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Flying Operations

F-16--PILOT TRAINING



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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-16 A/B/C/D. This publication applies to the Air National Guard and US Air Force Reserve. Selected paragraphs of this publication do not apply to all Air Force units. When an exception exists to the requirements of a paragraph, the exception is indicated in a parenthetical within the paragraph, or by using subparagraphs directed at specific units. MAJCOMs/DRUs/FOAs are to forward proposed MAJCOM/DRU/FOA-level supplements to this volume to HQ USAF/A3OT, through HQ ACC/A3TO, 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/A3OT, HQ ACC/A3TO, 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 Instruction 7730.57, *Aviation Career Incentive Act and Required Annual Report*; AFI 11-401, *Aviation Management*; and E.O. 9397. System of records notice F011 AF XO A, *Aviation Resource Management (ARMS)*, applies. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 37-123, *Management of Records* (will convert to AFMAN

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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: AFTTP 3-1, ACCI 11-464, (MAJCOM) 11-301

NOTE:

MAJCOM-specific guidance is embedded within the text and prefaced with the MAJCOM acronym.

SUMMARY OF CHANGES

This publication contains significant changes. Of note, this revision aligns RAP training with AEF cycle; **Table 4.1.** Ground Training Cycle Requirements and **Table 4.2.** Basic Skills (formerly NON-RAP) Cycle Training Requirements are removed and replaced with tables in the RAP Tasking memorandum; numerous changes to the currency table; redefines strafe minimums; removes Maverick upgrade and several other excessive Chp 6 upgrade programs; removes most paragraphs with specific MAJCOM instructions; makes guidance more directive where required; and updates office symbols with the A-staff designation.

Chapter 1— GENERAL GUIDANCE	5
1.1. Abbreviations, Acronyms, and Terms.	5
1.2. Responsibilities:	5
1.3. Processing Changes:	7
1.4. Training.	7
1.5. Training Concepts and Policies:	9
1.6. Ready Aircrew Program Policy and Management:	10
1.7. Training Sortie Program Development:	11
Table 1.1. F-16 RAP Lookback Requirements.	11
1.8. Training Records and Reports.	12
1.9. Pilot Utilization Policy:	12
1.10. Sortie Allocation Guidance:	13
1.11. Waiver Authority:	13
Chapter 2— INITIAL QUALIFICATION TRAINING	14
2.1. General.	14
2.2. Approval/Waiver for IQT.	14
2.3. Prerequisites.	14

2.4.	Ground Training.	14
2.5.	Flying Training:	14
2.6.	IQT for Senior Officers:	15
Chapter 3— MISSION QUALIFICATION TRAINING		16
3.1.	General.	16
3.2.	Ground Training:	16
3.3.	Simulator Training:	16
3.4.	Flying Training.	17
3.5.	Initial Aircrew Chemical Defense Training (ACDT).	18
3.6.	Flight Surgeon (FS) and Ground Liaison Officer (GLO) Training:	19
Chapter 4— CONTINUATION TRAINING		20
4.1.	General.	20
4.2.	Ground Training.	20
4.3.	Flying Training.	22
4.4.	Special Categories:	23
4.5.	Multiple Qualification/Currency:	24
4.6.	Currencies/Recurrencies/Requalifications:	25
Table 4.1.	F-16 Pilot Currencies.	26
4.7.	Regression:	29
4.8.	End of Cycle Requirements.	30
4.9.	Proration of End-of-Cycle Requirements.	30
Table 4.2.	Proration Allowance.	31
4.10.	Regaining CMR/BMC Status:	33
4.11.	Example of the Lookback, Regression, Proration, and Requalification Process:	33
Figure 4.1.	Regression Flow Chart.	34
4.12.	Instrument Training.	34
4.13.	G-Awareness Continuation Training.	35
Chapter 5— WEAPONS EMPLOYMENT QUALIFICATION		36
5.1.	General.	36
5.2.	Initial qualification	36
5.3.	CT qualification	36

5.4.	Familiarization (FAM):	37
5.5.	Weapons Employment Parameters.	37
5.6.	Full Scale Inert/Live Ordnance.	39
Chapter 6—	SPECIALIZED TRAINING	40
6.1.	Specialized Training Programs.	40
6.2.	Flight Lead (FL) Upgrade.	40
6.3.	Instructor Pilot (IP) Upgrade.	43
6.4.	Mission Commander (MC) Upgrade.	45
6.5.	Simulator Instructor (SI).	46
6.6.	Targeting Pod (TGP):	47
6.7.	Night Vision Goggle (NVG) Qualification Program:	48
6.8.	Forward Air Controller (Airborne) (FAC(A)) Upgrade.	50
6.9.	Suppression of Enemy Air Defenses (SEAD) Upgrade.	55
6.10.	Joint Helmet Mounted Cueing System (JHMCS) Qualification Training	56
6.11.	Alert Camera.	57
6.12.	Low Altitude Step-Down Training (LASDT).	57
Table 6.1.	LOWAT Categories.	58
6.13.	Armed Tactical Reconnaissance.	60
6.14.	F-16 Block Differences Training.	60
6.15.	Contingency/Exercise Spin-Up Training.	61
6.16.	Forms adopted or prescribed.	62
Attachment 1—	GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION	63
Attachment 2—	GLOSSARY OF MISSION/SORTIE AND EVENT DEFINITIONS	79

Chapter 1

GENERAL GUIDANCE

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

1.2. Responsibilities:

1.2.1. HQ ACC/A3 is designated as the responsible agency for this volume IAW AFD 11-2, *Aircraft Rules and Procedures*. HQ ACC/A3 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/A3s 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/A3OT, through HQ ACC/A3TO, for approval before publication. Provide HQ USAF/A3OT, HQ ACC/A3TO, and all applicable MAJCOM/A3s 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 copies to each MAJCOM, NAF/A3, and 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. ACC wings/groups will also assist ANG and AFRC unit training programs as required/requested IAW the AFRC unit advisory support program.

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 (ARC: all flyers) will train. Upon request provide MAJCOM/A3T (ANG: ACC/A3G, AFRC: ACC/A3U) with a list of Basic Mission Capable (BMC) and Combat Mission Ready (CMR) manning positions. Review programs and manning position designations annually.

1.2.4.4. Forward supplements of this volume and Wing syllabi to MAJCOM/A3T for review each training cycle, or upon significant changes (ANG: to ACC/A3G, AFRC: to ACC/A3U upon request). Review supplements each training cycle.

1.2.5. Squadron supervisor (ARC: Appropriate operations supervisor) will:

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

1.2.5.2. Review training and evaluation records of newly-assigned pilots 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. Orient Ready Aircrew Program (RAP) missions to develop combat skills or practice tactical employment relevant to expected unit tasking. Provide guidance to ensure only effective RAP missions are logged. 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 missions/events in which individual BMC pilots will maintain qualification versus familiarization.

1.2.5.6. Determine utilization of BMC pilots.

1.2.5.7. Determine how many and which BMC and CMR pilots will carry special capabilities/qualifications.

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

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

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

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

1.2.5.12. Squadrons will submit a training report to MAJCOM/A3T (ANG: ACC/A3G) every 4th month during the training cycle (always at the end of Jan, May, Sep for all). Squadrons may submit an out of cycle report at anytime if Higher Headquarters (HHQ) assistance is required to prepare for Designed Operational Capability (DOC) or AEF tasking. Reports will consist of: 1) an email memo summarizing results or unresolved issues since the last report, current training plan summary, and significant shortfalls/Limiting Factors (LIMFACS) affecting training. 2) A filled out squadron training health slide (attachment to email memo) summarizing critical training issues. Both items IAW the guidance and examples at the web site <https://A3.acc.af.mil/A3t/A3TO/Fighter/FighterTeam.asp>. Reports will reflect on different phases of training unique to each AEF pair. Key reports are the Post-AEF (end of the 1st month after AEF Vulnerability (Vul) period) and the Pre-AEF 4 months prior to AEF Vul period, others are snapshots of a squadron's training health. Report only significant shortfalls/LIMFACS of events/missions that affect 15% or greater of the squadron's pilot force. Include possible solutions or specific assistance required if able. HQ ACC will attempt to rectify or minimize noted shortfalls/LIMFACS while the training cycle is under way. Other MAJCOMs submit training reports IAW RAP Tasking Memo.

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

1.2.5.12.2. LIMFACS are factors, constraints, restrictions, etc. that degrade training effectiveness. Example: squadron's ability to accomplish actual weapons release is limited due to the lack of ranges that allow aircraft to drop munitions. This may include support hardware and software.

1.2.5.12.3. All deviations from these training requirements, after proration, will be summarized and reported to ACC/A3T (ANG: ACC/A3G) with the Post-AEF training report (end of the 1st month after AEF Vul period) IAW paragraph **1.2.5.12.** above. This includes requirements waived by OG/CC. Email training reports to ACC/A3TO RAP program manager at accдото.rapreporting@langley.af.mil , DSN 574-8323 (ANG: Email training reports to accdog.rapreporting@langley.af.mil). Contact ACC/A3TO F-16 Functional Area Manager (FAM) DSN 574-4099. Other MAJCOMs submit training reports IAW RAP Tasking Memo.

1.2.6. Individual pilots will:

1.2.6.1. Hand carry all available training records, gradebook, and Flight Evaluation Folders to assist the gaining unit in assessing qualifications and training requirements.

1.2.6.2. Complete training requirements and currencies within the guidelines of this instruction.

1.2.6.3. 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/A3 on AF IMT 847, *Recommendation for Change of Publication*.

1.3.2. MAJCOMs will forward approved recommendations to HQ ACC/A3.

1.3.3. HQ ACC/A3 will:

1.3.3.1. Coordinate all changes to the basic instruction with all MAJCOM/A3s.

1.3.3.2. Process recommendation for change after approval by HQ USAF/A3/5.

1.3.3.3. Address time sensitive changes by immediate action message.

1.3.3.4. MAJCOM/A3 (ANG: ACC/A3G) will determine training requirements for subordinate units. AFI changes will be issued via revision, Interim Change (IC), or Administrative Change (AC) to this publication. Due to dynamic requirements of Combatant Commanders, training requirements and currencies may be altered regularly. These training requirement and currency adjustments may be made via RAP Tasking Memorandum. HQ ACC/A3 will include MAJCOM supplemental guidance in the next publication of the AFI.

1.4. Training.

Training programs are designed to progress pilots 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 pilots in a basic position and flying duties without regard to a unit's mission. Upon completion of IQT, the pilots attain 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 pilots, other than general officers above the wing level, to remain BAQ is MAJCOM/A3 (ANG: ACC/A3G).

1.4.2. MQT provides the training necessary to initially qualify or requalify pilots in a specific position and flying duties to perform the missions assigned to a specific unit. Pilots maintain 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 pilot training in the basic flying skills contained in the RAP Tasking Memo (RTM). These skills 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, pilots will have received training in all the basic missions of a specific unit unless excepted in [Chapter 3](#). Pilots will then be assigned to either a CMR or BMC position.

1.4.4.1. **Combat Mission Ready (CMR).** The minimum training required for pilots 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 positions, flying SQ/CC and DO positions are designated CMR positions. OG/CCs may designate other API-6 positions not assigned to the flying squadron as CMR. (Exception: If a unit is over-manned, the SQ/CC may elect to train the front line of their Unit Manning Document (UMD) API-1s to CMR and designate the overage BMC. In this case, priority should be given to inexperienced pilots with at least 50 percent, if available, designated CMR). (ARC/TFI: Any pilot may be designated CMR at OG/CC discretion). CMR pilots maintain proficiency and qualification in all core missions of the flying unit to which they are assigned or attached. CMR pilots maintain currencies which affect CMR status, accomplish all core designated flight training (missions 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.

1.4.4.3. **Basic Mission Capable (BMC).** Pilot 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. (ARC: Any pilot may be designated BMC at OG/CC discretion).

1.4.4.4. All non-CMR active duty wing pilot positions are designated BMC positions. BMC designations are assigned to pilots who have a primary job performing wing supervision or staff functions that directly support the flying operation, or are FTU instructors, Weapons School instructors, pilots assigned to active flying billets in units without assigned aircraft (i.e. 549 CTS [Air Warrior I], etc.), or operational test pilots. For those missions in which they maintain familiarization only, BMC pilots must be able to attain proficiency and qualification in 30 days or less. BMC pilots accomplish all mission related ground training designated by their attached SQ/CC. BMC pilots 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. AFRC and AFRC TFI BMC training events will be directed by RAP Tasking Memo.

1.4.4.5. BMC pilots assigned to units without assigned aircraft (i.e. 549 CTS [Air Warrior I], etc.) will fly a RAP mix as determined by the unit commander consistent with their unit's tasking. RAP events and weapon requirements are determined by the unit commander.

1.4.4.6. **N-CMR/N-BMC.** Pilots that regress to N-CMR/N-BMC status will accomplish the requirements in accordance with paragraph 4.10. While N-CMR/N-BMC, pilots may perform missions (including exercise and contingencies) in which they are current, qualified, and either familiar or proficient.

1.4.4.7. **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 pilot. Specialized training consists of upgrade training such as FLUG, IPUG, FAC(A), etc., including CT to maintain proficiency and qualification in unit tasked special capabilities and missions. Specialized training is normally accomplished after a pilot is assigned CMR/BMC status, and is normally in addition to CMR/BMC requirements. Unless otherwise specified, pilots 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, pilot 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 assist OG/CCs in development of training programs when/where tasked by the HQ ACC/A3. Other MAJCOMs may submit requests for training program support to the HQ ACC/A3. If validated, these requests will be prioritized and tasked to ACC TRSS. Designated test units (CB-coded) may develop syllabi to upgrade operational test pilots 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. 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 pilot (IP) may be required.

1.5.4.2. IPs and FL-qualified SQ supervisors may allow any pilot to lead 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.

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.

1.5.5. Experienced Pilot (EXP)

1.5.5.1. An experienced pilot has one of the following:

1.5.5.1.1. 500 hours PAI.

1.5.5.1.2. 300 hours PAI with 1,000 hours (FP/IP/MP).

1.5.5.1.3. 100 hours PAI and previously fighter EXPERIENCED.

1.5.5.2. For pilots, fighter time is defined as FP/IP/MP hours logged in aircraft while assigned an AFSC of 11FX. OA-10 and AT-38 are considered fighter time. WSOs must achieve fighter EXPERIENCED while assigned an AFSC of 12F3X or 12F4X.

1.5.5.3. Hours logged in the MTC accomplishing RAP Tasking Memo-approved missions will be counted as “hours” when determining experience level. RAP MTC Mission hours will not exceed 20% of the total required to meet the experienced threshold (ex: 100 RAP MTC Mission hours out of 500 hours PAI). See the current RAP Tasking Memo for guidance on approved RAP MTC Missions and logging procedures. AFRC: N/A.

1.6. Ready Aircrew Program Policy and Management:

1.6.1. The RAP training cycle is equal in length to the AEF cycle. RAP tasking is aligned with a squadron’s specific AEF pair and executed IAW RAP Tasking Memorandum. If not assigned to an AEF pair or assigned to multiple AEF pairs, RAP tasking is aligned to the AEF cycle itself. AETC training cycle is 12 months and aligned with the calendar year.

1.6.2. Each RAP training level (CMR, BMC & BAQ) is defined by a total number of RAP missions, broken down into simulators, missions, specific weapons qualifications, and associated events as determined by the MAJCOM and unit commander.

1.6.3. The breakout of mission and event types is provided as a guideline to be followed as closely as possible but minor variances (other than increased Red Air allocations for CMR; AFRC: N/A) are authorized. However, SQ/CCs may still use variations in missions or events as a basis for regression.

1.6.4. An effective RAP training mission requires accomplishing a tactical or building block profile. Each mission requires successfully completing a significant portion of the relevant events as determined by the SQ/CC, RTM, and [Attachment 2](#).

1.6.4.1. Only one RAP training mission may be logged per sortie (day or night) unless separated by AAR. Each mission on either side of the AAR must stand alone as an effective RAP training mission. A maximum of two RAP missions per sortie may be logged under these rules.

1.6.5. The SQ/CC's first priority should be to train all designated pilots to CMR status. CMR status requires:

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 pilots 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.

1.6.6. Progression from BMC to CMR requires:

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

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

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

1.6.6.4. Squadron CC certification.

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

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

1.6.9. Units converting to another MDS may fly pilots in CMR positions at the BMC rate if CMR sortie rates cannot be supported. One month prior to the operationally ready date, CMR pilots should be flown at a CMR rate. 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 new authorized total.

1.7. Training Sortie Program Development:

1.7.1. RAP mission and event requirements (see [Attachment 2](#)) apply to CMR and BMC pilots including those carrying special capabilities or qualifications. They are IAW the RAP tasking memo which specifies the total RAP training cycle mission requirements. The RAP Lookback requirements at [Table 1.1](#) establish the minimum number of missions required for BMC and CMR levels. The RAP tasking memo takes precedence over this instruction and may contain updated requirements and events not yet incorporated in [Attachment 2](#).

Table 1.1. F-16 RAP Lookback Requirements.

Component	Cycle	BMC Inexp	BMC Exp	CMR Inexp	CMR Exp
Active Duty	3-Month Lookback	18	15	30	27
	1-Month Lookback	6	5	10	9
ARC	3-Month Lookback	18	15	24	18
	1-Month Lookback	6	5	8	6

1.7.2. Navigation sorties should be programmed for API-1 pilots. These sorties ensure that pilots 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 missions may not provide sufficient hours to experience pilots to achieve overall unit experience levels.

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

1.7.4. Attrition sorties are allocated to unit flying hour programs to compensate for non-effective training sorties. Non-effective sorties are logged when a training sortie is planned, but a major portion of valid training for that type of mission is not accomplished due to poor weather, IFE, adversary fall-out, etc. For CMR pilots, non-effective sorties will be logged (and not counted toward RAP totals) when Red Air allocations are exceeded during a training cycle (AFRC: N/A). In order to accurately allocate the number of attrition sorties, it is essential that non-effective sorties are logged appropriately.

1.8. Training Records and Reports.

1.8.1. Units will maintain pilot 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*.

1.8.2. Units will track the following information for all pilots (as applicable):

1.8.2.1. F-16 specific ground training (not Ancillary Training).

1.8.2.2. Requirements and accomplishment of individual missions and events cumulatively for the training cycle.

1.8.2.3. RAP requirements and accomplishment using 1-month and 3-month running totals for look-back.

1.8.2.4. Currencies.

1.8.2.5. Weapons employment qualification requirements in sufficient detail to document all employment attempts and hit/miss percentages in a COTS database of choice.

1.9. Pilot Utilization Policy:

1.9.1. Commanders will ensure that wing/group tactical pilots (API-1/6s) fill authorized positions IAW unit manning documents and that pilot status is properly designated. The overall objective is that pilots perform combat-related duties. Supervisors may assign pilots to valid, short-term tasks (escort officer, FEB/mishap board member, etc.), but must continually weigh the factors involved, such as level of pilot tasking, flying proficiency, currency, and experience. For inexperienced pilots in the first year of their initial operational F-16 assignment, supervisors will limit the non-flying duties to those related to combat activities.

1.9.2. Duties required by various publications that may be assigned to CAF API-1 pilots are weapons and tactics officer, programmer, flight 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-1s may be attached to the wing.

API-1s will not be attached to wing staffs or man wing staff positions unless total wing pilot API-1 manning is 100 percent or better. CCs will ensure wing staff pilots (API-6s) perform duties justified in MAJCOM manpower standards documents and authorized in UMDs. AFRC: OG/CC may designate API positions as required to meet unit requirement.

1.10. Sortie Allocation Guidance:

1.10.1. Inexperienced API-1 pilots should receive sortie allocation priority over experienced pilots. Priorities for sortie allocation are as follows:

1.10.1.1. **Operational Units.** CMR API-1, MQT API-1, CMR API-6, MQT API-6, BMC (API-All), API-5 pilot physicians.

1.10.1.2. **Combined Formal Training and Operational Units.** Formal syllabus training, CMR/API-1, MQT API-1, CMR API-6, MQT API-6, BMC (API-All), API-5 pilot physicians, others.

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

1.10.1.4. **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.

