a Class A range (IAW AFI 13-212V1, *Weapons Ranges*; AFI 13-212V2, *RANGE CONSTRUCTION AND MAINTENANCE*; AFI 13-212V3, *SAFE-RANGE PROGRAM METHODOLOGY*).

A2.3.2.1.2.2. **Tactical.** A minimum of 50% must be accomplished on a ground scored range (except for Maverick/EGBU-15/AGM-130 events). Remaining record hits may be air scored by reference to known distances from the target.

A2.3.2.1.2.3. **Strafe.** Aircraft rounds limiter will normally be set to 100 rounds for strafe events. A minimum of 50 rounds per strafe event must be set/expended to satisfy RAP strafe requirements.

A2.3.2.1.2.4. **LGB.** Designator and bomber functions may be accomplished simultaneously by a single aircraft or separately using buddy designation techniques. To record a complete LGB delivery, one simulated or actual weapons release and one designation must be performed. Laser tracker accuracy may be scored by AVTR or Laser Target Designator Scoring System (LTDSS).

A2.3.2.1.2.5. **Maverick.** May be scored by AVTR or TGM missile-mounted camera.

A2.3.2.2. **RAP Tasking:**

A2.3.2.2.1. **FAM.** Weapons events tasked at FAM may be basic/tactical record deliveries. Each single pass counts as one delivery. Unless otherwise specified in the RAP tasking message or formal course syllabi, FAM tasking requires six weapons deliveries or four strafe passes annually.

A2.3.2.2.2. **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 RAP tasking message or formal course syllabi, QUAL criteria is established for each event in **Chapter 5**.

A2.3.3. **Miscellaneous Weapons Delivery Definitions to be Considered for Event Descriptions:**

A2.3.3.1. **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.

A2.3.3.2. **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-accoustiscored 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.

A2.3.3.3. **Full Scale Weapons Delivery.** Delivery of live or inert ordnance in a combat configuration.

A2.3.3.4. **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.

A2.3.3.5. **Hit.** Any munitions impact within the weapons criteria established for that event.

A2.3.3.6. **Multiple Release.** More than one weapon released against the same target on a single pass.

A2.3.3.6.1. **Intentional.** The aircrew must advise the range officer prior to delivery and designate which impact to be scored.

A2.3.3.6.2. **Inadvertent.** Ordnance which has released without command by the aircrew. Impact will not be scored.

A2.3.3.6.3. **System Malfunction.** An undeclared multiple release caused by a verified system malfunction. Score is void after system malfunction verification, otherwise, unintentional rules apply.

A2.3.3.6.4. **Unintentional.** Ordnance released due to aircrew error. Will be scored as gross error regardless of impact point.

A2.3.3.7. **No Spot.** A weapons release during which no impact was observed. No score or error will be assigned.

A2.3.3.8. **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.

A2.4. 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.

A2.4.1. **ACMI Event.** An event which utilizes an ACMI range/facilities for flight and debrief. Only one event may be logged per sortie.

A2.4.2. **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/dry hook-up.

A2.4.3. **Basic Intercept.** A single/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.

A2.4.4. **Chaff Event.** Inflight 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.

A2.4.5. **Comm Jam Event.** Inflight operations without use of active anti-jam radios in a comm jamming environment that provide realistic intervals and duration (completion of one attack profile desired) to counter jamming and/or effective chattermark procedures. Limited to logging of one event per sortie.

A2.4.6. **Composite Force Training (CFTR).** Scenarios employing multiple flights of the same or different types of aircraft, each under the direction of its own flight leader, performing the same or different roles. Only one event may be logged per sortie (exception: If an AAR separates events, a maximum of two events may be logged per sortie. (AFI 11-214)

A2.4.7. **Composite Wing Training (CWT).** A mission scenario based on a Composite Wing's CONOPS involving an intelligence scenario and support, an Air Tasking Order (ATO), and a Mission Commander responsible for planning the mission. These missions must include participation from more than 50% of the wing's flying and air control squadrons. The mission will also have opposing forces, such as air-to-air adversaries, EC opposition, and/or surface-to-air threats. A CWT event may be logged with a Composite Force Training (CFTR) event.

A2.4.8. **EA A/A.** An intercept performed against a target using active and/or passive EP against attacker's radar, causing the attacker to employ EA techniques or tactics. Does not include co-channel interference. Only one event may be logged per target.

A2.4.9. **EP A/A.** The aircrew detects an airborne threat via electronic means and reacts with appropriate maneuvers, pod/internal ECM switchology, and expendables. Airborne threat training will be accomplished only with a dedicated adversary attacking from beyond visual range. Only one event may be logged per sortie.