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

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

1.10.4. API-8 rated personnel flying authorizations, MAJCOM/IGS inspectors in API-6 billets, and Test Unit pilots will be IAW AFI 11-401 and MAJCOM guidance. API-8 pilots will fly the BMC sortie rate, however they are not required to complete BMC specific missions/events or meet monthly lookback requirements. Test unit pilots will fly the BMC sortie rate as a minimum and should meet monthly BMC lookback. SQ/CCs will direct additional sorties if syllabus or test missions provide insufficient pilot proficiency training. Units should provide assigned API 6/8 flyers adequate resources to maintain minimum training requirements. However, API-6 flyer support will not come at the expense of the flying squadron's primary mission. API 6 flyers will accomplish basic skills events with allotted BMC sorties. API-8 IGS flyers will strive to accomplish basic skills events 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. Waiver Authority:

1.11.1. Unless specifically noted otherwise in the appropriate section, waiver authority for all requirements of the RAP tasking memo and for all provisions in **Chapter 4**, **Chapter 5**, and **Chapter 6** of this volume is the OG/CC. For all other provisions of this volume, the waiver authority is MAJCOM/A3 (ANG: ACC/A3G).

1.11.2. Waivers to this instruction will be valid until end of the training cycle.

Chapter 2

INITIAL QUALIFICATION TRAINING

2.1. General. This chapter outlines Initial Qualification Training (IQT) of pilots into the F-16. IQT includes Basic (B-Course) and Transition/Requalification/Senior Officer (TX-Course) training and will normally be conducted during formal syllabus courses at a Formal Training Unit (FTU) squadron whenever possible. Graduates of F-16 FTU will be proficient in air-to-air and air-to-ground mission tasks as indicated by the Training Task List/Course Training Standards (TTL/CTS) of the FTU syllabus. Students will graduate current and qualified in ACBT, LASDT CAT I (500'), NVG, TGP, weapons employment qualification (GP, LGBs, IAMs; EO - Fam), and receive block differences training as required by next assignment.

2.2. Approval/Waiver for IQT. 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.

2.2.1. MAJCOM/A3 (ANG: NGB/A3T) is approval authority to conduct local IQT, and is waiver authority to change the formal requirements of locally conducted IQT (ANG: ACC/A3G). Info MAJCOM/A3T.

2.2.2. MAJCOM/CC (ANG: ACC/CG) 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 pilot to complete an aircraft instrument qualification IAW AFI 11-202V2 (AFI 11-2F-16V2).

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 the best simulator 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 MAJCOM/A3T to MAJCOM/A3 (ANG: ACC/A3G) with pilot's name, rank, reason for delay, planned actions, and estimated completion date.

2.5.3. Pilots in IQT will fly under IP supervision (dual or chased) until completing the instrument 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 (ANG: ACC/CG).

Chapter 3

MISSION QUALIFICATION TRAINING

3.1. General. Mission Qualification Training (MQT) is a unit developed training program that upgrades newly assigned B or TX course graduates to BMC/CMR to accomplish the unit mission. The culmination of initial MQT is an evaluation IAW AFI 11-2F-16V2. For other newly assigned pilots MQT-LAO, SIM MQT-1 LAO/Instruments, and appropriate theater-specific ground training events are the minimum requirements. Guidance in this chapter is provided to assist SQ/CCs in executing an OG/CC approved MQT program. Units are expected to further tailor their programs based on current qualification, experience, currency, documented performance, and formal training. Applicable portions of MQT may be used to create a requalification program for pilots who have regressed from BMC/CMR to specifically address deficiencies which caused regression.

3.1.1. MQT will be completed within 90 calendar days (ARC: 120 calendar days). Timing starts at the pilot's first duty day at the gaining operational unit. If a pilot elects to take leave prior to entering MQT, the timing will begin after the termination of the pilot's leave. Training is complete upon SQ/CC certification to CMR/BMC. Notify MAJCOM/A3T if delay beginning MQT due to security clearance exceeds 30 days. If training exceeds the specified limit, units will notify MAJCOM/A3 (ANG: ACC/A3G).

3.1.2. The following CMR/BMC training items are granted grace periods for completion after MQT: AAR and night training may be accomplished NLT 90 days (ARC: 180 days) from completion of MQT. Failure to comply will result in regression to N-CMR/N-BMC until training is complete. AAR and night training accomplished in IQT may fulfill MQT requirements as determined by the SQ/CC. Night training events require demonstrated proficiency and currency in similar day events, unless accomplished dual with an IP.

3.1.3. Pilots in MQT will not fly in FLAG-level exercises or Weapons School support sorties.

3.1.4. Prior to BMC/CMR certification, if not accomplished during FTU training, pilots must complete initial Weapons Employment Qualification IAW [Chapter 5](#) and RAP tasking memo.

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. Pilots transferring from another MAJCOM require region-specific airspace procedures academics before flying.

3.2.3. **Initial Verification:** (N/A CB/TF-coded units): Initial verification will be completed within 90 days (ARC: 180 days) after completing MQT. Each pilot (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. Desired composition is SQ/CC or SQ/DO, weapons, electronic combat, intelligence, and plans representatives.

3.3. Simulator Training:

3.3.1. SIM MQT profiles should be accomplished in the best available simulator. SIM MQT-1 is a prerequisite for the first MQT flight. Locally directed simulator missions should concentrate on

squadron tasking and unique capabilities. AFRC: Any SIM requirements or events can be waived or replaced with flying training as required by SQ/CC.

3.3.2. SIM MQT--Local Area Orientation/Instruments. Normal ground operations, standard departure(s), navigation, emergency airfield procedures and approaches, published penetration and approach to primary alternates and home base, emergency divert procedures, EPs.

3.3.3. SIM MQT-Day/Night Air-to-Air Procedures. Trail departure, intercepts, EC equipment operation, threat detection and defensive reactions, switchology, emergency procedures, TGP employment, NVG operations, and weapons employment IAW squadron UCML.

3.3.4. SIM MQT--Day/Night Air-to-Surface Procedures. Heavyweight takeoff, weapons deliveries, jettison procedures, EC equipment operation, threat recognition and defensive reactions, local range procedures, emergency divert procedures, hung ordnance procedures, TGP employment, NVG operations, and weapons employment IAW squadron UCML.

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.

3.4.1. Supervision. A FL-qualified SQ supervisor or IP is required unless specified otherwise. The SQ/CC will determine the proper flight position of the supervisor/IP 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 pilots 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 critical action procedure scenario to include airborne communication with the SOF.

3.4.4. Sortie Requirements. The sorties listed in paragraphs **3.4.5.**, ACBT Qualification, **3.4.6.** 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. Supervision will be an IP or FL-qualified SQ supervisor. Pilots will demonstrate proficiency in the following additional minimum events during MQT:

Trail departure

Instrument approach (precision and non-precision)

Radar Trail Arrival

3.4.4.1. MQT-LAO--Mission Objectives. Practice local area orientation, local instrument procedures, airspace/range familiarization, and emergency airfield(s) overflight/approaches. B/TX course graduates may combine with MQT-AHC.

3.4.4.2. Mission Evaluation Checkride (If Required). This sortie will be flown IAW AFI 11-202V2 and local standardization/evaluation criteria on a mission representing the unit's primary mission tasking.

3.4.5. ACBT Qualification. The following sorties (in sequence) will be used to become ACBT qualified. Units may expand this program to achieve desired proficiency or capability. ACBT programs for pilots with previous fighter experience may be individually tailored based on experience, currency,

and documented performance. FTU graduates meet the requirements of this paragraph with the exception of MQT-(D)ACT.

3.4.5.1. **MQT-Aircraft Handling Characteristics (AHC)--Mission Objectives.** Familiarize the pilot with aircraft maneuvering capabilities and limitations, by practicing advanced handling maneuvers. Specific Mission Tasks: High AOA/low speed horn recovery, vertical recovery, high and low speed turn rate/radius maneuvers, acceleration demonstrations.

3.4.5.2. **MQT-(D)BFM--Mission Objectives.** Demonstrate proficiency in basic fighter maneuvering skills. Specific Mission Tasks: Tactical formation, ranging exercises, A/A weapons employment, offensive, defensive and high aspect setups.

3.4.5.3. **MQT-(D)ACM--Mission Objectives.** Demonstrate proficiency in element A/A maneuvering. Specific Mission Tasks: Offensive/defensive setups, A/A weapons employment, engaged/defensive/ supporting fighter roles and responsibilities..

3.4.5.4. **MQT-(D)ACT--Mission Objectives.** Demonstrate proficiency in element A/A employment. Specific Mission Tasks: Tactical formation, A/A weapons employment, defensive reactions, reforms/resets, disengagement/egress.

3.4.6. **Air-to-Surface Training:**

3.4.6.1. **MQT-SAT--Mission Objectives.** Demonstrate proficiency in A/G employment. Specific Mission Tasks: Intel scenario and mission planning, opposed ingress, threat detection and reactions, first-run attacks, TGP and weapons employment IAW squadron UCML, safe recovery procedures.

3.4.6.2. **MQT-CAS--Mission Objectives.** Demonstrate proficiency in A/G employment. Specific Mission Tasks: GLO/ Intel scenario and tactical mission planning, Engagement under the control of a JTAC or FAC(A), TGP and weapons employment IAW squadron UCML.

3.4.6.3. **MQT-Night 4-Ship Employment--Mission Objectives.** Demonstrate proficiency in Unit specific missions. Achieve 4-ship NVG wingman qualification.

3.5. Initial Aircrew Chemical Defense Training (ACDT). (N/A for CB/TF-coded and ANG ADF units) Designed to ensure pilot proficiency in the overall use of the Aircrew Chemical Defense Ensemble (ACDE) and to familiarize pilots with combat capabilities while wearing ACDE. Pilots must complete Initial ACDT NLT 90 days (ARC: 180 days) from MQT completion. Initial ACDT affects CMR/BMC, but is non-grounding. All initial ACDT is to be accomplished prior to the first ACDE flight. Pilots will be ACDE certified upon the completion of initial ACDT. Pilots who accomplished initial ACDT in previous tours in a fighter type MDS are not required to reaccomplish the ACDE Flight.

3.5.1. **Ground Training.** Pilots will accomplish initial (LL04) Aircrew Chemical Defense Training/ACDT (LL04) initial and CT refresher thereafter. Egress Training with ACDE (LL05) IAW AFI 11-301 (Aircrew Life Support Program), and Emergency Parachute Training with ACDE IAW AFI 16-1301 (Survival, Evasion, Resistance, and Escape Program) will be accomplished once in a career (per MDS).

3.5.2. **Aircrew Chemical Defense Ensemble (ACDE) SIM.** A SIM mission in full ACDE gear (anti-exposure suit liner may be substituted), harness, and G-suit. Within the mission profile, practice doffing simulated contaminated equipment. An ACDE SIM mission may use existing SIM mission profiles and count toward TAC SIM training cycle requirements. Units will use their best available

simulator or actual aircraft cockpit for ACDE SIM training. The ACDE SIM will be accomplished once in a career (per MDS), and should be conducted as close as possible to the day before (but not more than 30 days prior) to the ACDE flight.

3.5.3. Aircrew Chemical Defense Ensemble (ACDE) Flight. The ACDE flight will be accomplished once in a career (unless previously accomplished in a fighter type MDS). Flight training must consider limitations of operating while wearing ACDE. Full donning and doffing procedures/sequence will be practiced in conjunction with the ACDE flight but the only ACDE worn in-flight will be mask, filter pack, and gloves.

3.5.4. ACDE Flight Restrictions:

3.5.4.1. Pilots will be fully current and qualified in an event prior to accomplishing that event on an ACDE flight.

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

3.5.4.3. Minimum altitude is 500 feet AGL except takeoffs, approaches and landings.

3.5.4.4. No ACBT or night sorties. AAR requires an IP in the flight.

3.5.4.5. Weather minimums are 1,500 feet ceiling and 3 miles (4.8 km) visibility for pilots wearing ACDE.

3.5.4.6. Dual cockpit operations will be used to the maximum extent possible with a safety observer, qualified in the aircraft, not wearing ACDE in the rear cockpit. Solo operations will be supervised by an ACDE qualified FL from a chase position. Formations, to include chase, are limited to two-ship and only one pilot in the element will be wearing ACDE unless both aircraft are dual with an experienced pilot in each RCP. Pilots wearing ACDE gear will not fly in dissimilar formations.

3.5.4.7. Operations supervision should not conduct ACDE flight training when, in their judgment, temperature/dew point conditions are not favorable to safe operations.

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

3.6.1. **Ground Training.** Flight Surgeons and GLOs who are assigned to tactical 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, AGSM training (to include the review of "Anti-G Strain Technique Reinforcement and Assessment"), and an instrument/EP simulator (optional) with a CMR/BMC pilot.

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 stick/throttle interference avoidance, communications and equipment, tactical display 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 pilots. Pilots must be qualified IAW AFI 11-401, AFI 11-2F-16 V2, and AFI 11-202 V1/V2. Additionally, they must complete IQT to fly in BAQ status, MQT or FTU IP upgrade to fly in BMC status, or MQT to fly in CMR status.

4.2. Ground Training. Ground training will be accomplished IAW the ground training table in the RTM. Waiver authority for the ground training specified is IAW the reference directive. Ground training accomplished during IQT/MQT may be credited toward CT requirements for the training cycle in which it was accomplished. This list is intended to be a single source reference for F-16 specific ground training only, which will be tracked in ARMS. This list does not include non-F-16 specific ancillary training (e.g. SABC, IA training) which should not be tracked ARMS. Where discrepancies exist, the reference directive takes precedence.

4.2.1. Simulator (SIM): The event requirements in the most current RTM depict the minimum EP and TAC SIM training requirements to be accomplished in best available simulator. SQ/CC will determine the required supervision for CT SIM missions, based on SIM capabilities, and mission training objectives. Units will develop scenarios that cover both EP and TAC SIM missions based on expected employment tasking and general systems knowledge requirements. Emphasis should be placed on training not readily attainable during daily flying activities. Units will review scenarios each training cycle and update as required. Pilots may receive credit for training accomplished in special SIM devices or HHQ-directed simulator test support, etc., if approved by the SQ/CC (AFRC: N/A).

4.2.1.1. During EP SIM missions, training in the following areas will be accomplished each training cycle: unusual attitude recoveries, spatial disorientation, inadvertent weather entry, controlled flight departure recognition and recovery procedures, controlled and uncontrolled ejection parameters, aircraft subsystem failure checklist procedures, relevant critical action procedures, and precision instrument procedures. NOTE: Pilots may satisfy EP SIM requirements by accomplishing or administering INSTM/QUAL EP Evaluations (EPEs).

4.2.1.2. During TAC SIM missions, training in the following areas will be accomplished each training cycle: AEF and DOC relevant simulated combat employment, threat recognition/reactions and counter tactics, aircraft subsystem failure checklist procedures, relevant critical action procedures. NOTE: Pilots may satisfy TAC SIM requirements by accomplishing or administering MSN EPEs.

4.2.2. Situational Emergency Procedures Training (SEPT).

4.2.2.1. This training is not an evaluation, but a review of abnormal/emergency procedures and aircraft systems operations/limitations during realistic scenarios. One pilot should present a situation and another discusses actions necessary to cope with the malfunction and carry it to a logical conclusion. Critical action/Boldface procedures (if applicable) and squadron special interest items should be emphasized. Incorporate the following elements into squadron SEPT training programs:

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

4.2.2.1.2. Develop SEPT scenarios using actual mishaps/incidents as baseline cases.

4.2.2.1.3. Discuss at least one EP for each major subsystem (engine, electrical, hydraulic, fuel, flight control and auxiliary power as applicable) in each session. The EPs should also span all phases of flight.

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

4.2.2.2. SEPT training will be accomplished each calendar month, and the currency will expire at the end of the following month. Pilots with an expired SEPT are grounded until subsequently completed.

4.2.2.3. SEPTs should be accomplished in the best available simulator. If a simulator is not available, SEPTs should be accomplished one-on-one or in small flight-sized groups as long as all members participate fully and share equal time responding to emergency situations.

4.2.2.4. Completion of a simulator EP profile satisfies the monthly SEPT requirement. For an IP/FE administering the SEPT/EP Sim, this will satisfy their SEPT requirement.

4.2.2.5. Formal course student SEPTs may satisfy the monthly SEPT requirement for the IP whom administers this training.

4.2.3. **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. Audio-visual 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. Pilots successfully scoring 85 percent or greater may be given training credit in lieu of ground CT, where authorized by the governing publication.

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

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

4.2.3.2.1. Air-to-Air and Air-to-Ground weapons description, operation, parameters, fusing, limitations, preflight, tactics, normal and emergency procedures/techniques.

4.2.3.2.2. ACBT. Principles of aerodynamics, maneuverability, AHC, formations, signature management, flow priorities, tactical intercept principles, visual merge mechanics and execution, alert procedures and scrambles, use of GCI/AWACS, and enemy capabilities.

4.2.3.2.3. Electronic combat equipment, capabilities, operation, checks, procedures, IRMD/RMD, countermeasures, and hostile EW tactics.

4.2.3.2.4. Specialized training to support specific weapons, tactics (to include threat VID tactics), mission capabilities, authentication, wartime ROE, and safe passage.

4.2.3.2.5. Low altitude flying academics review IAW the outline in paragraph 6.12.6., LASDT Ground Training.

4.2.4. **Verification:**

4.2.4.1. Continuation verification updates pilots on their squadron's wartime mission. Each pilot will participate in a squadron initial/CT verification as a briefer, board member, or seminar partic-

ipant. Pilots who participate in a unit deployment to a tasked AOR may receive credit for continuation verification.

4.2.4.1.1. BMC pilots should accomplish an initial verification and/or participate in a CT verification to facilitate future upgrade to CMR status, at the discretion of the SQ/CC.

4.3. Flying Training. All pilots will accomplish the mission and event requirements listed in the most current RTM. Failure to accomplish these requirements may not affect BAQ, BMC, or CMR status but may require additional training as determined by the SQ/CC. API-8 and MAJCOM/IGS flyers will strive to accomplish as many of the requirements as practical. In addition, the following are required:

4.3.1. Basic Aircraft Qualification (BAQ) Requirements:

4.3.1.1. Instrument Qualification Evaluation IAW AFI 11-202V2.

4.3.1.2. Currencies (as applicable) IAW paragraph 4.6.

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

4.3.1.4. BAQ pilots 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/A3).

4.3.2. Basic Mission Capable (BMC) Requirements:

4.3.2.1. Mission Evaluation IAW AFI 11-202V2.

4.3.2.2. Currencies (as applicable) IAW paragraph 4.6.

4.3.2.3. Ground training requirements related to applicable RAP missions/events.

4.3.2.4. Sortie rate (lookback) IAW [Table 1.1](#) and paragraph [4.7.1](#). (N/A API-8s and MAJCOM/IGS Inspectors).

4.3.2.5. RAP sorties, mission types, and events, including weapons qualifications IAW the procedures set forth in this volume and the RTM.

4.3.2.6. LASDT Category I certification.

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.

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 the RTM.

4.3.3.8. Verification IAW paragraph [4.2.4](#).

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

4.3.4.1. Specialized training IAW **Chapter 6** or locally directed syllabi.

4.3.4.2. Mission/event 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 recertification IAW paragraph **4.8.3**.

4.3.5. **Special Unit Requirements.** This paragraph applies to Designated Training (TF-coded) and Designated Test (CB-coded) Aircraft Units.

4.3.5.1. API-1/6 pilots assigned or attached to TF/CB-coded units will fly at the BMC rate and accomplish the applicable BMC requirements in the RTM. Formal training syllabus-directed missions and approved test plan missions apply to the BMC rate requirement.

4.3.5.2. IPs should be current and qualified in all events they instruct except where specifically waived in Note 4 of **Table 4.1**. Failure to complete a RAP requirement will not affect IP status, but will require additional training as determined by the SQ/CC prior to instructing that event. For CB-coded units, SQ/CCs may designate IPs as initial cadre to instruct new events under an approved test plan.

4.3.5.3. **Ground Training.** SQ/CCs will direct additional ground training necessary to accomplish special unit requirements, such as IP phase briefings and test preparation.

4.3.5.4. **Flying Training.** SQ/CCs will direct additional sorties if syllabus or test missions provide insufficient pilot proficiency training.

4.3.5.5. For United States Air Force Air Warfare Center (USAFAWC) and United States Air Force Weapons Test Center (USAFWTC) pilots, night flying and AAR events are only required to meet syllabus or program requirements.