A2.4.10. **EC Event S/A.** The aircrew detects a surface threat via electronic means and reacts with appropriate maneuvers, pod/internal ECM switchology and/or expendables. Only one event may be logged per sortie.

A2.4.11. **EW Range Event.** Inflight 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/internal EP switchology and/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).

A2.4.12. **Flare Event.** Inflight 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.

A2.4.13. **HAVE QUICK Event.** The practice of loading the combat or MAJCOM HAVE QUICK training net WOD, world-wide Time of Day (TOD). Requires proper radio configuration for HAVE QUICK operation and successful utilization during tactical mission accomplishment. During extended missions, the TOD should be updated from a world-wide master clock if available. Only one event may be logged per sortie.

A2.4.14. **Instructor Event.** An event logged by an instructor when performing instructor duties during the sortie, or a portion thereof. The instructor qualification must be required and used for the mission itself or a mission element. Examples include upgrade sorties, updating lost currencies, etc. Evaluators will log this event on evaluation sorties. Logging this event updates instructor currency.

A2.4.15. **Joint Force Training (JFT).** Scenarios employing integrated aerospace and land/naval forces. Examples include JAAT, CAS with FAC, airdrop escort, etc. Only one event may be logged per sortie (exception: if an AAR separates events, a maximum of two events may be logged per sortie).

A2.4.16. **Joint Maritime Operations.** Air (JMO(A)) Event. (USAFE) NATO and Non NATO Navy/Marine Forces are included Scenario that involves flying a Designed Operational Capability (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 (AIR) training program is intended to expose aircrew to the challenges of employing their weapon system in a joint maritime environment. Common problems identified in joint exercises are associated with operating in a maritime setting such as target identification, threat avoidance, and overwater operations.

A2.4.16.1. **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 oceans, seas, bays, estuaries, islands, coastal areas, and the airspace above these.

A2.4.16.2. 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 there are other Navy/Marine aircraft on the same side as (and communicating with) Air Force fighters and have mission/package commander responsibilities.

A2.4.16.3. A JMO (A) training event may be logged when participating with (not against) Navy/Marine aircraft in Strike University exercises at Fallon NAS.

A2.4.16.4. JMO (AIR) considerations should be included in unit tactics and intelligence training programs that 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).

A2.4.17. **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 engage offensively, an aerial target at low altitude. Only one event may be logged per sortie (Exception: if an AAR separates events, a maximum of two events may be logged per sortie). (AFI 11-214)

A2.4.18. **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 sortie (Exception: If an AAR separates events, a maximum of two events may be logged per sortie). (AFI 11-214)

A2.4.19. **Low Altitude Intercept (LAI).** An intercept conducted below 5,000 feet AGL. Only one event may be logged per target.

A2.4.20. **Low Altitude Tactical Formation (LATF).** Flying tactical formation while conducting LATN training. Only two events may be logged per sortie. (AFI 11-214)

A2.4.21. **Low Altitude Tactical Navigation (LATN).** Low altitude training using the fundamental aspects of dead reckoning and point-to-point low altitude navigation, with or without prior route planning. Only two events may be logged per sortie. (AFI 11-214)

A2.4.22. **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 weapons engagement zones, consider environmental factors, attain turning room and energy at end game, practice ID/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.

A2.4.23. **Medium Altitude Tactics.** Day or night tactical formation (if appropriate for night mission profiles) above 5000 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.

A2.4.24. **Secure Voice.** Requires proper radio configuration for secure voice operation and successful utilization during tactical mission accomplishment. Only one event may be logged per sortie.

A2.4.25. **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 upgrade ACBT currency. One event may be logged per engagement.

A2.4.26. **Target Mark** . A tactical weapon delivery used in conjunction with final air strike control. Only one event may be logged per target.

A2.4.27. **Terrain Following Radar (TFR) Event.** A low level event using integral aircraft TFR equipment or 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 Minimum Safe Altitude (MSA)) will be flown. Only two events may be logged per sortie.

A2.4.28. **Visual Reconnaissance.** An event using basic navigational techniques during which surveillance of an area or lines of communication is conducted, leading to the timely acquisition of information or enemy activities. It encompasses map reading, recognition of terrain features, pilotage, and Dead Reckoning (DR). Only two events may be logged per sortie.

A2.4.29. **Time Sensitive Target (TST) Event.** An event performing a tactical weapons delivery (actual or simulated) against an unplanned, highly lucrative target or target of opportunity requiring immediate response. The attacking aircraft should receive target data/description and clearance from an appropriate command and control (C2) asset. Use of CRCs, AWACS, JSTARS, AOC, UAV, TACP, FAC or a simulation thereof is required. Scenarios should include standard fire support control measures utilizing standard J-FIRE terminology for clearance of fires. Data/description can be via datalink or normal radio communications. Only the attacking aircraft will receive credit for the event. Although the target is unplanned, the event and procedures must be thoroughly briefed. CAS may be used to fill the TST requirement.