4.3.5.6. Pilots assigned/attached to USAFWC, 422 TES, 85 TES, and 86 FWS will maintain appropriate weapons delivery currencies, and at the unit CC's discretion, may fly in the RCP of aircraft participating in A/G WSEP. 83 FWS pilots will maintain ACBT currency and, at the 83 FW/CC's discretion, may fly in the RCP of aircraft participating in A/A WSEP.

4.4. **Special Categories:**

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

4.4.1.1. FSs/GLOs may fly any tactical missions for which they are fully briefed and prepared. They should fly with an experienced pilot or flight lead. Initial checkouts will be IAW paragraph **3.6**.

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

4.4.1.3. All SQ flight surgeons assigned to fighter/attack/FAC(A)/FTU are required to complete centrifuge training IAW AFI 11-404 (Centrifuge Training for High-G Aircrew). During centrifuge training, they will receive instruction on AVTR review.

4.4.2. MAJCOM and NAF API-8 Pilots and MAJCOM/IGS Flying Inspectors. (ANG: Responsibilities for API -8 staff flyers are contained in AFI 11-401 as supplemented by the ANG).

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 are the reviewing authority 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 pilot accomplishments and currencies prior to authorizing pilots to participate in MDT.

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

4.4.2.3. HHQ pilots will:

4.4.2.3.1. Review accomplishments and currencies for accuracy.

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

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

4.4.3. Active Duty Pilots Flying with ANG or AFRC Units:

4.4.3.1. Wing/group air advisor rated personnel on duty with operational training units can maintain CMR/instructor status, as appropriate, and may be qualified as an FE.

4.4.3.2. MAJCOM pilots may fly with other MAJCOM units IAW AFI 11-401.

4.4.3.3. Pilots on exchange programs from active duty units are authorized mission oriented sorties IAW the specific guidance that establishes the exchange. Squadron commanders may authorize their participation IAW their specific experience and qualification.

4.4.3.4. HHQ staff pilots may participate in tactical training events. Each pilot will present documentation summarizing currencies, egress training, flight qualifications, etc., to the unit where flying is performed.

4.5. Multiple Qualification/Currency:

4.5.1. MAJCOM/A3 (ANG: NGB/A3) may authorize qualification in more than one MDS aircraft for pilots 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 pilots qualified in primary mission aircraft to maintain qualification in support aircraft. Individuals assigned to positions covered by paragraph 4.5.2. have MAJCOM/A3 approval, and not need to submit specific requests.

4.5.1.1. Submit multiple qualification requests through command channels to MAJCOM/A3 (ANG: NGB/A3). All requests must contain full justification. Approval for a multiple qualification request must be provided to the appropriate host installation aviation management office.

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 until rescinded by the approval authority.

4.5.2. Paragraph 4.5.1. does not apply to variants of the F-16. These aircraft are considered the same MDS. See paragraph 6.14. for block differences training.

4.5.3. 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 WG/CV or OG/CC should qualify in another of the wing's aircraft (not the same one selected by the WG/CC).

4.5.4. **Multiple Requirements.** Pilots will satisfy at least 50 percent of the sortie requirements of their primary aircraft in that aircraft. If CMR, they will meet all RAP sortie/event requirements of the primary aircraft. In addition, pilots 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.

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

4.5.6. Pilots must complete conversion training IAW an approved syllabus.

4.6. Currencies/Recurrencies/Requalifications:

4.6.1. **Currency.** Table 4.1., as supplemented by the most current RTM, defines currency requirements for all F-16 pilots. If a pilot loses a particular currency, that sortie/event may not be performed except for the purpose of regaining currency as noted.

Table 4.1. F-16 Pilot Currencies.

EVENT	To update fly:	INEXP	EXP	Affects CMR	To regain currency:	NOTES
DEMANDING SORTIE	Any Sortie	21	30	NO	Non-demanding mission	1, 10
LANDING	Landing	30	45	NO	Landing, Ref 4.6.3.	2, 10
Rear Cockpit Landing	RCP Landing		90	NO	RCP Landing, Ref 4.6.3.	2
NIGHT LANDING	Day or night Landing	21	30	NO	Day landing, Ref 4.6.3.	
SFO	Event or Sim Event	90	90	NO	Event	3, 15
ACBT	ACBT	60	90	YES	ACBT, Ref 4.6.4.	3, 4
RANGE	Event	120	180	NO	Event	3, 6
LOWAT	Low A/A or Low A/G Event	60	90	NO	LOW A/A or Low A/G Event	3, 4, 7
AAR	Day or Night AAR	180	180	YES	Event	3
FORMATION T/O	Event	60	90	NO	Event	3, 4, 5
FORMATION LANDING	Event	60	90	NO	Event	3, 4, 5
PRECISION APPROACH	Event or Sim Event	30	45	NO	Event	8, 16
Element A/A Maneuvers	Event	60	90	NO	Event	3, 4, 9
INSTRUCTOR	Event or Sim Event	N/A	90	NO	Event, Ref 4.6.5.	10, 16
NVG	Event or Sim Event	120	180	NO	NVG Re-currency mission IAW para 4.6.6.	10, 11, 16
NVG LOW (N/A ANG)	Event	60	90	NO	NVG LOW ALT Fam	3, 12
FCF Profile	Event or FCF Sim	N/A	90	NO	Event or FCF Sim	13, 16
AIR STRIKE CONTROL (ASC)	Event	60	90	NO	Event, Ref 4.6.7.	14
JHMCS	Event	120	180	NO	Event	3, 15
LOW ALT LGB	Event	45	60	NO	Day Event	3, 18

EVENT	To update fly:	INEXP	EXP	Affects CMR	To regain currency:	NOTES
TFR	Night Event	45	60	NO	Night Event	17
SELF-DESIGNATED LGB LOFT	Night Event	30	45	NO	Night Event	17

NOTES:

1. See [Attachment 2](#) for demanding/non-demanding sortie definitions. In addition, BAQ pilots will fly in a supervised status (with a FL-qualified 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 landing currency, FCP must be occupied by a BMC/CMR pilot with landing currency.
3. Supervision will be FL-qualified SQ supervisor or instructor, qualified and current in the event/capability.
4. For formal course IP's (WIC and FTU), 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.
6. Updated by an actual weapons release on a class A/B/C range.
7. Currency is required in the pilot's low altitude category for operations below 1000 feet ([Table 6.1](#)). Loss of currency requires regression to the next higher altitude block. Operations in a lower block will update the higher block categories. Re-currency requires satisfactory performance in the following events: vertical awareness training, hard turns, tactical formation, and offensive/defensive maneuvering.
8. If non-current in precision approaches, increase the pilot weather minimum by one category. To regain currency, fly a precision approach. Any simulator may be used to update currency (but not to regain currency) provided simulator training is accomplished with WX at/below pilot minimums. Multiple simulator approaches are desired.
9. Element Air-to-Air currency. Currency is updated by accomplishing an A-A event with emphasis on blue element employment contracts and deconfliction. Does not affect CMR. If non-current, must accomplish a day event. Opposed Air-to-Ground sorties that fit the definition in [A2.1.24](#) may update this currency.
10. For IPs, accomplishing or instructing the event from either cockpit will update currency. WIC student sorties count as instructor sorties.
11. Must be current in NVG Refresher Academics. Supervision will be an NVG current, qualified pilot in the aircraft or current, FL-qualified SQ supervisor or IP in the element.
12. Currency is required in NVG LOW to fly in the night low altitude environment (IAW AFI 11-214). Loss of currency will require re-accomplishment of single ship low altitude familiarization (IP/Sq supervisor chased) IAW para [6.7.6.8](#).
13. Supervision for flight or simulator will be a current and qualified FCF pilot.
14. FAC(A)s will perform two controls to update ASC currency, IAW the current JCAS FAC(A) MOA. No more than two controls may be counted per CAS target or 9-line briefing. FAC(A)s will satisfy ASC currency and event requirements by training with actual fighters and TACPs to the maximum extent possible. Failing to meet either proficiency or currency will result in FAC(A) pilots being non-qualified.
15. For units with an MTC, this currency may be updated in the simulator as part of a tactical/EP sim profile.
16. For units with any type of simulator (UTD, MTT, NTC, MTC), this currency may be updated as part of a tactical/EP sim profile.
17. See paragraph [4.6.9](#).
18. LOW ALT LGB currency applies to LANTIRN pilots conducting LGB attacks in a certified LOW ALT block while operations are conducted using the LANTIRN system.

4.6.2. **Recurrency.** Pilots require additional training if a currency requirement is not met.

4.6.2.1. Pilots must accomplish overdue training requirements as specified by the SQ/CC before they are considered requalified to perform the task. Training annotated as affecting CMR status will require regression to N-CMR until the pilot accomplishes the training. Training identified as not affecting CMR status does not require regression from CMR; however, it may result in grounding until the training is completed. 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. **Landing Recurrency.** Loss of landing currency requires the following action (timing starts from date of last landing):

4.6.3.1. **31-90 Days (46-90 Days--Experienced).** Regain landing currency.

4.6.3.2. **91-135 Days.** Same as **4.6.3.1.**, plus instructor supervised SIM (tactics, normal and emergency procedures for CMR pilots; normal, instrument, and emergency procedures for BMC pilots).

4.6.3.3. **136-210 Days (136-225 for experienced).** Same as **4.6.3.2.**, plus (CMR/BMC) closed and open book qualification examinations, EPE, and CAPs written examination.

4.6.3.4. **211 (226 for experienced) or More Days.** IQT, landing recurrency, and appropriate weapons event initial qualification.

4.6.4. **ACBT Recurrency.** Pilots losing currency in ACBT must accomplish the following sorties:

4.6.4.1. **61-90 Days (91-120 Experienced).** BFM (offensive and/or defensive).

4.6.4.2. **91-180 Days (121-180 Experienced).** AHC (One Vertical Recovery, one event from the HARTS series IAW AFTTP 3-3.5) and BFM (offensive and/or defensive).

4.6.4.3. **Over 180 Days.** Accomplish a SQ/CC tailored program IAW paragraph **3.4.5.**

4.6.5. **Loss of/Requalification to IP Status.** IPs will be decertified for:

4.6.5.1. Failure of a flight evaluation. To regain IP status, the IP must successfully complete a flight check IAW AFI 11-202V2.

4.6.5.2. Failure of an INST/QUAL open book test. To regain IP status, the IP must successfully reaccomplish the written exam.

4.6.5.3. Expiration of instructor currency. 91-180 days requires an instructor recurrency flight with an IP. Over 180 days requires a Stan/Eval flight evaluation IAW 11-2F-16V2. IP rear cockpit landing currency is 90 days. WIC student sorties count as instructor sorties for currency.

4.6.5.4. Loss of CMR/BMC status due to loss of currency in an event/sortie and the SQ/CC deems decertification is required. 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 IP will not instruct in that event/sortie until the required currency is regained.

4.6.6. **NVG Re-currency Mission.** Pilots losing NVG currency must accomplish the following events prior to unrestricted night operations:

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

4.6.6.2. Tactical turns and maneuvers.

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

4.6.6.3.1. Intercept NVG-TI profile not to exceed 2v2, above 5,000 feet AGL or MSA whichever is higher, or

4.6.6.3.2. BSA above 4,500 feet AGL or MSA whichever is higher, or

4.6.6.3.3. Unopposed SAT / SEAD above 4,500 feet AGL or MSA whichever is higher.

4.6.7. **ASC Currency.** Air strike control events only apply to FAC(A) qualified pilots and are IAW JCAS FAC(A) MOA (dated 24 Mar 05). Track each ASC performed by type as applicable for JCAS FAC(A) MOA documentation requirements. This currency only updates when FAC(A) qualified pilots act as the FAC(A) element lead. FAC(A)s will satisfy their requirements with ground units or TACPs whenever possible.

4.6.8. MAJCOM/AOS Currency Requirements. Units will comply with AFI 11-207 for additional currencies required for the flight delivery of aircraft coordinated through any AOS.

4.6.9. **TFR Recurrency.** Loss of TFR currency requires the following actions (timing starts from date of last event): CB-coded units may use single seat aircraft with a current/qualified IP or SQ CC-designated supervisor in a chase aircraft to update TFR currency requirements.

4.6.9.1. **46-90 Days (61-90 Experienced).** Regression to Medium Altitude until recurrent. Accomplish a night dual-supervised TFR event. Supervision required is an IP or SQ/CC-designated supervisor current and qualified in the event.

4.6.9.2. **91-210 Days.** Accomplish a LANTIRN SIM and a night dual-supervised TFR event.

4.6.9.3. **211 Days-1 Year.** Re-accomplish unit Low Altitude LANTIRN top-off training IAW locally tailored Chp 6 upgrade program.

4.6.9.4. **Over 1 Year.** Accomplish LANTIRN requalification training.

4.7. Regression:

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

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

of the probation period. Probation should not be used to disguise extended shortfalls in sorties that would result in underperforming the training cycle totals. Probation should be used sparingly.

4.7.1.2. CMR/BMC pilots regressed to N-CMR/N-BMC for lookback, must complete a SQ/CC approved re-certification program to return the pilot to CMR/BMC standards. Upon completion of the re-certification program, the CMR/BMC pilots must also meet 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 pilot 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 pilot 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 may require regression to N-CMR/N-BMC. Refer to section 5.3.3. for requalification.

4.7.3. **Regression for Evaluation.** Pilots who fail an aircraft qualification, mission, or instrument evaluation will be handled IAW AFI 11-202V2. Pilots will regress to N-CMR or N-BMC as applicable. These pilots will remain N-CMR/N-BMC until successfully completing required corrective action, a reevaluation, and are recertified by the SQ/CC.

4.8. End of Cycle Requirements. Pilots who fail to complete mission and/or event requirements of this instruction at the end of the training cycle may require additional training depending on the type and magnitude 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 1.2.5.12.

4.8.1. Pilots failing to meet total training cycle RAP mission requirements may continue CT at CMR/BMC as determined by lookback. The SQ/CC will determine if additional training is required.

4.8.2. Pilots failing to meet RAP mission type requirements will result in one of the following:

4.8.2.1. Regress to N-CMR/N-BMC if SQ/CC determines the mission type deficiency is significant. To regain CMR/BMC the pilot must complete all deficient sortie types. These sorties may count towards total requirements for the new training cycle.

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

4.8.3. Pilots failing to accomplish sorties required for Special Capabilities/Qualifications will lose their qualification. The SQ/CC will determine requalification 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 DNIFs, emergency leaves, Consecutive Overseas Tour (COT) leaves, non-flying TDY/exercises combat/contingency deployments, (ANG: and or mandatory training required by civilian employment), preclude training for a portion of the training period. Use Table 4.2. to determine proration. Normal 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.

(ANG: End-of-cycle proration is permitted for documented attrition (e.g. HHQ or weather cancels, MNDs, ground or air aborts) in monthly increments when the total number of occurrences ranges from one half to one times the individual's normal monthly rate of flying). The following guidelines apply:

Table 4.2. 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
346 – 375	12
376 – 405	13
406 – 435	14
436 – 465	15
466 – 495	16
496 – 525	17
526 – 555	18
556 – 585	19
Over 586	20

4.9.1. Proration will only be used to adjust for genuine circumstances of training non-availability and not to mask maintenance, FHP execution, training or planning deficiencies.

4.9.2. Proration is based on cumulative days of non-availability for flying in the training cycle. Use [Table 4.2.](#) to determine the number of months to be prorated based on the cumulative number of calendar days the pilot was not available for flying during the training cycle.

4.9.3. If IQT or MQT is reaccomplished a pilot'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). (ANG: Maj Smith is an experienced CMR pilot with a normal monthly requirement of 6 sorties. He had eight attrition occurrences throughout the training cycle, therefore his SQ/CC can prorate one month of Maj Smith's training requirements).

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

4.9.6. Newly assigned/converted pilots and pilots 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 pilot was declared CMR/BMC unless specified otherwise by MAJCOM.

4.9.8. A pilot's last month on station prior to departing PCS may be prorated provided 1 month's proration is not exceeded. Individuals departing PCS may be considered CMR for reporting purposes until loss of CMR currency, port call date, or sign in at new duty station, whichever occurs first.

4.9.9. CMR pilots who attend USAF Weapons School in TDY-and-return status may be reported throughout the TDY as CMR. Upon return, those pilots will accomplish a prorated share of sortie/event requirements (see [Table 4.2](#)).

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. Missions flown during contingency operations will be logged as such. These missions do not count toward RAP requirements, but may be used for lookback purposes. Except AAR, RAP events may be used to update currencies but do not count toward training cycle requirements. Units will prorate RAP missions and events upon returning from contingency operations for the period of time each individual was deployed. Proration is also authorized for deployment preparation and reconstitution where home station flying is reduced by the MAJCOM. (ANG/AFRC: individuals deployed for more than a seven-day period may prorate a one-month portion of RAP missions and events.)

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

4.9.10.3. Upon return from contingency operations, units will prorate the sorties for the entire deployment, subtracted by the number of valid OG/CC-authorized RAP missions. The result is the allowable sortie proration. SQ/CCs will prorate based on the events accomplished during valid RAP missions. In all cases, negative numbers equate to zero.

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 **5.3.3**.

4.10.2. If CMR/BMC status is lost due to failure to meet lookback IAW paragraph **4.7.1**, the following applies (timing starts from the date the pilot came off CMR/BMC status):

4.10.2.1. **Up to 90 Days.** The pilot 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 Stan/Eval generated open and closed book 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 pilot in ACC with a 1 and 3 month lookback requirement of 9 and 27 RAP missions respectively. On 3 Feb, he flew an ACBT sortie prior to departing for a non-flying TDY for two months. He reported back for flight duty on 6 Apr. What is his status throughout his TDY and on his return?

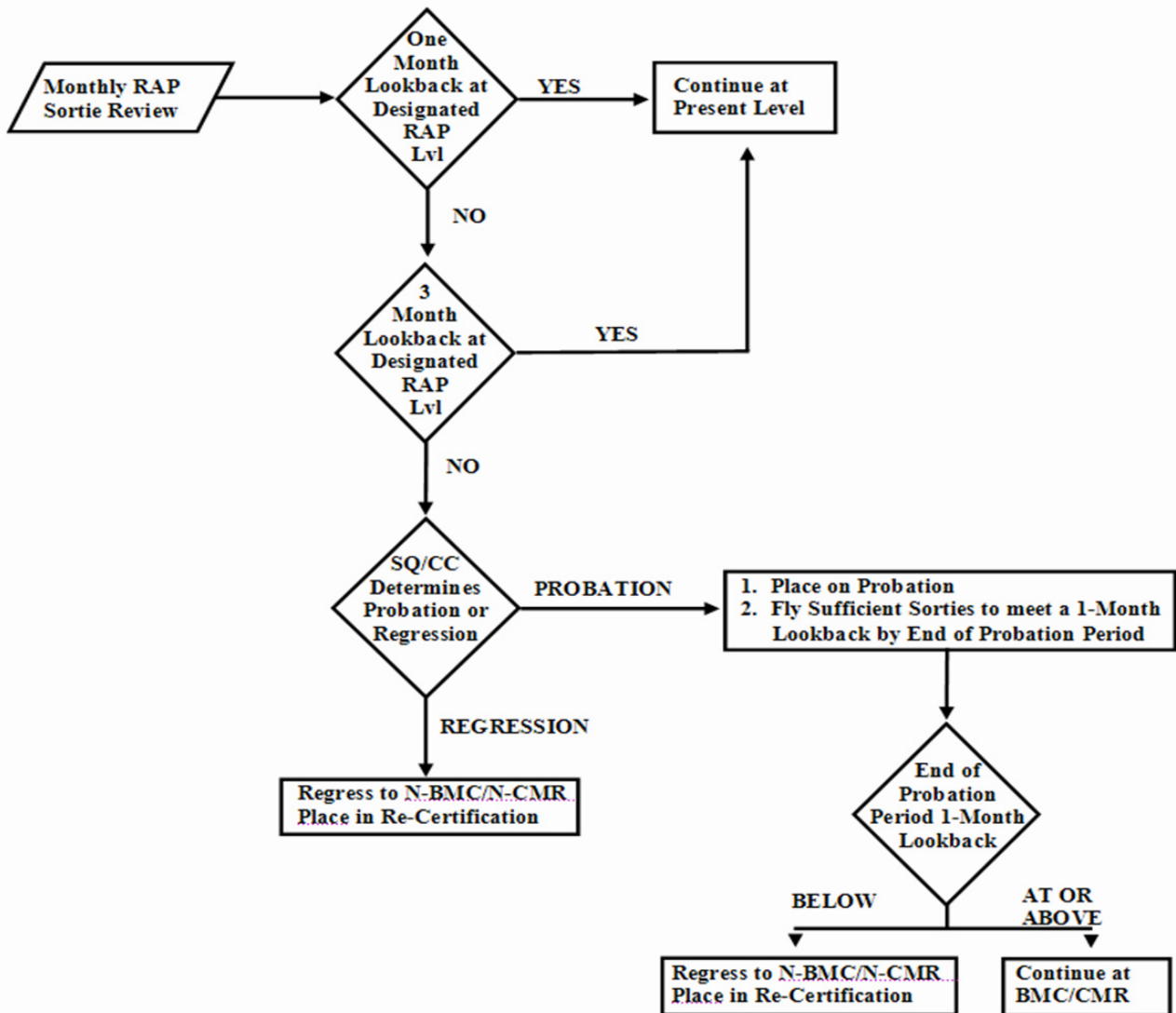
4.11.1.1. The SQ/CC wanted to list Capt Smith as a countable CMR pilot for reporting purposes throughout the TDY. Therefore, on 1 Mar, his Flt/CC performed the mandatory 1-month lookback (Feb) on Capt Smith. He only flew one RAP sortie, failing the 1-month lookback. The Flt/CC then performed a 3-month lookback (Dec, Jan, Feb). This showed that he flew only 24 sorties for this period. Had he flown three more sorties, his SQ/CC could continue Capt Smith at CMR. With 21 sorties, Capt Smith did not meet the 3-month lookback for a CMR pilot. The SQ/CC could regress Capt Smith to N-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 probation for one month. 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 complete 9 RAP missions to recapture his 1-month lookback and get off probation. Although Capt Smith was still CMR in Mar, the SQ/CC flew him with an IP on his first few sorties 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 Jun, the SQ/CC prorated 2 months off of Capt Smith's total requirements. In spite of this proration, Capt Smith was deficient in one mission category. The SQ/CC could regress Capt Smith to N-CMR if deemed significant. After accomplishing the tailored recertification program (in this case, the deficient sorties), the SQ/CC would recertify Capt Smith to CMR. This training counts for the new training cycle.

Figure 4.1. Regression Flow Chart.



4.12. Instrument Training.

4.12.1. An instrument training program will be developed IAW AFM 11-210.

4.12.2. Units which seldom encounter bad weather and/or night recoveries should exercise pilots and approach facilities by periodically simulating "weather day" recovery operations, as determined by the SQ/CC.

4.12.3. Pilots transferring from another MAJCOM require the theater-specific portions of IRC before flying without a theater-experienced pilot in the formation. MQT academics and the MQT LAO mission may satisfy this requirement.

4.12.4. RAP events may be accomplished on an instrument mission provided accomplishment does not interfere with the primary goal of instrument training. The transition from instruments to visual

references should be practiced on all instrument approaches. An instrument sortie is a basic skills requirement and may be credited toward monthly RAP lookback only IAW the RTM.

4.13. G-Awareness Continuation Training. Units will develop a CT program that provides feedback to pilots and imprints a proper L-1 AGSM so that it becomes an integral part of pulling Gs.

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

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

4.13.2.1. AGSM technique and assessment will be incorporated into the squadron CT program. Emphasis will be placed on briefing, debriefing, and assessing the L-1 AGSM using the AVTR in the debrief on a daily basis. FLs, IPs, SQ supervisors, and flight surgeons should become adept at assessing and teaching the correct AGSM. Academics will include a discussion of the limitations imposed on aircraft performance as a result of an ineffective AGSM.

4.13.2.2. The G-awareness exercise will be flown IAW the guidance in AFI 11-2F-16V3.

4.13.2.3. FLs will assess the AGSM effectiveness of flight members during mission debriefings. This assessment should not be limited to the G-awareness exercise. Evaluate the AGSM after the pilot has had the time to fatigue to get an accurate assessment of a pilot's AGSM during a tactically and G-demanding portion of flight. AGSM should also be evaluated under relatively low intensity G such as A/S sorties.

4.13.2.4. An A/A mission tape for each pilot will be reviewed each training cycle by the squadron flight surgeon, aerospace physiologist, or a squadron supervisor. The reviews will be documented.

4.13.3. FLs or SQ supervisors will identify pilots having poor AGSM technique or low G-tolerance to the Flt/CC or appropriate operations supervisor. The SQ/DO or appropriate operations supervisor will determine what action is required to improve the pilot's G-tolerance. The SQ/CC will determine if refresher training is required IAW AFI 11-404.

Chapter 5

WEAPONS EMPLOYMENT QUALIFICATION

5.1. General. This chapter outlines requirements for attaining initial qualification and maintaining CT qualification in the employment of air-to-surface and air-to-air weapons. Refer to "Glossary of Missions/Sorties/Events" at [Attachment 2](#) for further guidance on weapons qualifications.

5.2. Initial qualification (QUAL): Pilots must attain initial qualification in any weapon or weapon category listed as QUAL in the RAP Tasking memo. Initial qualification can be attained in IQT or MQT, and may be credited toward CT qualification requirements.

5.2.1. Initial qualification and requalification in a weapon or weapon category is satisfied when the pilot has achieved a minimum of 3 hits out of 6 consecutive employment attempts. Initial qualification will carry over for consecutive F-16 assignments.

5.3. CT qualification (QUAL): Pilots must maintain qualification in any weapon or weapon category listed as QUAL in the RAP Tasking memo. These criteria establish the minimum standards for a pilot to maintain qualification and do not necessarily determine evaluation criteria established by other instructions or agencies (e.g., inspection/evaluation teams).

5.3.1. CT weapons employment will be from tactical deliveries or intercepts simulating realistic employment of UCML munitions, and IAW all appropriate guidance. To maintain a combat perspective during training, CT air-to-surface weapons employment qualification requirements will be accomplished using full scale live/inert munitions and Standard Conventional Loads (SCLs) to the maximum extent possible. To achieve this, units should schedule full scale live/inert munitions such that every CMR pilot and the maximum number of aircraft have the opportunity to expend.

5.3.2. QUAL for air-to-surface weapons requires a hit rate of 50 percent when compared to total employment attempts. QUAL for air-to-air weapons requires a 75% hit rate (valid at pickle/trigger squeeze) when compared to total employment attempts. Hit criteria is IAW AFTTP 3-1 and/or this Volume, as applicable. The RAP Tasking memo further defines QUAL requirements based on the training cycle.

5.3.2.1. Video assessment. 100% of guided air-to-surface and air-to-air weapons employment qualification requirements may be video assessed. Unguided Munitions and Strafe events require actual weapons employment.

5.3.2.2. At the end of the training cycle, each pilot's weapons employment statistics (hit/miss percentages) will be reviewed to assess qualifications. Weapons employment qualifications are valid through the subsequent training cycle.

5.3.3. **Failure to Qualify:** Failure to qualify in one weapon or weapon category does not invalidate qualification in others. SQ/CCs may declare a pilot unqualified in a weapon or weapon category at any time during a training cycle without affecting other weapon employment qualifications. If qualification is required at CMR/BMC, failure to qualify will result in regression to N-CMR/N-BMC until requalification is accomplished IAW [5.2.1](#).

5.4. Familiarization (FAM): Familiarization for weapons does not require a hit rate when compared to total employment attempts. The RAP Tasking memo further defines FAM requirements based on the training cycle.

5.5. Weapons Employment Parameters. The event requirements and parameters listed below form the basic framework for pilot weapons employment training. All weapons employment will conform to the limits established for each specific event. Pattern descriptions, procedures, training rules, and foul criteria are contained in AFI 11-2F-16V3 and AFI 11-214. Events performed at night may require higher minimum recovery altitudes based on AFI 11-214 Night Training Rules.

5.5.1. Strafe Events. Tactical Strafe (TAC STRF) is a combined event. Any combination of LAS and/or HAS hits satisfies this training requirement. Each pass is a stand alone event for weapons employment qualification with no maximum number of passes. Hit criteria (regardless of aircraft rounds limiter setting): acoustically scored or independently observed impacts on a point target, or bullet dispersion within 36 feet of any target. For VTR assessment: a stabilized piper on target during witness cue.

5.5.1.1. Low Angle Strafe (LAS). Planned dive angle 15 degrees or less. Minimum recovery altitude is 75 feet AGL. Foul line is 2,000 feet.

5.5.1.2. High Angle Strafe (HAS). Planned dive angle greater than 15 degrees. Minimum recovery altitude is 500 feet AGL.

5.5.2. Guided Munitions Events:

5.5.2.1. AGM-65 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 TGM simulated weapon release within launch parameters with stabilized target tracking. May be accomplished in a simulator (AFRC: N/A).

5.5.2.2. Laser Guided Bomb (LGB). An event in which a combat/training laser is employed to self-lase simulated/actual ordnance during an LGB delivery. Minimum recovery is safe escape/fuze arm/guide time required for the ordnance being simulated/delivered. Hit criteria: IAW AFTTP 3-1.

5.5.2.3. Inertially Aided Munition (IAM). An event in which an aircraft system is used to determine release parameters for JDAM, JASSM, JSOW or WCMD weapons. Simulated or actual delivery of ordnance is required. Minimum recovery is safe escape for the ordnance being simulated/delivered. Hit criteria: IAW AFTTP 3-1.

5.5.2.4. AGM-88 High Speed Antiradiation Missile (HARM). Maneuver as required to achieve weapon employment. Acquisition and launch may be performed from a level, climbing, or diving maneuver to achieve firing parameters. A maximum of 4 HTS and 4 HAS shots may be credited toward qualification per mission. 4 HAS shots per training cycle must be with a CATM. Hit criteria: valid HARM launch (actual or simulated) IAW AFTTP 3-1 shot criteria at pickle as determined by VTR review.

5.5.3. Unguided Munitions Events: Unguided Bomb (UGB) is a combined event. Any combination of hits from the following list of events satisfies this training requirement.

5.5.3.1. **Visual Level Delivery (VLD).** 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 altitude is safe separation/escape/fuze arm for ordnance being delivered/simulated or 200 feet AGL or range/target area restrictions, whichever is higher. Hit criteria: 130 feet (40m).

5.5.3.2. **Systems Level Delivery (SLD).** 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 altitude is safe separation/escape/fuze arm for ordnance being delivered/simulated or the pilot's minimum low altitude qualification or range/target area restrictions, whichever is higher. Hit criteria: 195 feet (60m).

5.5.3.3. **Low Angle High Drag (LAHD).** Planned dive angle is less than 30 degrees. Minimum recovery altitude is safe escape 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: 75 feet (23m) for computed deliveries; 105 feet (32m) for manual; or within the target area or impacting the vertical panel in the skip target.

5.5.3.4. **Low Angle Low Drag (LALD).** Planned dive angle is less than 30 degrees. Minimum recovery altitude is safe escape for ordnance being simulated/delivered or as required to recover above 1,000 feet AGL, whichever is higher. Hit criteria: 100 feet (31m) for computed deliveries; 175 feet (53m) for manual.

5.5.3.5. **Dive Bomb (DB).** Planned dive angle is 30 degrees or greater. Minimum recovery altitude is safe escape 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; 145 feet (44m) for manual.

5.5.3.6. **High Altitude Dive Bomb (HADB).** Planned dive angle is 30 to 60 degrees. Minimum recovery altitude is 4,500 feet AGL. Hit criteria: 125 feet (38m) for computed deliveries; 250 feet (76m) for manual.

5.5.3.7. **Medium Altitude Release Bomb (MARB).** Planned dive angle is 30 to 60 degrees. Minimum recovery altitude is 7,000 feet AGL. Hit criteria: 167 feet (58m) for computed deliveries.

5.5.3.8. **High Altitude Release Bomb (HARB).** Planned dive angle is 30 to 60 degrees. Minimum recovery altitude is 10,000 feet AGL. Hit criteria: 255 feet (78m) for computed deliveries; 510 feet (136m) for manual.

5.5.3.9. **Low Altitude Toss (LAT).** A delivery executed from a pop-up or roll-in with less than a 10,000 feet AGL base/apex. Aircraft should not enter lateral or vertical limits of the bomb frag pattern. Any system may be used for target designation and weapon release. Hit criteria is: 175 feet (53m).

5.5.3.10. **Special Weapons Event.** A delivery which utilizes all applicable nuclear switchology to release simulated or actual ordnance. Minimum altitude is safe separation for ordnance being delivered/simulated, the pilot's minimum low altitude qualification or 100 feet AGL, whichever is higher. Hit criteria: Based on the delivery method used.

5.5.4. **Rocket Events. Tactical Rockets (TAC RX)** is a combined event. Any combination of HATR/LATR and/or LR hits satisfies this training requirement. Hit criteria applies to controlled deliveries only. Impromptu target marking should be validated by the timeliness and effectiveness of rocket impact for fighters to locate the target.

5.5.4.1. **Low Altitude Tactical Rockets (LATR).** A tactical delivery from a dive angle of 0 to 30 degrees; slant range at release of 10,000 feet or greater from the target; minimum recovery altitude 1,000 feet AGL. Hit criteria: 1000 feet (300m).

5.5.4.2. **High Altitude Tactical Rockets (HATR).** A tactical delivery from a dive angle of 0 to 30 degrees; slant range at release of 10,000 feet or greater from the target; minimum recovery altitude 4,000 feet AGL. Hit criteria: 500 feet (152m).

5.5.4.3. **Loft Rockets (LR).** A tactical delivery from level to 45 degrees of climb; slant range at release of 10,000 feet or greater from the target; minimum recovery altitude 300 feet AGL. Hit criteria: 1650 feet (500m).

5.5.5. **Air-to-Air Weapons Events: AIM-9/AIM-120/A/A GUN.** Hit criteria is IAW AFTTP 3-1 shot criteria and/or this Volume as applicable. Reference paragraphs [5.3.](#) and [5.4.](#)

5.6. Full Scale Inert/Live Ordnance. Full Scale Inert/Live ordnance training is essential to pilot combat capability. Every attempt should be made to give pilots the opportunity to employ as many types of weapons on the unit's UCML as possible. To provide this opportunity, pilots should expend the following ordnance:

5.6.1. Three Unguided Munitions FSWD (IAW [Attachment 1](#) definition) per training cycle.

5.6.2. Two actual IAM per training cycle.

5.6.3. Two actual LGB per training cycle.

Chapter 6

SPECIALIZED TRAINING

6.1. Specialized Training Programs.

This chapter outlines upgrade training programs for special capabilities and qualifications. These programs are intended to provide a basic starting point and should be modified by the SQ/CC based on the unit's requirements and/or the upgradee's previous experience, qualifications, and documented performance. Unless governed by a formal syllabus, ground and device training for these programs will consist of unit-developed academics and scenarios. Flight training will be conducted in accordance with a program approved by the SQ/CC.

6.2. Flight Lead (FL) Upgrade. This program establishes the minimum guidelines for those pilots identified by the SQ/CC to upgrade to flight lead. This program takes an F-16 pilot with demonstrated tactical proficiency as a wingman and teaches flight leadership and decision-making.

6.2.1. Initial entry may be as a two-ship/element FL until experience and proficiency warrant further progression, in which case, responsibilities for employment will not exceed two aircraft until certified as a four-ship FL. The SQ/CC will determine when a two-ship FL may train toward larger, more complex formations (three- or four-ship).

6.2.2. The following minimum flying hours are required prior to entering FL upgrade training:

6.2.2.1. 300 hours PAI, or

6.2.2.2. 200 hours PAI with 400 hours IP/FP/MP in a 11Fxx, 11K3C, or 11K3D AFSC, or

6.2.2.3. 50 hours PAI, if previously qualified as a 11Fxx AFSC flight lead.

6.2.2.4. (ANG, AFRC) For converting units, OG/CC's may select prior flight lead qualified pilots to upgrade to flight lead concurrently with the MQT top off program regardless of PAI hours.

6.2.3. **Ground Training.** Ground training will consist of locally developed instruction in the following areas. Add unit specific ground training items for unique ordnance, pods, or capabilities.

6.2.3.1. **FL Responsibilities.** FL/wingman relationship, airmanship, judgment and maturity should be addressed as they relate to flying and squadron related duties.

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

6.2.3.3. **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.

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

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

6.2.3.6. **IFEs and Emergency Diverts.** Divert decisions as an element, support of wingman during EPs, FL responsibility and authority, min fuel planning, and ATC assistance.

6.2.3.7. **Simulator Training.** To the maximum extent possible, high-fidelity simulator training should be incorporated into FL upgrade. SIM missions should precede flight training whenever possible and reinforce common errors allowing upgrade pilots to repeatedly practice upgrade tasks. Emergency procedures, lost wingman, and instrument training should be demonstrated in the sim.

6.2.4. **Flight Training.** Flight training will be conducted in accordance with an upgrade program approved by the SQ/CC. Missions may be flown in any order. The program outlined below provides a basic starting point and may be modified by squadron commanders based on unit needs and/or upgradee's previous experience, qualifications, and documented performance. All FLUG training will be under the supervision of an IP or flight lead-qualified squadron supervisor flying as the upgrading student's wingman. Dissimilar adversaries should be used to the maximum extent practical during FLUG training. Units will add considerations/techniques for specialized capability (TGP, HTS, etc) to applicable areas.

6.2.4.1. **FLUG Event Requirements.** Two formation takeoffs and landings, a day or night aerial refueling, trail departure, and a trail recovery will be accomplished as a flight lead during the program.

6.2.4.2. **Night Employment.** Employment with NVGs is integral to night missions in every upgrade program. Include some non-NVG events in FLUG training. All A-G missions may be completed in the day or night to include certification.

6.2.4.3. **FLUG-BFM--Mission Objectives.** Practice leading and controlling a 1v1 BFM mission including WVR and BVR setups. Specific Mission Tasks: Briefing, WVR setups, intercepts to BFM, weapons employment, mission reconstruction and debriefing, tape review/assessment (to include AGSM).

6.2.4.4. **FLUG-ACM--Mission Objectives.** Practice leading and controlling a 2v1(+1) ACM mission including WVR and BVR setups. Specific Mission Tasks: Briefing, perch setups, tactical intercepts to ACM, Tap n' CAP, weapons employment, mission reconstruction and debriefing, tape review/assessment (to include AGSM).

6.2.4.5. **FLUG-ACT(2)--Mission Objectives.** Practice leading and controlling a 2vX (D)ACT mission. Specific Mission Tasks: Briefing, tactical formation, PID scenario, BVR setups for sweep and lane/point defense (concentrating on element/flight integrity), low/slow VID, ACMI procedures (if available), minimum fuel recovery, mission reconstruction and debriefing, tape review/ assessment (to include AGSM).

6.2.4.6. **FLUG-BSA/SAT(2)--Mission Objectives.** Practice leading and controlling a two-ship weapons delivery mission to a controlled range. Specific Mission Tasks: Mission planning, briefing, LATN, LATF, surface-to-air threat reactions, first run attack, controlled range procedures, conventional (including strafe) and nuclear weapons delivery patterns, hung ordnance recovery, landing, mission reconstruction and debriefing, tape review and assessment.

6.2.4.7. **FLUG-CAS--Mission Objectives.** Practice leading and controlling an element under JTAC/FAC(A) engagement authority. Specific Mission Tasks: Briefing with GLO, briefing with JTAC/FAC(A), tactical departure, C2 check-in and authentication, TACS/AAGS coordination, FTR-JTAC briefs, 9-line, Type 1/2/3 control, surface-to-air threat reactions, employment with TGP desired, tactical egress, BDA, debrief with GLO, JTAC, and FAC(A).

6.2.4.8. **FLUG-SAT(3of4)--Mission Objectives.** Practice leading and controlling an element as number three of a four-ship tactics mission to a tactical range/working area in a medium/high threat scenario. Specific Mission Tasks: Trail departure, opposed ingress, medium/high threat target area tactics, specialized capability (TGP, HTS, etc) employment procedures/techniques (if applicable), tactical egress, comm jam procedures.