Attachment 3

VERIFICATION GUIDE FOR AIR-TO-SURFACE

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

A3.2. Overview:

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

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

A3.3. Area of Operations:

A3.3.1. Geography (topography, population centers, lines of communications, 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 Briefing:

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, (WW: EOB), tactics).

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

A3.5.6. Egress plan (route, mutual support agreements).

A3.5.7. Reattack plan/options.

A3.5.8. Downed pilot/wounded bird plan.

A3.5.9. Recovery (safe corridor procedures, IFF procedures, ASLAR, 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 AIR-TO-AIR

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

A4.2. Overview:

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

A4.2.2. Mission overview.

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

A4.3. Area of Oprations:

A4.3.1. Geography (topography, population centers, lines of communications, 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 Briefing:

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. Egress plan (route, mutual support agreements).

A4.5.6. Downed pilot/wounded bird plan.

A4.5.7. Recovery (safe corridor procedures, IFF procedures, ASLAR, 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.

Attachment 5

TRAINING SHORTFALL REPORT

MEMORANDUM FOR MAJCOM/DOT

SUBJECT: XX SQ Training Shortfalls

FROM:

1. TRAINING SHORTFALLS. By squadrons, report the training events/sorties not accomplished or locally waived. Only report shortfalls commanders feel will have a major impact on unit training. Report only those events/sorties that are 15% short of what would be expected that quarter **and** that affect 15% or greater of their CMR crew force. Expected shortfalls for the 1st, 2nd, 3rd and 4th quarters are 75%, 50%, 25%, and 0% respectively. You are simply reporting when your squadron misses one of those goals by 15% or more. Also note any specific reasons for the shortfall and the corrective action taken. If you think you will meet annual RAP requirements, then note in para. 3. See the example below.

Report math:

Problem: The 69th Fighter Squadron is a 24 PAA squadron with 30 API-1/6 CMR pilots assigned and attached. 15 CMR pilots only logged 10 of the 58 chaff events for the 1st quarter.
Solution:

Step 1: Determine the chaff requirements for that quarter:

(58×Y) = chaff events required for that quarter

Y=. 25 for 1st quarter

.50 for 2nd quarter

.75 for 3rd quarter

1.00 for 4th quarter (EOY report)

(58×.25) = 14.5 chaff events required for 1st quarter

Step 2: Determine minimum goal for each event:

(events required)×(.85) = events or less required to be reportable

(14.5)×(.85)= 12.3

Pilots who accomplish 12 or less chaff events may report a shortfall (if you have greater than 15% of your crew force under this goal)

Step 3: Figure out what % of CMR crewmembers, as required by specialty (AC, pilot, navigator, etc.), that came up 15% short. 15 of the 30 pilots logged only 10 chaff events therefore **50% CMR** pilots affected.

Step 4: Figure out what % shortfall is for that event. Only 10 chaff events were logged for those CMR pilots affected. Make that a percentage with the following formula:

% Shortfall = 100% - (events accomplished÷events required)

= 100% - (10÷58)

= **82%**

Report Example:

EVENT	%CMR AFFECTED	% SHORTFALL
Chaff	50%	82%

Reason for Shortfall: The squadron was deployed for ONE for first 2 months of the quarter.

Corrective Action: The squadron plans to fly more air to air in the 2nd quarter and have all jets loaded with deployable chaff.

2. SQUADRON PRORATION DATA. Use paragraph 2 to denote the squadrons' overall percentage of proration due to Contingency Operations (ONE, OEF, SWA) for CMR aircrew members. BMC crew-members' data is not required or desired. Do not include proration due to DNIF's, emergency leaves, and non-contingency TDYs. Compile the proration data for each aircrew member and divide by the total number of CMR personnel by specialty to come up with a squadron average of quarterly/annual proration. Example: 10 CMR pilots out of 30 flew ONE for 1 month and were prorated appropriately. These 10 pilots were prorated for 33% of the quarter and the other 20 pilots for 0% of the quarter for a squadron average quarterly proration of 11% for pilots; Math is (10×33) ÷30 total pilots =11%.

Report Example:

% AC PRORATED	% PILOT PRORATED	% NAV PRORATED
N/A	11%	N/A

3. COMMANDERS COMMENTS. This is an open forum for specific concerns for his squadron's training and immediate concerns. Also note if you think your squadron will be able to accomplish annual RAP requirements. Comments to improve the training reporting system are also voiced here.

1st Ind, OG/CC

TO: HQ ACC/DOT

CC: NAF DO