6.2.4.9. **FLUG-NBSA(2)--Mission Objectives.** Practice leading and controlling a two-ship night weapons delivery mission to a controlled range. Specific Mission Tasks: Briefing, trail departure and joinup, surface-to-air threat reactions, med alt 2-ship attacks (TGP employment desired), NVG and non-NVG tactical formations, night range operations, weapons delivery patterns, debrief, tape review/assessment.

6.2.4.10. **FLUG-CERT(2)--Mission Objectives.** Assessment (by SQ/CC or designated representative) of flight lead abilities in a tactical mission scenario based on squadron tasking. Specific Mission Tasks: Briefing, mission accomplishment, flight management and control, mission reconstruction and debriefing, tape review/assessment. This sortie is optional if UP is going directly to 4 Ship certification.

6.2.4.11. **FLUG-ACT(4)--Mission Objectives.** Practice leading and controlling a 4vX (D)ACT mission. Specific Mission Tasks: Briefing, tactical formation, PID/EID or VID scenario, BVR setups for sweep and lane/point defense (concentrating on element/flight integrity), ACMI procedures (if available), mission reconstruction and debriefing, tape review/ assessment (to include AGSM).

6.2.4.12. **FLUG-BSA/SAT(4)--Mission Objectives.** Practice leading and controlling a four-ship weapons delivery mission to a controlled range. Specific Mission Tasks: Briefing, LATN, LATF, first run attack, surface-to-air threat reactions, controlled range procedures, conventional (including strafe) and nuclear weapons delivery patterns, hung ordnance recovery, landing, mission reconstruction and debriefing, tape review/ assessment.

6.2.4.13. **FLUG-NSAT(4)--Mission Objectives.** Practice leading and controlling a four-ship tactics mission in a high-threat scenario. Specific Mission Tasks: Briefing, threat reaction(s) to air and surface threats, tactical ingress, high-threat target area tactics, NVG and non-NVG tactical formations, specialized capability (TGP, HTS, etc) employment procedures/techniques, mission reconstruction and debriefing, tape review/assessment.

6.2.4.14. **FLUG-CERT(4)--Mission Objectives.** Assessment (by SQ/CC or designated representative) of flight lead abilities in a tactical mission scenario based on squadron tasking. Specific Mission Tasks: Briefing, mission accomplishment, flight management and control, mission reconstruction and debriefing, tape review/assessment, critique.

6.2.5. **Flight Lead Certification.** A certification sortie is required by the SQ/CC or designated representative prior to operating as a 2/4 ship lead. (**NOTE:** If two- and four-ship upgrade training are combined, only one evaluation sortie is required). Following a successful certification sortie, failure to complete scheduled training events (i.e., LOWAT, AAR, etc.) need not delay certification. The SQ/CC will certify new flight lead's status, including any restrictions, in appropriate written format (letter, gradesheets, ARMS, etc).

6.2.6. **Killer Scout/Strike Coordination and Reconnaissance (SCAR).** IAW joint doctrine, any qualified flight lead may also act as a Killer Scout/SCAR. If required by SQ/CC, accomplish additional theater specific ground or flying training within a locally directed syllabus.

6.3. Instructor Pilot (IP) Upgrade. This program establishes the minimum guidelines for those pilots identified to upgrade to IP. SQ/CCs may waive selected missions based on previous experience. FTU instructors will complete a formal syllabus course as defined in the USAF Education and Training Course Announcements (ETCA).

6.3.1. Pilots selected for IP upgrade must be four-ship FLs with either:

6.3.1.1. 500 hours PAI or

6.3.1.2. 400 hours PAI with 1,000 IP/MP/FP, or

6.3.1.3. 200 hours PAI with 750 IP/MP/FP hours in an 11Fxx AFSC,

6.3.1.4. (ARC) For converting units, pilots may be designated by the OG/CC for IP upgrade regardless of time in the new PAI if they have at least 1,000 hours IP/MP/FP in a fighter AFSC and the IP upgrade will be conducted at FTU.

6.3.2. **Ground Training.** Upgrading pilots must satisfactorily complete the following unit-developed blocks of instruction prior to certification as IPs. Units will add considerations/techniques for specialized training (TGP, HTS, etc) to applicable areas:

6.3.2.1. **Principles of Instruction.** Learning objectives, instructor responsibilities, IP/upgrade pilot relationship, training facilities, and publications.

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

6.3.2.3. **Instructor Responsibility.** Airmanship, judgment, maturity and flight discipline during briefing, in-flight, debrief, and additional squadron duties.

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

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

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

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

6.3.2.8. **Simulator Training.** To the maximum extent possible, high-fidelity simulator training should be incorporated into IP upgrade. SIM missions should precede flight training whenever possible and reinforce common errors allowing upgrade pilots to repeatedly practice upgrade tasks. Emergency procedures, lost wingman, and instrument training should be demonstrated in the sim.

6.3.3. **Flying Training.** Flight training will be conducted in accordance with an upgrade program approved by the OG/CC. IPUG sorties may be flown in any order, as aircraft configurations and sortie scheduling permit. Transition and JHMCS IPUG sorties do not need to be flown as a dedicated sortie if all the training events listed are completed during flying training. IPUG programs for pilots with previous fighter experience may be individually tailored, based on experience, currency, and documented performance. Unit programs should specify which tasks the upgrading IP will practice demonstrating, which tasks the upgrading IP will practice evaluating the "student's" performance, and which tasks he will do both. AAR may be completed on any mission.

6.3.3.1. **Night Training.** Employment with NVGs is integral to night missions in every upgrade program. Include some non-NVG events in IPUG training. All A-G missions (including certification) may be completed in the day or night.

6.3.3.2. **IPUG Events.** Accomplish the following events during the IPUG: chase overhead pattern, chase SFO, AAR (day or night), trail departure, trail recovery, formation takeoff/landing from each position.

6.3.3.3. **IPUG-BFM--Mission Objectives.** Introduce upgrading IP to instructing 1v1 BFM. Specific Mission Tasks: Briefing, WVR setups, intercepts to BFM, weapons employment, chased VFR patterns, mission reconstruction and debriefing, tape review/assessment (to include AGSM).

6.3.3.4. **IPUG-ACM--Mission Objectives.** Introduce upgrading IP to instructing element maneuvering against an adversary. Specific Mission Tasks: Briefing, WVR setups, tactical intercepts to ACM, Tap n' CAP, weapons employment, mission reconstruction and debriefing, tape review/assessment (to include AGSM).

6.3.3.5. **IPUG-TI--Mission Objectives.** Practice instructing and controlling a 2vX tactical intercept mission. Specific Mission Tasks: Briefing, tactical formation, 2vX tactical intercepts to engagements, VID scenario, combat separations, mission reconstruction and debriefing, tape review/assessment (to include AGSM).

6.3.3.6. **IPUG-NTI—Mission Objectives.** Instruct 2vX air-to-air employment with NVGs. Primary emphasis should be placed on how NVGs enhance night air-to-air element employment, rather than complex tactical employment scenarios. Additional emphasis should be placed on single ship and element AAMD procedures with NVGs. Focus the briefing on NVG tactical formation, employment and air-to-air threat reactions with NVGs. Specific Mission Tasks: Tactical intercepts to include: a) Sorting pass, b) BVR launch and leave, c) Single-side offset, d) Element launch and react (Notch/Attack/Abort gameplan), e) Element AAMD. Employment with TGP is desired.

6.3.3.7. **IPUG-ACT--Mission Objectives.** Practice instructing and controlling a 4vX air combat mission. Specific Mission Tasks: Briefing, tactical formation, 4vX tactical intercepts to engagements, PID scenario, mission reconstruction and debriefing, tape review/assessment (to include AGSM).

6.3.3.8. **IPUG-BSA--Mission Objectives.** Introduce upgrading IP to instructing a basic surface attack mission to a controlled range. Specific Mission Tasks: Briefing, LATN, LATF, first run attack, surface-to-air threat reactions, conventional (including strafe) and nuclear delivery patterns, specialized capability (TGP, HTS, etc) employment procedures/techniques (if applicable), mission reconstruction and debriefing, tape review/assessment.

6.3.3.9. **IPUG-NBSA--Mission Objectives.** Introduce upgrading IP to instructing and controlling a night surface attack mission. Specific Mission Tasks: Briefing, NVG and non-NVG formation, surface-to-air threat reactions, med alt attacks (TGP employment desired), night range operations, night weapons delivery patterns, debrief, tape review/assessment.

6.3.3.10. **IPUG-NSAT--Mission Objectives.** Introduce upgrading IP to instructing and controlling a low- to medium-threat night tactics mission. Specific Mission Tasks: Briefing, NVG and non-NVG tactical formation, low/medium-threat tactics, threat reactions, specialized capability

(TGP, HTS, etc) employment procedures/techniques (if applicable), mission reconstruction and debriefing.

6.3.3.11. **IPUG-SAT--Mission Objectives.** Introduce upgrading IP to instructing and controlling a tactics mission in a high-threat environment. Specific Mission Tasks: Briefing, tactical ingress, high-threat target area tactics, simulated/actual weapons delivery, specialized capability (TGP, HTS, etc) employment procedures/techniques (if applicable), tactical egress, threat reactions, mission reconstruction and debriefing.

6.3.3.12. **IPUG-CERT--Mission Objectives.** Complete a successful IP evaluation IAW AFI 11-2F-16V2, using a profile simulating unit tasking.

6.3.3.13. **IPUG-JHMCS (Optional)--Mission Objectives.** Assessment of the IP's ability to brief, lead, and debrief a BFM JHMCS qualification mission. Specific Mission Tasks: Weapons system checks, G-awareness exercise, JHMCS display orientation, fence check, off-boresight radar/missile cueing exercise, 1v1 offensive/defensive/high aspect BFM, front hemisphere missile defense.

6.3.3.14. **IPUG-Day Transition (Optional)--Mission Objectives.** F-16B/D Desired. Introduce upgrading IP to dual cockpit instruction, if RCP qualification is desired, selected transition/instrument demonstrations, maneuvers, and procedures. Specific Mission Tasks: Briefing, joinup, tanker rendezvous, AAR, basic and tactical formation, pitchouts and rejoins, flight control demonstration, confidence maneuvers, aircraft handling maneuvers, aerobatics, unusual attitude recoveries, instrument approach, touch-and-go landing, SFO, VFR pattern and landing (if desired), debrief/flight reconstruction.

6.3.3.15. **IPUG-Night Transition (Optional)--Mission Objectives.** F-16B/D Desired. Introduce upgrading IP to instructing night transition procedures. Specific Mission Tasks: Briefing, RCP takeoff, trail departure, joinup, tanker rendezvous, NAAR, basic formation, pitchouts and rejoins, intercepts, debrief.

6.3.4. **Instructor Evaluation.** A completed formal evaluation (AF IMT 8) sortie is required by the SQ/CC or designated FE prior to performing instructor duties. Failure to complete scheduled training events (i.e., RCP-landing, AAR, etc.) need not delay certification. The SQ/CC will certify new instructor's status, including any restrictions, in appropriate written format (IMT 8, letter, gradesheets, ARMS, etc).

6.4. Mission Commander (MC) Upgrade. This program establishes guidelines for upgrade to MC. MC upgrade programs will be tailored to meet specific unit taskings (i.e., Defense Suppression units will include Electronic Combat related academics and training assets).

6.4.1. Responsibilities:

6.4.1.1. The MC is responsible for planning coordinating, briefing, executing, and debriefing joint/composite force employment packages. Certified MCs are authorized to lead joint/composite force missions.

6.4.1.2. MCs may delegate authority and responsibility for a portion of the mission to a secondary MC. For example, a MC flying in an A/S weapons system may designate a MC in an A/A weapons system to be in charge of the A/A portion of the mission.

6.4.2. **MC Prerequisites.** Squadron commanders will consider ability, judgment, technical expertise, skill, and experience when selecting pilots for mission commander upgrade. Minimum qualification is four-ship FL.

6.4.3. **Ground Training.** Upgrading MCs must satisfactorily complete the following unit developed blocks of instruction prior to certification as a MC.

6.4.3.1. **Mission Planning Considerations.** Range space and availability, 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. Review appropriate AFTTP 3-1 volumes for specific mission commander checklists and considerations.

6.4.4. **Flying Training.** As a minimum, the upgrading MC will observe a certified MC during the planning, briefing, flight, and debriefing of at least one composite force mission. Prior to certification, the upgrading MC will then plan, brief, fly, and debrief a minimum of one mission under the supervision of an IP or Squadron Supervisor who is MC qualified.

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

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

6.4.5. **Certification.** Following satisfactory completion of the above requirements, the SQ/CC will certify a new MC by placing a letter of certification in the training folder and indicating qualifications on Letter of Xs.

6.5. Simulator Instructor (SI). The following SIM mission profiles should be used to train and qualify selected simulator instructors to operate the 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 SIM instructor.

6.5.1. **Academic Training.** Prior to the first IOS mission, the USI will complete the following unit developed blocks of instruction:

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

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

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

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

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

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

6.5.2.1. **SI-1, IOS Operations.** Mission initialization, CRT page review and modification, keyboard operation, light pen operation, emergency shutdown, record/playback, hard copy, performance, and procedures monitoring.

6.5.2.2. **SI-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.

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

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

6.6. Targeting Pod (TGP): For the purposes of this upgrade, any TGP (LANTIRN, LITENING, Sniper) may be used. Pilots upgrading from LANTIRN to ATP (LITENING or Sniper) should receive a squadron commander approved abbreviated syllabus which, at a minimum, contains academics and one simulator (if available). The program outlined below provides a basic starting point and may be modified by SQ/CC based on unit needs and/or upgrading pilot's previous experience, qualifications, and documented performance. Pilots will not use TGP systems for which they have not been formally trained.

6.6.1. **Ground Training.** Initial ground training will include instruction that covers IR theory and mission planning, targeting pod description and operation, medium altitude TGP operations and tactics, PW II/III description and employment, non-LGB employment, and TGP-assisted IAM employment. If no training devices are available, substitute a detailed discussion of procedures and techniques and document it on the gradesheet.

6.6.1.1. **SIM TGP-1, Medium Altitude Introduction – Mission Objectives:** Introduce aircraft and TGP-specific avionics operations, PW II/III deliveries, and buddy lasing. Specific Mission Tasks: TGP ground operations, tuning/boresight procedures, weapons systems/fence checks, medium altitude ingress, TGP system updates, PW II level deliveries, buddy lasing procedures, PW III mode 3 and mode 4 attacks, and unusual attitude recoveries.

6.6.1.2. **SIM TGP-2, Medium Altitude Tactics – Mission Objectives:** Introduce medium-altitude threat reactions, GP and IAM TGP-assisted weapons deliveries. Specific Mission Tasks: TGP ground operations, tuning/boresight procedures, weapons systems/fence checks, medium altitude ingress, TGP system updates, medium altitude threat reactions, TGP-assisted medium altitude GP and IAMs attacks, TGP-assisted Maverick attacks (if available), PW II level deliveries, and unusual attitude recoveries.

6.6.2. **General Instructions for Flying Training:** All sorties will be supervised by an IP or FL-qualified squadron supervisor who is TGP qualified. Missions may be scheduled as a two-, three-, or four-ship. Students may use NVGs on any night mission if they are NVG-qualified. At least one day and one night sortie must be accomplished in order to be considered fully qualified.

6.6.2.1. **TGP-1, Medium Altitude Introduction – Mission Objectives:** Introduce medium altitude PW II TGP employment. Introduce TGP A-A operations. Specific Mission Tasks: Mission planning, Preflight avionics and TGP (BIT, MFD tuning, and gain/level procedures), medium-altitude ingress, TGP system updates, air-to-air TGP operations, TGP-assisted medium-altitude GP attacks, PW II level/diving attacks, PW II simultaneous impacts, PW II buddy-lase attacks, ATP events (LSS, IR Marker).

6.6.2.2. **TGP-2, Day/Night Medium Altitude – Mission Objectives:** Introduce IAMs and PW III employment. Practice TGP A-A operations. Specific Mission Tasks: IAM mission planning,

preflight avionics, medium-altitude ingress, ATP-cued IAM attacks, air-to-air TGP operations, PW III level/diving attacks, buddy-lase, ATP events (LSS, IR Marker).

6.6.2.3. **TGP-3 Day/Night Proficiency** – Mission Objectives: Demonstrate proficiency in PW II & III attacks, buddy lase attacks, and TGP-assisted general purpose attacks. Specific Mission Tasks: Mission planning, Preflight avionics and TGP (BIT, tuning, and focus procedures), Medium-altitude ingress, Medium-altitude diving/level attacks, PW II attacks with live/inert GBU(s), PW II simultaneous impact attacks, PW II buddy lase attacks, ATP events (LSS, IR Marker).

6.7. Night Vision Goggle (NVG) Qualification Program: Any upgrade program (MQT, FLUG, IPUG, MCC, etc) should include use of NVGs during all phases of night flying. This upgrade is intended for a pilot who has never been qualified with NVGs but is already CMR/BMC/BAQ. The intent of this program is to produce fully qualified four-ship wingmen, flight leads, and instructor pilots.

6.7.1. **Status upon Completion:** Completion of the qualification training allows the pilot to perform missions under NVGs at or above minimum safe altitude (MSA) or IAW AFI 11-214, whichever is greater. See paragraph 6.7.6.8. for requirements to fly below MSA

6.7.2. **Qualifications:**

6.7.2.1. Through NVG-OPSAT(4): Qualified 4-Ship NVG wingman.

6.7.2.2. NVG-FLUG (Flight Lead Upgrade): Qualified NVG 4-ship flight lead.

6.7.2.3. NVG-IPUG (Instructor Upgrade): Qualified NVG Instructor.

6.7.3. **Student to Instructor ratio:** 1:1.

6.7.4. **Ground Training.** Upgrading NVG pilots must satisfactorily complete the following requirements prior to NVG-FAM.

6.7.4.1. **Academics.** Academic instruction must include Air Force Research Labs (AFRL) or equivalent NVG academics, F-16 specific academics (ACC/TRSS has developed these academics (ACC/TRSS NVG Refresher Academics #CT-19 (CD ROM) and will distribute upon request), and an NVG Phase Brief. Each Operations Group is required to have one highly qualified and certified instructor (AFRL NVG Platform IP / Former FTU NVG IP / WIC graduate) to teach these academics. This instructor may certify additional instrutors within the Operations Group.

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

6.7.4.2.1. **NCT (Night Cockpit Trainer)-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, battery change, emergency/egress procedures, recognition/prevention of spatial disorientation, unusual attitude recoveries, night/NVG instrument crosscheck, task saturation/prioritization, and potential FOD hazards associated with NVG use.

6.7.5. **Special Instructions (SPINS).**

6.7.5.1. NVG-FAM should be flown dual with the IP in the RCP.

6.7.5.2. UP must fly at least 1 low illumination sortie. It is desired to fly at least some portion of an upgrade sortie during the period between sunset and nautical twilight (the “taint”).

6.7.5.3. NVG sorties will be flown in prescribed order.

6.7.5.4. NVG IP must complete a total of 10 NVG sorties, including upgrade sorties, before performing NVG IP duties.

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

6.7.6.1. **NVG-FAM, Basic NVG Familiarization - Mission Objectives.** Introduce NVG formation, cross-check, threat reactions, and baseline intercepts. Specific Mission Tasks: NVG adjustment procedures, cockpit preparation, trail departure, ranging exercise, NVG G-awareness exercise, aircraft lighting demonstration, tactical 2-ship formation positions with a mixture of external lighting options including covert lighting, reduced lighting and lights, afterburner demonstration, Chaff/Flare demonstration, tactical turns and NVG assisted rejoins, lost wingman/blind exercise, AAMD and surface-to-air threat reactions, controlled maneuvering (hi illumination and D-model).

6.7.6.2. **NVG-INTRO, Single Ship Air-to-Air Introduction - Mission Objectives :** Introduce NVG air-to-air employment versus both high and low-speed targets. Specific Mission Tasks: Practice NVG tactical formation maneuvering and 1 v 1 air-to-air employment with NVGs. 1 v 1 intercepts to include: a) BVR Launch and Leave, b) Low to high conversion, c) High to low conversion (Low speed target), d) AAMD, e) BVR launch and leave with short range recommit. Controlled maneuvering (High illumination).

6.7.6.3. **NVG-TI, Element Air-to-Air Basics - Mission Objectives :** Introduce two-ship tactical intercepts, air-to-air threat reactions and all aspect missile defense. Specific Mission Tasks: 2 v X air-to-air employment with NVGs, single ship and element RMD procedures with NVGs. Tactical intercepts to include: a) Sorting pass, b) BVR launch and leave, c) Single-side offset, d) Element launch and react (Spike-naked-press gameplan), e) Element AAMD.

6.7.6.4. **NVG-SAT(4), 4-Ship Basic Air to Ground - Mission Objectives:** Introduce NVG weapons delivery, surface-to-air threat reactions, and 4-ship NVG formation. Specific Mission Tasks: Navigation (Medium altitude or low altitude [Illumination Permitting, reference paragraph [6.7.6.8](#) for low altitude requirements], medium altitude diving deliveries, medium altitude multi-ship attacks, surface-to-air threat reactions, 4-ship NVG formations and maneuvering.

6.7.6.5. **NVG-OPSAT(4), 4-Ship SAT (Opposed) - Mission Objectives:** Demonstrate proficiency in opposed 4-ship unit specific tactics. Specific Mission Tasks: Navigation (Medium altitude or low altitude [Illumination Permitting, reference paragraph [6.7.6.8](#) for low altitude requirements]), 4-ship unit specific tasks, surface-to-air threat reactions, air-to-air threat reactions, 4-ship tactical intercepts to include: a) CAP mechanics/formations, b) BVR and VID tactics employed from 4- ship visual formations.

6.7.6.6. **NVG-FLUG, Flight Lead Upgrade Unit/Mission Specific - Mission Objectives:** Demonstrate proficiency in leading tactical employment of unit mission specific tasks in an increased threat scenario Specific Mission Tasks: Navigation (Medium altitude or low altitude [Illumination Permitting, reference paragraph [6.7.6.8](#) for low altitude requirements]), unit specific tasks, surface-to-air threat reactions, air-to-air threat reactions. Adversaries are desired.

6.7.6.7. **NVG-IPUG, NVG Instructor Pilot Upgrade – Mission Objectives :** Demonstrate proficiency in instructing two-ship tactical intercepts, air-to-air threat reactions and all aspect missile

defense. **Mission Overview:** Primary focus of this sortie is to instruct 2 v X air-to-air employment with NVGs. Primary emphasis should be placed on how NVGs enhance night air-to-air element formations, rather than complex tactical employment scenarios. Additional emphasis should be placed on single ship and element AAMD procedures with NVGs. Specific Mission Tasks: Tactical intercepts to include: a) Sorting pass, b) BVR launch and leave, c) Single-side offset, d) Element launch and react (Spike-naked-press gameplan), e) Element AAMD.

6.7.6.8. **NVG Low Altitude Task List.** All of the following tasks must be completed to allow tactical maneuvering below MSA under high illumination (altitudes IAW AFI 11-214). These events may be flown during the basic NVG upgrade, as time permits, or may be combined into an additional upgrade sortie. If flown during the basic NVG upgrade, these events may be spread over multiple sorties. However, the events will be flown in order and annotated on the UP's gradesheet.

6.7.6.8.1. Single ship low altitude tactical navigation (IP Chase).

6.7.6.8.2. Single ship low altitude familiarization (IP Chase) to include: a) Level hard turns, b) 30 degree pitch up/20degree pitch down, c) threat reactions.

6.7.6.8.3. Low altitude tactical formations to include turns and element threat reactions.

6.7.6.8.4. Low altitude tactical intercepts to include: a) Low to high conversion, b) High to low conversion, c) AAMD.

6.7.6.8.5. Low altitude surface attack tactical weapons deliveries according to squadron tasking.

6.8. Forward Air Controller (Airborne) (FAC(A)) Upgrade. This program establishes the minimum guidelines for those pilots identified by the SQ/CC for FAC(A) upgrade training.

6.8.1. FAC(A) upgrade training will be IAW the current Joint Close Air Support FAC(A) Memorandum of Agreement (MOA). The MOA defines the Joint Mission Task List (JM TL) for a FAC(A) to attain certification and maintain qualification/currency. Following the upgrade, FAC(A)s will be capable of performing Type 1, 2, and 3 forms of terminal attack control with fixed wing and rotary wing assets, controlling indirect fires, and conducting their missions in day, night, permissive, and restrictive threat environments. They will be able to acquire, identify, mark targets, and pass target information (coordinates, 9-lines) verbally and via data-link.

6.8.2. Prior to FAC(A) certification, the SQ/CC will personally interview the UP and review FAC(A) responsibilities, scope of duties, authority, and philosophy. The SQ/CC will certify the new FAC(A)'s status, including any restrictions, in appropriate written format (grade sheet, training folder, Letter of Xs, etc.).

6.8.3. Pilots identified for FAC(A) upgrade must meet the following minimum requirements. Track 1 produces mission capable F-16 pilots proficient in F-16 FAC(A) mission tasks. Track 2 produces FAC(A) instructor.

6.8.3.1. Entry Prerequisites - Track 1

- (1) Qualified and current four-ship flight lead.
- (2) Qualified in TGP operations (ATP experience desired).
- (3) Qualified F-16 NVG flight lead below MSA IAW paragraph [6.7.6.8](#).

6.8.3.2. Entry Prerequisites - Track 2

- (1) Current and Qualified F-16 FAC(A)
- (2) Current and Qualified F-16 Instructor
- (3) Students entering Track 2 directly from Track 1 (initial qualification) should perform two CT FAC(A) sorties after Track 1 completion before performing instructor duties.

6.8.4. **FAC(A) Ground Training.** Pilots designated for the FAC(A) special capability must have completed a Joint FAC(A) Training and Standardization Board (JFTSB) sanctioned academic program at one time during their career IAW AFI 13-102, unless specified otherwise by MAJCOM/A3. The FAC(A) Joint Firepower Course (FACJFC) at the Air Ground Operations School (AGOS) meets this requirement. While graduation is **not** a course entry prerequisite, it is required prior to performing operational FAC(A) duties. If a FACJFC class is not readily available, OG/CCs may approve UPs to attend another accredited FAC(A) course. Units will develop additional local training in the following areas:

6.8.4.1. **FAC(A) academics and JMTL review.** Terminal attack control (Type 1, 2, and 3), radio relay, reconnaissance, indirect fires and Calls for Fire (CFF), asset coordination and deconfliction, battle damage assessment (BDA), target designation and marking, coordinate generation, Suppression of Enemy Air Defenses (SEAD) coordination,

6.8.4.2. **FAC(A) responsibilities.** Unit training objectives, review of appropriate Joint/MAJCOM Instructions, Air Force Instructions, and local guidance. Single-ship approach to enroute procedures, employment, obtaining mutual support, and local responsibilities.

6.8.4.3. **Mission preparation.** Fighter and JTAC requirements, currencies, proficiencies, capabilities, developing appropriate mission objectives, and briefing preparation.

6.8.4.4. **Conduct of missions.** Leadership and controlling area of operations, interaction with ground forces, employment with JTACs, coordination with other FAC(A)s, EPs, and TRs.

6.8.4.5. **Practice FAC(A) briefing.** Administrative items, mission tasks, and contingencies.

6.8.4.6. **FAC(A) Simulator Training.** Units will incorporate simulator profiles into FAC(A) training to the maximum extent practical, depending on simulator capabilities and availability.

6.8.4.6.1. **ASC Sim-1 Air Strike Control Basics - Mission Objectives:** Introduce air strike control mission tasks and FAC(A) CRM techniques. Demonstrate proficiency in HUD/TGP marks, use of TOT clock and LGB employment. Specific Mission Tasks: Discuss rocket pre-flight, Introduce airborne TACS/AAGS coordination and authentication, Introduce CCIP, DTOS, and CCRP rocket symbology, practice HUD and TGP marks, practice low altitude TOT clock scenario, introduce airborne map plotting, practice Med altitude LGB employment, practice FAC(A) cockpit management, discuss night FAC(A) cockpit management.

6.8.5. **FAC(A) Flight Training.**

6.8.5.1. The mission profiles listed below are organized in a building-block approach. The SQ/CC may modify profiles as necessary, but will ensure the following guidelines are met:

6.8.5.1.1. All FAC(A) upgrade training will be under the supervision of a FAC(A)-certified IP. Unless specified otherwise, the IP will fly chase or other deconflicted position to properly assess UP performance. Throughout the upgrade, IP will prepare UPs to successfully accomplish all aspects of a single-ship tactical mission.

6.8.5.1.2. A dedicated FAC(A) certification mission is required and will be flown with the SQ/CC or designated representative.

6.8.5.1.3. Required FAC(A) upgrade missions/events. Medium altitude ASC, Low altitude ASC, Night ASC (NASC), LATN, actual JTAC, dissimilar fighters, artillery deconfliction, Troops in Contact (TIC), and 12 ASC events (of which eight must be Type I, eight with fixed wing, four involve actual WD, and one at night).

6.8.5.1.4. Unaccomplished tasks. Scheduled training events unaccomplished need not delay certification. The SQ/CC may certify the FAC(A) with appropriate restrictions based on unaccomplished training. The FAC(A) is restricted from performing unaccomplished events until that task is successfully completed in an upgrade status.

6.8.5.1.5. FAC(A) upgrade missions and events may be flown in any order, provided day training precedes night.

6.8.5.1.6. Schedule actual JTACs, fighter support, and dissimilar assets to the maximum extent practical.

6.8.5.2. FAC(A) Missions – Track 1.

6.8.5.2.1. **WD-1 (Track 1) Tactical Rocket Deliveries (Optional) - Mission Objectives :** Introduce low-altitude tactical rocket (LATR) and high-altitude tactical rocket (HATR) deliveries, system marks, visual and TGP recce, and TACS/AAGS agency coordination. Specific Mission Tasks: Range orientation, Tactical deliveries, LATR, HATR, HAS, System marking (HUD, TGP), Visual/TGP recce, TACS/AAGS agency coordination demonstration.

6.8.5.2.2. **ASC-1 (Track 1) - Medium-Altitude ASC - Mission Objectives:** Introduce fundamental mission elements of medium-altitude, reduced-threat ASC in a sterile (non scenario) environment to include target plotting, acquisition, marking, fighter rendezvous, talk-ons and observation positions in types 1, 2, and 3 control. Practice use of TGP for marking, visual recce, and TGP recce. Specific Mission Tasks: FAC(A) mission planning, fighter coordination and FAC(A) mission brief (IP briefed), TACS/AAGS agency coordination, Medium-altitude, navigation and safe passage procedures, Medium-altitude ASC procedures, Terminal control of CAS attacks, Fighter/FAC(A) deconfliction, Visual/TGP recce, Target marking, Rocket, TGP.

6.8.5.2.3. **ASC-2 (Track 1) - Medium-Altitude ASC - Mission Objectives:** Introduce medium-altitude, reduced-threat ASC in scenario, artillery calls for fire and deconfliction, SEAD support and threat reactions. Practice target plotting, acquisition, marking, fighter rendezvous, talk-ons, and observation positions in types 1 and 3 control. Introduce stand-off weapons considerations in CAS under a BVR type 3 scenario. Specific Mission Tasks: FAC(A) mission planning, fighter coordination and FAC(A) mission brief, TACS/AAGS agency coordination, Medium-altitude navigation and safe passage procedures, Medium-alti-

tude ASC procedures, Target plotting, acquisition, ID, and marking, Fighter coordination and rendezvous, Observation position, Verbal and/or sensor talk-ons, WP target marks, Terminal control of CAS attacks, Fighter/FAC(A) deconfliction, AO egress, Artillery deconfliction, Surface-to-air threat reactions, BDA, In-flight report.

6.8.5.2.4. ASC-3 (Track 1) - Medium-Altitude ASC with TIC - Mission Objectives: Introduce troops-in-contact and collateral damage scenarios, buddy lasing deliveries, FAC(A) changeover, and UAV deconfliction in a limited comm.-jamming environment. Practice medium-altitude, reduced-threat ASC under type 1 and 2 control. Specific Mission Tasks: FAC(A) mission planning, fighter coordination, and FAC(A) mission brief, TACS/AAGS agency coordination, Medium-altitude navigation and safe passage procedures, Medium-altitude ASC procedures, FAC(A) changeover, JTAC coordination in a limited comm jamming environment, Verbal and/or sensor talk-ons, Terminal control of CAS attacks, Fighter/FAC(A) deconfliction, Artillery and airborne SEAD coordination and deconfliction, Observation position and terminal control of CAS attacks with troops in contact/collateral damage procedures in a cultural area, Buddy lasing for diving deliveries in a TIC scenario, ground laser designator (GLD) attacks, UAV deconfliction.

6.8.5.2.5. ASC-4 (Track 1) - FAC(A) Element Tactics - Mission Objectives: Introduce FAC(A) element tactics, limited time-over-target and Urban CAS tactics. Practice low-threat ASC. Specific Mission Tasks: FAC(A) mission planning, fighter coordination, and FAC(A) mission brief, employ as a FAC(A) element, TACS/AAGS agency coordination, medium-altitude navigation and safe passage procedures, medium-altitude ASC procedures, terminal control of CAS attacks, Fighter/FAC(A)/FAC(A) wingman deconfliction, Artillery and airborne SEAD coordination and deconfliction, ground laser designator (GLD) attacks, observation position and terminal control of CAS attacks with timing restriction, surface-to-air threat reactions, BDA, In-flight report.

6.8.5.2.6. ASC-5 (Track 1) - Low-Altitude ASC - Mission Objectives: Introduce low-altitude, reduced-threat ASC with a FAC(A) element. Introduce rotary wing aircraft integration. Specific Mission Tasks: FAC(A) mission planning, fighter coordination, and FAC(A) mission brief, Employ as a FAC(A) element, TACS/AAGS agency coordination, Low- and medium-altitude navigation and safe passage procedures, Low-altitude ASC procedures, Terminal control of CAS attacks, Fighter/FAC(A)/FAC(A) wingman deconfliction, Low-altitude, timing-coordinated compressed attacks, Artillery and SEAD coordination and deconfliction.

6.8.5.2.7. ASC-6 (Track 1) - Practice ASC and Cleanup Items - Mission Objectives: Clean up unaccomplished items from ASC 1-5 in preparation for demonstrating proficiency. Specific Mission Tasks: Any required/unaccomplished tasks from ASC 1-5.

6.8.5.2.8. ASC-7 (Track 1) - Demonstrate Proficiency in ASC - Mission Objectives: Demonstrate proficiency in ASC. Specific Mission Tasks: FAC(A) mission planning, fighter coordination, and FAC(A) mission brief, Employ as a FAC(A) element, TACS/AAGS agency coordination, Medium-altitude navigation and safe passage procedures, Medium- or low-altitude ASC procedures, Artillery and airborne SEAD coordination and deconfliction, Rotary wing aircraft integration, Buddy lasing deliveries, Observation position and terminal control of CAS attacks with TIC scenarios.

6.8.5.2.9. **NASC-1 (Track 1) Night Rocket Deliveries - Mission Objectives:** Introduce night rocket deliveries, IR rocket delivery, fundamental mission elements of medium-altitude, reduced-threat night ASC procedures with night vision devices in a low threat environment, night FAC(A) observation position, and buddy-lase procedures under type 1 and 3 control. Specific Mission Tasks: FAC(A) mission planning, fighter coordination and FAC(A) mission brief, TACS/AAGS agency coordination, night medium-altitude navigation and safe passage procedures, Medium-altitude ASC procedures, NVG verbal and/or TGP/sensor talk-ons, Observation position and terminal control of CAS attacks within a cultural environment (Urban CAS), Buddy lasing and dive-glide deliveries in a minimum collateral damage/TIC scenario, Night high-angle rocket deliveries, low-angle rocket deliveries, HAS, IR rocket employment.

6.8.5.2.10. **NASC-2 (Track 1) Multiple Fighters ASC - Mission Objectives:** Introduce night ASC against non-illuminated targets with troops-in-contact, and night medium-altitude threat reactions. Practice night rocket deliveries and reduced-threat night ASC with night vision devices under type 1 and 2 control. Specific Mission Tasks: FAC(A) mission planning, fighter coordination, and FAC(A) mission brief, TACS/AAGS agency coordination, night medium-altitude navigation and safe passage procedures, medium-altitude ASC procedures, artillery and airborne SEAD coordination and deconfliction, ASC for scenarios with troops-in-contact, WP and IR Illumination rocket deliveries.

6.8.5.2.11. **NASC-3 (Track 1) Demonstrate Proficiency in Night ASC - Mission Objectives:** Demonstrate proficiency in reduced-threat night ASC. Specific Mission Tasks: FAC(A) mission planning, fighter coordination, and FAC(A) mission brief, TACS/AAGS agency coordination, FAC(A) element tactics, medium-altitude navigation and safe passage procedures, medium-altitude ASC procedures, Artillery and airborne SEAD coordination and deconfliction.

6.8.5.3. Air Strike Control Instruction - Track 2

6.8.5.3.1. **ASC-31 (Track 2) Introduce Day ASC Instruction - Mission Objectives:** Introduce day ASC instruction. Specific Mission Tasks: FAC(A) mission planning, fighter coordination and FAC(A) mission brief, employ as a FAC(A) element, TACS/AAGS agency coordination, medium-altitude ASC procedures, artillery and airborne SEAD coordination and deconfliction, observation position and terminal control of CAS attacks with timing (TOT Clock) restriction, Surface-to-air threat reactions. Conduct an instructional ASC brief in a clear, concise manner to include fighter coordination, FAC(A) techniques and wingman contracts/responsibilities, Demonstrate proficiency in safely controlling and deconflict airborne assets, practice ASC scenario management. Conduct an instructional debrief, offer instructor techniques, find the majority of the execution errors and draw valid lessons learned.

6.8.5.3.2. **ASC-32 (Track 2) Demonstrate Proficiency in Day ASC Instruction - Mission Objectives:** Demonstrate proficiency day ASC instruction. Specific Mission Tasks: FAC(A) mission planning, fighter coordination and FAC(A) mission brief, employ as a FAC(A) element, TACS/AAGS agency coordination, medium-altitude ASC procedures, artillery and airborne SEAD coordination and deconfliction, observation position and terminal control of CAS attacks with timing (TOT Clock) restriction, surface-to-air threat reactions, BDA. Brief ASC in a clear, concise manner to include fighter coordination, FAC(A) techniques and wingman contracts/responsibilities, Demonstrate proficiency in safely managing an ASC mission

scenario, Demonstrate proficiency in providing in-flight instruction for significant student errors. Conduct an instructional debrief or IP debrief of FAC(A) student sortie, offer instructor techniques, find the majority of the execution errors and draw valid lessons learned.

6.8.5.3.3. NASC-33 (Track 2) Demonstrate Proficiency in Night ASC Instruction - Mission Objectives: Demonstrate proficiency in NASC instruction. Specific Mission Tasks: FAC(A) mission planning, fighter coordination and FAC(A) mission brief, employ as a FAC(A) element, TACS/AAGS agency coordination, medium-altitude ASC procedures, artillery and airborne SEAD coordination and deconfliction, observation position and terminal control of CAS attacks with timing (TOT Clock) restriction, surface-to-air threat reactions, BDA. Brief Night ASC in a clear, concise manner to include fighter coordination, FAC(A) techniques and wingman contracts/responsibilities, Demonstrate proficiency in safely managing a night ASC mission scenario, Demonstrate proficiency in providing in-flight instruction for significant student errors, Conduct an instructional debrief or IP debrief of FAC(A) student sortie, offer instructor techniques, find the majority of the execution errors and draw valid lessons learned.

6.9. Suppression of Enemy Air Defenses (SEAD) Upgrade. This program establishes guidelines for pilots to qualify in the AGM-88 HARM and HARM Targeting System (HTS). The program outlined below provides a basic starting point and may be modified by SQ/CC based on unit needs and/or upgradee's previous experience, qualifications, and documented performance.

6.9.1. Ground Training. Ground training will consist of unit developed academics and Simulator missions. Academics will cover ALIC, HARM and HTS preflight and operations, threat capabilities, SEAD and Force Protection (FP) tactics, and SEAD mission planning to include use of the AFMSS/MSS II. Simulator mission profiles will be integrated with upgrade flight training missions and are designed to introduce and practice cockpit management, HTS employment, air-to-surface and air-to-air threat reactions, HARM as Sensor (HAS) and Position Known (POS) deliveries, and Data Link (DL) operations.

6.9.2. Flying Training. All SEAD upgrade sorties will be under the supervision of a SEAD-qualified IP. Upgrade sorties should be dedicated SEAD missions with CATM and functional HTS pod. VTR documentation of the HARM/HTS display from threat detection to simulated missile launch is required. SEAD-4, Night SEAD, may be flown after the upgradee is certified CMR/BMC.

6.9.2.1. SEAD-1, HARM Employment and Introduction to HTS Operations--Mission Objectives. Practice weapon preflight and ground operations, employ HARM against active radar emitters using HAS/EOM/RUK delivery modes, introduce HTS operations, accomplish weapon qualification. Specific Mission Tasks: Preflight, ground operations, chased medium/low altitude HARM engagements, HARM employment using HAS, POS, and DL delivery modes, threat reactions, weapon qualification.

6.9.2.2. SEAD-2, Two-Ship SEAD--Mission Objectives. Introduce two-ship HTS tactics in medium/low altitude and low/medium threat environments to include comm, formations, responsibilities, and DL procedures. Practice HARM employment against active radar emitters using the HTS. Specific Mission Tasks: Medium altitude SEAD CAPs, two-ship coordinated attacks using available delivery modes, and threat reactions.

6.9.2.3. **SEAD-3, Four Ship SEAD--Mission Objectives.** Introduce force protection tactics in medium/low altitude and high/low threat environments. Practice HARM employment to support a simulated/actual strike package TOT window. Specific Mission Tasks: Force protect a simulated/actual strike package (adversary air desired), coordinated four-ship medium/low altitude SEAD tactics, HARM employment supporting a simulated/actual strike package TOT, and threat reactions.

6.9.2.4. **SEAD-4, Night SEAD--Mission Objectives.** Introduce and practice night HARM employment (two or four ship) against active radar emitters using the HTS in a medium altitude/low threat environment. Specific Mission Tasks: Medium altitude two/four-ship night SEAD tactics, weapons employment, and threat reactions.

6.9.2.5. **SEAD-5, SEAD/EC Mission Commander--Mission Objectives.** Introduce force protection in a composite strike force. Specific Mission Tasks: Plan, brief, and lead a mission as EC package commander to include ATO break out, integration of additional SEAD assets (RJ, EA-6B, AWACS, etc.), development of the SEAD targeting, employment, and deconfliction plan and strike package support.

6.10. Joint Helmet Mounted Cueing System (JHMCS) Qualification Training . The purpose of this program is to train IPs, flight leads, and wingmen in JHMCS high off-boresight system (HOBS) operation and employment. The program outlined below provides a basic starting point and may be modified by SQ/CC based on unit needs, previous experience, qualifications, and documented performance.

6.10.1. **Ground Training.** Pilots upgrading to JHMCS must complete the following requirements prior to their first sortie:

6.10.1.1. **JHMCS Academics.** Initial academics will be accomplished locally or during simulator orientation (if available). Academic courseware will be approved by ACC/TRSS. Academics will be accomplished within 60 days prior to the first JHMCS qualification sortie. If more than 60 days elapse between academics and the first sortie, pilots will re-accomplish academics.

6.10.1.2. **JHMCS Simulator Orientation Training.** Although AIM-9X capability should be incorporated into unit MTCs with M3.3+ OFP, JHMCS-modified simulators may not be available for initial orientation training. If a SIM with JHMCS is available, pilots will complete JHMCS SIM-1 prior to flight.

6.10.1.2.1. **JHMCS SIM-1 Mission Objectives.** Introduce JHMCS preflight, ground operations, radar/missile cueing and employment, JHMCS degraded and failure modes, system limitations, emergency egress, ejection, and human factors implications (display fixation, fatigue, etc.). Specific Tasks: JHMCS preflight, strap-in, boresight, switchology/HOTAS functions, ground operations, JHMCS and AIM-9X Built-in Test (BIT) and indications, fence check, weapons/radar/navigation display orientation, helmet mounted display (HMD) auto acquisition modes, radar and missile (AIM-9M/X) cueing and employment, AIM-9X Link16 cueing, "uplook" cueing orientation, declutter modes, and after landing checks. Special subjects to be emphasized during all JHMCS training include the potential for display fixation and ejection risks.

6.10.2. **General Instructions**

6.10.2.1. CMR/BMC pilots may conduct JHMCS training separately or as part of any upgrade.

6.10.2.2. JHMCS-IPUG can be flown in conjunction with unit IPUG program.

6.10.3. **Flying Training.** Provided a suitable JHMCS capable simulator is available, and JHMCS SIM-1 is accomplished, squadron commanders may waive the requirement for JHMCS-BFM for experienced pilots. IPs must complete JHMCS-IPUG before they can be designated a JHMCS IP by SQ/CC. To the max extent practical, AIM-9X CATMs should be employed during A-A JHMCS missions.

6.10.3.1. **JHMCS-A/A.** Mission Objectives: Introduce/practice A-A training using JHMCS. Specific Mission Tasks: Practice JHMCS ground procedures, HOTAS operation, display interpretation, radar and missile cueing, airborne uplook alignment and HMD re-alignment G-awareness exercise, JHMCS display orientation, fence check, off-boresight radar/missile cueing exercise, uplook cueing.

6.10.3.2. **JHMCS-A/G.** Mission Objectives: Introduce/practice A-G employment using JHMCS. Specific Mission Tasks: G-awareness exercise, low level navigation, defensive reactions, 2-ship low/medium altitude tactical SAT attacks, CAS wheel attacks, and JHMCS/HOBS recce / weapons employment considerations (with TGP if available).

6.10.3.3. **JHMCS-IPUG.** Mission Objectives: Evaluation of the IP's ability to brief, lead, and debrief a JHMCS qualification mission. The IP will demonstrate the ability to instruct JHMCS/HOBS employment and to manage the scenario to achieve the desired learning outcomes.

6.11. Alert Camera. CMR/BMC pilots with an operational requirement to fly with cameras on active air defense alert missions will complete this training. Ground training will be coordinated through the squadron training officer and unit intel, and is only required prior to being scheduled for alert duty where flight with a camera is required by an ATO. Possessing an adequate supply of cameras to equip a normally tasked number of alert aircraft and having a plan to accomplish training as described above satisfies the requirement to have an alert camera capability. Use of cameras will be IAW AFI 11-202V3 paragraph 2.5.1. and applicable MAJCOM supplements.

6.11.1. Ground training will cover operation of a basic point-and-shoot camera and intelligence gathering techniques, MAJCOM/local restrictions on the use of cameras in the cockpit, and hands-on cockpit training in the best available training device.

6.12. Low Altitude Step-Down Training (LASDT). This training is normally conducted as part of IQT. It may be used to requalify pilots who are significantly out of currency or to train pilots to a lower category.

6.12.1. To conduct low altitude operations safely, pilots need to be knowledgeable of aircraft handling and performance characteristics, tactical formation, intercept, offensive maneuvering, defensive reactions, and navigation. LASDT qualifies pilots 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.

6.12.2. To provide a structured approach, the step-down training program is built on a multi-phase training process IAW [Table 6.1](#). There is no time limit to progress beyond Category I and progress will be based upon individual pilot proficiency and training availability. All LASDT missions will be supervised by an IP or FL-qualified SQ supervisor who has completed LASDT training and is current in the LOWAT category being instructed.

Table 6.1. LOWAT Categories.

Category	Altitude Block	Upgrade Sorties To Certify
I	1,000-500	LASDT-1, LASDT-2, LASDT-3
II	Below 500-300	LASDT-5, LASDT-6, LASDT-7
III	Below 300-100	LASDT-8, LASDT-9, LASDT-10

6.12.3. Category I qualification is a minimum requirement for CMR status. Units may accept a transfer pilot's LOWAT qualification from other units. Category II training may not be conducted during MQT.

6.12.4. Entry into LASDT (other than at FTU) requires SQ/CC approval. The altitude to which a pilot 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 pilot to the minimum approved altitude of the LASDT category. Squadrons may accept documented LASDT certification for pilots coming from other units/commands. With SQ/CC approval, low altitude training conducted at a formal course may be used to fulfill applicable requirements of this paragraph.

6.12.5. LASDT will be scheduled and briefed as a primary portion of the mission. Compatible RAP CT events may be accomplished in conjunction with LASDT as long as the objectives of the LASDT sortie are met. LASDT will not be flown as an alternate mission.

6.12.6. **Ground Training.** Coverage should support the mission and concept of operations of the squadron, incorporating appropriate portions of AFTTP 3-1 and AFTTP 3-3.5. All academic training will be completed prior to flight training/briefing.

6.12.6.1. **AHC.** LASDT AHC will be IAW AFTTP 3-3.5, Low Altitude Training Series exercises. Discuss 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 operation/use of ground collision avoidance advisory systems.

6.12.6.2. **Environmental Factors.** Discuss out-of-cockpit visibility and FOV restrictions, sun angle, terrain and G-excess illusions/perceptions, WX considerations, and use of the HUD.

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

6.12.6.4. **Low Altitude Tactical Navigation (LATN).** Discuss dead reckoning, pilotage, INS use/techniques, RADAR, etc.

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

6.12.6.6. **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 deconfliction.

6.12.6.7. Discuss factors affecting low level awareness: airspeeds and maneuverability, formation size and design, formation and pilot 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.

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

6.12.6.9. **Low Altitude Air-to-Air Employment.** Discuss level 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, 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, and VID procedures against a low/slow speed target with emphasis placed on threat VID procedures IAW AFTTP 3-1).

6.12.7. **Flying Training:**

6.12.7.1. **LASDT-1 (Dual or Single-Ship w/Chase).** Mission Objectives. Demonstrate proficiency in single-ship maneuvering between 5,000 and 1,000 feet AGL. Introduce LOWAT Category I operations. Specific Mission Tasks: AHC IAW AFTTP 3-3.5, LOWAT Series exercises (level turn exercise, turning room demo, acceleration/deceleration exercise, descent awareness training, CAT III maneuvering, vertical jink turns, orthogonal SAM break, reversals, visual lookout exercise); G-awareness exercise; low level navigation; airspeed control; fuel management; ridge crossings; terrain masking/maneuvering techniques for level/rolling/rough terrain; altitude awareness/control; attack maneuvering; practice KIOs; defensive reactions; and single-ship low altitude tactical intercepts.

6.12.7.2. **LASDT-2 (Dual or Single-Ship w/Chase).** Mission Objectives. Demonstrate proficiency in single-ship LOWAT Category I operations. Specific Mission Tasks: AHC IAW AFTTP 3-3.5, LOWAT Series exercises (level turn exercise, turning room demo, acceleration/deceleration exercise, descent awareness training, CAT III maneuvering, vertical jink turns, orthogonal SAM break, reversals, visual lookout exercise) not flown on previous sorties or needing review; G-awareness exercise; low level navigation; airspeed control; fuel management; ridge crossings; terrain masking/maneuvering techniques for level/rolling/rough terrain; altitude awareness/control; attack maneuvering; practice KIOs; defensive reactions; single-ship low altitude tactical intercepts.

6.12.7.3. **LASDT-3 (Two-Ship).** Mission Objectives. Demonstrate proficiency in two-ship LOWAT Category I operations. Specific Mission Tasks: G-awareness exercise; low level navigation; fuel management; LATF; terrain masking/maneuvering techniques for level/rolling/rough terrain; ridge crossings; altitude awareness/control; attack maneuvering; practice KIOs; defensive reactions; weather route abort; two-ship low altitude tactical intercepts and low altitude weapons

employment considerations. Upon satisfactory completion of this mission, the SQ/CC can certify the pilot to LOWAT Category I.

6.12.7.4. **LASDT-4 (Two-Ship).** Mission Objectives. Introduce LOWAT Category I two-ship maneuvering against a low/slow target. Specific Mission Tasks: G-awareness exercise, low level navigation, fuel management, LATF, altitude awareness/control, attack maneuvering, practice KIOs, two-ship low altitude tactical intercepts, low altitude weapons employment considerations, and EID/VID procedures against a low/slow target (dissimilar asset required; helicopter, if able) with emphasis placed on threat VID procedures IAW AFTTP 3-1. This ride is not required for LOWAT Category I, but should be accomplished as part of pre-deployment spin-up training in support of contingency operations or exercises.

6.12.7.5. **LASDT-5 (Dual or Single-Ship w/Chase).** Mission Objectives. Introduce single-ship LOWAT Category II operations. Specific Mission Tasks: Same as LASDT-1 only accomplish in the 300-500 foot environment as the student proficiency increases.

6.12.7.6. **LASDT-6 (Dual or Single-Ship w/Chase).** Mission Objectives. Demonstrate proficiency in single-ship LOWAT Category II operations. Specific Mission Tasks: Same as LASDT-2 in the 300-500 foot environment.

6.12.7.7. **LASDT-7 (Two-Ship).** Mission Objectives. Demonstrate proficiency in two-ship maneuvering LOWAT Category II operations. Specific Mission Tasks: Same as LASDT-3 in the 300-500 foot environment. Upon satisfactory completion of this mission, the SQ/CC can certify the pilot to LOWAT Category II.

6.12.7.8. **LASDT-8 (Dual or Single-Ship w/Chase).** Mission Objectives. Introduce single-ship LOWAT Category III operations. Specific Mission Tasks: Same as LASDT-1 only accomplish in the 100-300 foot environment as the student proficiency increases.

6.12.7.9. **LASDT-9 (Dual or Single-Ship w/Chase).** Mission Objectives. Demonstrate proficiency in single-ship LOWAT Category III operations. Specific Mission Tasks: Same as LASDT-2 in the 100-300 foot environment.

6.12.7.10. **LASDT-10 (Two-Ship).** Mission Objectives. Demonstrate proficiency in two-ship LOWAT Category III operations. Specific Mission Tasks: Same as LASDT-3 in the 100-300 foot environment. Upon satisfactory completion of this mission, the SQ/CC can certify the pilot to LOWAT Category III.

6.13. Armed Tactical Reconnaissance. Armed Tactical Reconnaissance is a RAP special capability to support unit DOC requirements or AEF tasking. The minimum requirement for pilot training is academics. Conduct familiarization training in a compatible simulator if resources are available. If excess sorties are available, a familiarization flight (during a RAP mission) is desired to assist training maintenance and intel personnel. Unless directed by the SQ/CC, no dedicated flight training is required.

6.14. F-16 Block Differences Training. To train between all variants of the F-16, pilots must be current and qualified prior to beginning training. Using 11-202 Vol 1 definitions, CCIP aircraft conversion requires differences training only; out-of-cycle checkrides are not required.

6.14.1. **Academics.** Academic instruction should be tailored to the pilot's previous experience and should concentrate on the differences between the two blocks. Instruction should address avionics system, electrical systems, engine differences (as applicable), EPs, both A/A and A/G radar modes,

and cockpit layouts. If available, an AETC formal course (such as Blk 50 course) meet the requirements for academics and device training.

6.14.2. **Device Training.** Pilots should receive simulator training as required by previous experience. This simulator should include systems EPs, practice instrument procedures, review of radar and intercept procedures, review of air-to-ground systems, and CAPs. Pilots assigned/attached to units without concurrent simulators will substitute two SEPTs for the simulator.

6.14.3. **Flying Training.** Block differences training may be conducted during MQT. Pilots who do not require MQT should receive one supervised aircraft sortie. Flight briefing should stress cockpit procedures and employment techniques.

6.15. Contingency/Exercise Spin-Up Training. This training will be conducted prior to support of contingency operations (if time permits) or exercises. The objective of this training is to ensure the pilot's 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 appropriate 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.

6.15.1. If a pilot is not assigned to the tasked squadron, they must receive spin-up training as determined by the tasked SQ/CC. This applies to all attached pilots (OG/WG/HQ staffs, etc.), and all pilots augmenting from other squadrons (operational, FTU, weapons school, test, etc.). The objective of this training is to ensure attached/augmenting pilot is 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 pilot based on the pilot's level of proficiency, currency, qualification, experience, etc. For augmenting pilots, once the amount of spin-up training is determined, the augmentee's SQ/CC is responsible for ensuring the spin-up training is accomplished.

6.15.2. **Ground Training.** All applicable pilots will complete ground training as necessary prior to their support of contingency operations or exercises.

6.15.2.1. **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.

6.15.2.2. **Visual Recognition.** Pilots 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.

6.15.3. **Flying Training.** Tailor spin-up training to ensure all supporting pilots are proficient, current, and qualified in all expected mission taskings.

6.16. Forms adopted or prescribed. AF Form 847, **Recommendation for Change of Publication**, AF IMT 8, **Certificate of Aircrew Qualification**.

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DCS, Air, Space & Information
Operations, Plans & Requirements

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

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Abbreviations and Acronyms

A/A—Air-to-Air

A/S—Air-to-Surface

AAGS—Army Air-to-Ground System

AAR—Air-to-Air Refueling

AAMD—All Aspect Missile Defense

AB—Afterburner

ACBT—(Dissimilar) Air Combat Training

ACC—AirCombat Command

ACDE—Aircrew Defense Ensemble

ACDT—Aircrew Defense Training

(D)ACM—(Dissimilar) Air Combat Maneuvering

ACMI—Air Combat Maneuvering Instrumentation

(D)ACT—(Dissimilar) Air Combat Tactics

ADL—Aircraft Data Link

ADS—Air Demonstration Squadron

AEF—Aerospace Expeditionary Force

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
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 (includes ANG and AFRC)
ARMS—Aircrew Resource Management System
ASA—Air Sovereignty Alert
ASC—Air Strike Control
ASD—Average Sortie Duration
ATD—Aircrew Training Device
ATP—Advanced Targeting Pod (Litening and SNIPER)
AVTR—Aircraft Video Tape Recorder
AWACS—Airborne Warning and Control System
BAI—Backup Aircraft Inventory
BAQ—Basic Aircraft Qualification
BDA—Battle Damage Assessment
(D)BFM—(Dissimilar) Basic Fighter Maneuvers/Maneuvering
BMC—Basic Mission Capable
BSA—Basic Surface Attack
BSA-N—Basic Surface Attack Night
BVR—Beyond Visual Range
C3—Command, Control, and Communications
C3I—Command, Control, Communications, and Intelligence
CAF—Combat Air Forces
CAP—Combat Air Patrol, Critical Action Procedures

CAS—Close Air Support
CAT—Category
CA-Coded—Designated Aggressor Aircraft
CB-Coded—Designated Test Aircraft
CC—Commander
CC-Coded—Designated Combat Aircraft
CCIP—Constantly Computed Impact Point
CCRP—Continuously Computed Release Point
CE—Combat Edge, Circular Error
CFT—Cockpit Familiarization Trainer
CFTR—Composite Force Training
CHUM—Chart Update Manual
CMR—Combat Mission Ready
COCOM—Combatant Commander
COMM JAM—Communications Jamming
COMSEC—Communications Security
COT—Continuous Overseas Tour
COTS—Commercial Off The Shelf
CPT—Cockpit Procedures Trainer
CRM—Cockpit Resource Management
CRT—Cathode Ray Tube
CSAR—Combat Search and Rescue
CT—Continuation Training
CV—Vice Commander
DB—Dive Bomb
DCA—Defensive Counter Air
DCA-N—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
DT—Dynamic Targeting
DTOS—Dive Toss
EA—Electronic Attack
EC—Electronic Combat
ECCM—Electronic Counter Countermeasures
ECM—Electronic Countermeasures
ECO—Electronic Combat Officer
ECR—Electronic Combat Range
EI—Essential Elements of Information
EO—Electro-Optical
EP—Emergency Procedure, Electronic Protection
EPE—Emergency Procedures Evaluation
ETCA—Education and Training Course Announcements
EW—Electronic Warfare
EXP—Experienced
FAC—Forward Air Controller
FAC(A)—Forward Air Controller (Airborne)
FAM—Familiarization
FCP—Front Cockpit
FDL—Fighter Data Link
FE—Flight Examiner
FEB—Flying Evaluation Board
FEF—Flying Evaluation Folder
FHP—Flying Hour Program
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, Force Protection

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
HADB—High Altitude Dive Bomb
HARB—High Altitude Release Bomb
HARM—High-Speed Antiradiation Missile (AGM-88)
HAS—High Angle Strafe, HARM As Sensor
HATR—High Angle Tactical Rocket
HHQ—Higher Headquarters
HTS—HARM Targeting System
HUD—Head Up Display
HVAA—High Value Airborne Asset
IAM—Inertial Aided Munition
IAW—In Accordance With
ICWT—Initial Chemical Warfare Training
ID—Identify/Identification
IFE—In Flight Emergency
IFF—Identification Friend or Foe
IFR—Instrument Flight Rules
IMC—Instrument Meteorological Conditions
INEXP—Inexperienced
INFLTREP—In-flight Report

INS—Inertial Navigation System
IOC—Initial Operational Capability
IOS—Instructor Operator Station
IP—Instructor Pilot, Initial Point
IPSIM—IP Simulator
IPUG—Instructor Pilot Upgrade
IQT—Initial Qualification Training
IR—Infrared
IRC—Instrument Refresher Course
IRCM—Infrared Counter Measures
IRMD—Infrared Missile Defense
ISOPREP—Isolated Personnel Report
JAAT—Joint Air Attack Team
JFT—Joint Force Training
JHMCS—Joint Helmet Mounted Cueing System
JMO (A)—Joint Maritime Operations (Air)
J-SEAD—Joint Suppression of Enemy Air Defenses
JTAC—Joint Terminal Attack Controller
KCAS—Knots Calibrated Airspeed
KIAS—Knots Indicated Airspeed
KIO—Knock It Off
KS—Killer Scout
KTAS—Knots True Airspeed
LAD—Low Altitude Delivery
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
LAT—Low Altitude Toss
LATF—Low Altitude Tactical Formation

LATN—Low Altitude Tactical Navigation
LATR—Low Angle Tactical Rocket
LGB—Laser Guided Bomb
LOC—Lines of Communication
LOS—Line of Sight
LOW A/A—Low Altitude Air-to-Air
LOW ALT—Low Altitude
LOWAT—Low Altitude Training
MAD—Medium Altitude Delivery
MAJCOM—Major Command
MAV—Maverick
MCC—Mission Commander
MDS—Mission Design Series
MIJI—Meaconing, Intrusion, Jamming and Interference
mil—Milliradian
MIL—Military Power
MISREP—Mission Report
MOA—Military Operating Area, Memorandum of Agreement
MOUT—Military Operations in Urban Terrain
MP—Mission Pilot
MQF—Master Question File
MQT—Mission Qualification Training
MSA—Minimum Safe Altitude
MSN—Mission
MTC—Mission Training Center
MTT—Mutli Tactics Trainer
N/A—Not Applicable
NAAR—Night Air Refueling
NAF—Numbered Air Force
NAV—Navigation
NCO—Non-Commissioned Officer
NGB—National Guard Bureau

NLT—Not Later Than

NT—Night

NTC-L—Networked Training Center-Luke

NVG—Night Vision Goggles

OCA—Offensive Counterair

OCA-A—Offensive Counterair Air-to-Air

OCA-S—Offensive Counterair Air-to-Surface

OG—Operations Group

OPR—Office of Primary Responsibility

OPS—Operations

OPSEC—Operations Security

OSC—On Scene Commander

OT&E—Operational Test and Evaluation

ORI—Operational Readiness Inspection

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 (Includes aircraft assigned to Aggressor units)

PTAI—Primary Training Aircraft Inventory

PTT—Partial Task Trainer

PW—Paveway

QUAL—Qualification

RAP—Ready Aircrew Program

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
ROE—Rules of Engagement (Combat only)
RTM—RAP Tasking Memorandum
RWR—Radar Warning Receiver
SA—Situational Awareness
SADL—Situational Awareness Data Link
SAFE—Selected Area For Evasion
SAR—Search and Rescue
SAT—Surface Attack Tactics
SCL—Standard Conventional Load
SEAD—Suppression of Enemy Air Defenses
SELO—Stan/Eval Liaison Officer
SEPT—Situational Emergency Procedure Training
SFO—Simulated Flameout
SI—Simulator Instructor
SIF—Selective Identification Feature
SIM—Simulator (MTC, WST, UTD, MTT, WTT)
SLD—Systems Level Delivery
SOF—Supervisor of Flying, Special Operations Forces
SORTS—Status of Resources and Training System
SORTIE—In Air Operations, An Operational Flight By One Aircraft
SQ/CC—Squadron Commander
STR—Strategic Training Range
TAC—Tactical
TACAN—Tactical Air Navigation
TACS—Theater Air Control System
TAI—Total Active Inventory
TD—Tactical Deception (AFI 10-704)
TDY—Temporary Duty
TES—Tactics Eval Sq/Test &Evaluation Squadron
TF-Coded—Designated Training Aircraft
TGM—Training Guided Munitions

TGP—LANTIRN, LITENING II or SNIPER Targeting Pod

TGT—Target

TI—Tactical Intercept

T.O.—Technical Order

TOD—Time of Day

TOT—Time Over Target

TR—Training Rules

TST—Time Sensitive Target

TTP—Tactics, Techniques and Procedures

TTR—Tactics and Training Range

TX—Transition

UCML—Unit Committed Munitions List

UE—Unit Equipped

UIP—Upgrading Instructor Pilot

UMD—Unit Manning Document

USAF—United States Air Force

USAFE—United States Air Forces in Europe

USAFWS—United States Air Force Weapons School

USI—Upgrading Simulator Instructor

UTE—Utilization Rate

UTD—Unit Training Device

VID—Visual Identification

VFR—Visual Flight Rules

VLD—Visual Level Delivery

VMC—Visual Meteorological Conditions

VR—Visual Recognition

VTR—Video Tape Recorder

WD—Weapons Delivery

WDL—Weapon Data Link

WG—Wing

WIC—Weapons Instructor Course

WS—Weapons School

WST—Weapon System Trainer

WTT—Weapons and Tactics Trainer

WVR—Within Visual Range

WX—Weather

Terms

Air Combat Training (ACBT)—A general term which may include (D)BFM, (D)ACM, and (D)ACT. Accomplishment of this event requires visual maneuvering against an airborne adversary. Limited/Unlimited TRs (IAW 11-214) are not a litmus test for the accomplishment of ACBT. The prefix (D) refers to dissimilar assets. When the prefix is missing, similar is assumed as flown/required. When present in parenthesis, dissimilar is optional. When present without parenthesis, dissimilar is assumed flown or required. This convention corresponds to all facets of ACBT (i.e., BFM, ACM, ACT).

Air Combat Tactics (ACT)—Training in the application of offensive and defensive maneuvering to achieve a tactical air-to-air objective. DCA, OCA, Force Protection and other A-A centric missions that include element/multi-ship blue tactics are examples of ACT. Limited/Unlimited TRs (IAW 11-214) are not a litmus test for the accomplishment of ACT.

Basic Mission Capable (BMC)—The status of a pilot who has satisfactorily completed training (MQT) prescribed to be fully qualified to perform the basic unit operational missions but does not maintain CMR status. Pilot 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 pilots may also maintain special capabilities (refer to paragraph 4.3.).

Basic Aircraft Qualification (BAQ)—A status of a pilot 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 pilot 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/A3. Pilots are not authorized to perform RAP-tasked missions/events without instructor pilot or SQ supervisor supervision. Flight duties will be limited to those identified in paragraph 4.3.

Certification—The process of certifying pilot 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 (see AFP 50-11 (AFPAM 36-2211)).

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 (see AFP 50-11 (AFPAM 36-2211)).

Combat Edge (CE)—A positive-pressure breathing-for-G (PPG) system which provides pilots additional protection against high positive G accelerations experienced during flight. The system consists of pilot equipment (high-pressure mask, counter-pressure suit (optional with the CRU-94 Port Plug

installed), G-suit), and aircraft equipment (oxygen regulator, G-valve, and interfacing sense line). Above 4G regulated air and oxygen are supplied to the system to provide automatic mask tensioning, vest inflation (n/a with port plug installed), and positive pressure breathing to the mask.

Combat Mission Ready (CMR)—A status of a pilot 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 pilots selected for CMR must be inexperienced (refer to paragraph 4.3.).

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 pilot capabilities to perform unit missions (does not include formal syllabus or test plan missions). Applicable to CMR and BMC pilots.

Currency—The minimum frequency required to perform a mission, sortie, or an event 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.

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

Experienced Aircrew (EXP)—See paragraph 1.5.5.

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 (see AFP 50-11 (AFPAM 36-2211)).

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

Initial Qualification Training (IQT)—Training to qualify the pilot in basic aircraft flying duties without specific regard to a unit operational mission. The minimum training requirement for Basic Aircraft Qualification (BAQ).

Joint Force Training (JFT)—Scenarios employing integrated aerospace and land/naval forces. Examples include JAAT, CAS with FAC, airdrop escort, etc.

Joint Helmet-Mounted Cueing System (JHMCS)—An advanced visor and helmet system that can display Heads-Up Display information on the inside of the pilot's visor.

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 TGP (II, ER, AT)—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 6.1](#). Currency associated with and updated by either LOW A/A or LOW A/G.

Low Altitude Tactical Formation (LATF)—Flying tactical formation while conducting LATN training.

Low Altitude Tactical Navigation (LATN)—Training conducted below 1,000 feet AGL using onboard systems and the fundamental aspects of dead reckoning and point-to-point low altitude navigation, with or without prior route planning.

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

Medium Altitude Tactics.—Day or night (if appropriate for night mission profiles) tactical formation above 5,000 feet AGL, ingressing to a target area, employing actual or simulated ordnance, and egressing with mutual support.

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.

Mission Training Center (MTC)—An installation of high-fidelity networked simulators providing 360-degree visual capabilities coupled with realistic brief and debriefing tools. The facility will have the capability to network local simulator cockpits together, and the potential for long-distance networked operations, providing realistic multi-aircraft virtual training.

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 end of evening civil twilight and the beginning of morning civil twilight, as published in the American Air Almanac, converted to local time. Once trained and equipped, all night sorties should include the use of NVGs. All NVG aided missions should include covert/lights out 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.)

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

SCAR—Mission flown to control, as a minimum, two independent attacks by fighters on or off range with actual or simulated ordnance against lucrative targets identified and validated in specified geographic locations. Mission elements include: Target area reconnaissance and target identification, C3I network interface, SCAR-to-fighter brief, target marking and fighter hand-off, neutralization of enemy air defenses, BDA, and INFLTREP. Formerly called Killer Scout.

SEAD.—A tactical event employing simulated or actual munitions to supress any portion of a simulated IADS, to include SAMs, AAA, and GCI systems.

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

Sniper XR TGP—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’.

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

Squadron Supervisor—SQ/CC, SQ/DO, SQ/ADO, and Flight CCs. ARC: As designated by the OG/CC.

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).

Tactical Intercept.—A single/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. One event may be logged per engagement.

Tactics and Training Range (TTR)—Sites capable of bomb scoring , electronic combat events, and special training.

Target Mark—A tactical weapon delivery used in conjunction with final air strike control.

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

Time Sensitive Target (TST)—An unplanned (as defined in JP 3-60 Targeting) target requiring immediate response. Targets should be both mobile and fixed. The attacking aircraft should receive target data/description and “tasking” 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 in a dynamic environment. Data/description can be via datalink or normal radio communications. Although the target is unplanned, Positive Target Identification (PID), Collateral Damage Estimates (CDE), Deconfliction and basic attack procedures must be thoroughly briefed.

Unit Training Device (UTD)—A squadron-level trainer designed for pilot refresher and continuation training for emergency and instrument procedures and air-to-air and air-to-ground weapons employment. Major components include a high-fidelity cockpit replica for pilot interactions, an out-the-window visual scene, and an Instructor Operator Station (IOS).

Verification—Applies to procedure aimed at verifying and refreshing pilot 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 pilot knowledge. Continuation training is to reinforce, refresh, and update pilots on unit wartime mission/tasking, tactics, and procedures.

Visual Identification (VID)—Often required to positively identify an aircraft using visual means.

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 DR. Only two events may be logged per mission.

Weapons Delivery—Simulated or actual expenditure of weapons in a tactical scenario.

Weapons and Tactics Trainer—A PTT device used primarily for warfighting tasks, and skill integration training (see AFP 50-11 (AFPAM 36-2211)).

Attachment 2

GLOSSARY OF MISSION/SORTIE AND EVENT DEFINITIONS

A2.1. Mission/Sortie/Event Definitions:

A2.1.1. **4-Ship Flight Lead (4FL) Mission.** Special capability mission. Mission where FL led a flight of four or more. May be logged in conjunction with baseline training requirements

A2.1.2. **4-Ship A-A Employment Event.** Offensive or defensive A-A employment as a 4-ship minimum against at least one red air. May include (but is not limited to): opposed 4-ship SAT, DCA (4vX), OCA-A(4vX), Force Protection, etc.

A2.1.3. **ACMI Event.** An event which utilizes an ACMI range/facilities for flight and debrief (to include ACTS, RFMDS, PCDS and P4/5RC, etc.). Only one event may be logged per mission.

A2.1.4. **Air Combat Maneuvers (ACM) Mission.** ACM training is designed to achieve proficiency in element formation maneuvering and the coordinated application of BFM to achieve a simulated kill or effectively defend against one or more aircraft from a pre-planned starting position.

A2.1.5. **Air Strike Control (ASC) Event.** A control performed by the FAC(A) element lead, passing attack (9-line) information and performing Type 1, 2, or 3 control duties. Two controls are required to update an ASC event. The controls do not have to occur on the same mission. A control consists of at least one aircraft attacking a surface target. The control begins with a CAS briefing from a FAC(A) and ends with either an actual/simulated weapons release or an abort on a final attack run. No more than two controls can be counted per CAS briefing per target. Air strike control (ASC) events only apply to FAC(A) qualified pilots and are IAW JCAS FAC(A) MOA (dated 24 Mar 05). Track each ASC performed by type as applicable (see definition below) for JCAS FAC(A) MOA documentation requirements. Only applies to FAC(A) qualified pilots when performed as the FAC(A) element lead. FAC(A)s will satisfy their requirements with ground units or TACPs whenever possible.

A2.1.6. **Aircraft Handling Characteristics (AHC) Mission (ANG: Event).** Basic skills mission. 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. Instrument/AHC missions may be applied to monthly lookback at a maximum of one of either per month (3 for 3 month lookback) (ANG: N/A).

A2.1.7. **Air-to-Air Refueling (AAR) Event.** 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.

A2.1.8. **Alert Scramble Event.** From an alert posture, launch on a scramble order in any tasked role. Simulated event may terminate after initial taxi. Only one event may be logged per sortie.

A2.1.9. **Attrition Sortie.** Programming tool used to forecast future flight hour and sortie requirements. Attrition sorties are derived from historical data (weather, sympathetic, maintenance, etc.) and used to account for sorties cancelled before flight. Launched sorties cannot be considered attrition (see Non-effective Sortie definition).

A2.1.10. **Basic Fighter Maneuvers (BFM) Mission.** Building block mission. BFM (1 v 1) Training designed to apply aircraft handling skills to gain proficiency in recognizing and solving range, clo-

sure, aspect, angle off, and turning room problems in relation to another aircraft to either attain a position from which weapons may be launched, or defeat weapons employed by an adversary.

A2.1.11. **Basic Surface Attack (Night) [BSA-(N)] Mission.** Building block mission. Training designed to achieve proficiency in medium/low altitude tactical navigation and air-to-surface weapons delivery events. Excess night missions may be applied to day requirements. All night missions should include the use of NVGs. All NVG aided missions should include covert/lights out training.

A2.1.12. **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. A normal event will be considered 15 chaff, but 1 chaff expended will satisfy the event requirement.

A2.1.13. **Close Air Support (CAS) Mission.** Mission flown in support of ground forces (actual or simulated) under the control of a Forward Air Controller (FAC) or JTAC providing air strike control for the fighter attacks. Mission elements include: Intel scenario and tactical mission planning, execution against actual or simulated threats, simulated or actual weapons employment against designated targets while under positive control of a FAC(A) or JTAC interfacing (actual or simulated) with the TACS/AAGS C2 network, and INFLTREP. Excess night missions may be applied to day requirements. All night missions should include the use of NVGs. All NVG aided missions should include covert/lights out training.

A2.1.14. **Collateral Sortie.** Sortie 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, hurrevac, airshows, etc. MAJCOMs will normally assign collateral sorties in lump sum (nominally 200 per fighter unit) adjusted for local conditions and circumstances (see paragraph 1.7.2.). Tactical events accomplished on collateral sorties may be logged and used to update currencies but may not be logged as RAP missions or count towards RAP lookback requirements.

A2.1.15. **Commander Option/AEF Prep Mission.** Mission allocated at the beginning of each training cycle by the unit commander based on DOC requirements or AEF commitments. Allocate for CMR pilots to meet individual training requirements and unit training objectives. Allocate for BMC pilots to meet the BMC definition and support squadron training requirements. CMR pilots may log any type RAP mission, with the exception of a Red Air, Instruments, or AHC.

A2.1.16. **Composite Force Training (CFTR) Event.** Scenarios employing multiple flights of aircraft, each under the direction of its own flight leader, acting in a large-force employment (LFE) scenario to achieve a common tactical objective. Scenarios should be opposed by air and surface threats and should include at least 8 blue aircraft. Only one event may be logged per mission.

A2.1.17. **Contingency Sortie.** A sortie tasked and flown while deployed for a contingency operation. These sorties are logged as Contingency Operations Sortie (SC13) in ARMS. These sorties and events accomplished on these sorties do not count towards training cycle RAP requirements, however, the sorties may be used for lookback and the events may be used to update currencies.

A2.1.18. **Defensive Counter Air (Night) [DCA (N)] Mission.** Mission designed to develop proficiency in Defensive Counter Air (DCA) mission tactics. Mission elements include: Intel scenario and mission planning, execution of tactics to detect, engage, and negate aircraft employing adversary tactics and weapons capabilities to penetrate protected airspace or attack a specific target area, and in-flight report. Additional night missions may be applied to day mission requirements. All night mis-

sions should include the use of NVGs. All NVG aided missions should include covert/lights out training.

A2.1.19. **Demanding Sortie** --Sorties that task the pilot to the extent that flying frequency and continuity are most critical. Authorized missions/events requiring demanding sortie currency are: BFM, ACM, ACT, LOW A-A or A-G (below 1,000 feet AGL), CAS, Opposed SAT, CFTR, night missions, instructor duties, aerial demonstrations, etc. SQ/CCs may add missions/events to the demanding sortie list, depending on unit tasking and the individual's capabilities. Also see Non-demanding Sortie.

A2.1.20. **Destruction of Enemy Air Defenses (DEAD) Mission.** Mission designed to develop proficiency in Destruction of Enemy Air Defense tactics. Mission elements include: Intel scenario and integrated mission planning to support force package objectives, execution of tactics to detect and destroy (utilizing conventional, IAM, or LGB munitions) enemy IADS, to include SAM, AAA systems, and critical IADS nodes, employing adversary tactics and weapons capabilities to disrupt force package employment/destroy package assets, and in-flight report. Destructive suppression effects are cumulative, resulting in reduced attrition of friendly aircraft. Destructive operations should be integrated and used with disruptive operations. TGP employment (dual-carriage when capable) is highly desired.

A2.1.21. **DT A/A Event.** Complete an air-to-air intercept/engagement against a target relayed/passed by an appropriate command and control (C2) asset. Track information should be a datalinked (J 3.2 track) if possible, otherwise via normal radio communications (C2 asset and relay/passing of track information can be simulated). Only two events may be logged per mission.

A2.1.22. **DT A/G Event.** Complete an air-to-ground attack/engagement against a target/TST relayed/passed by an appropriate command and control (C2) asset. Track information should be a datalinked (J 3.5 track) if possible, otherwise via normal radio communications (C2 asset and relay/passing of track information can be simulated). Targeting within a CAS scenario does not meet the intent of this event. Only two events may be logged per mission.

A2.1.23. **EA A/A Event.** 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 engagement.

A2.1.24. **Element Air-to-Air Maneuvers Event.** Formerly ACT (2v2) min. Accomplishing an Air-to-air tactical event as Blue Air that requires element deconfliction, contract adherence, and formation maneuvering. This may include (but is not limited to): ACM (as blue), element notch-attack, WEZ in depth maneuvers to VID, Skate/Bonzai tactical execution, etc. Minimum of 2 in the blue element opposed by multiple groups or single multi-ship group.

A2.1.25. **EP A/A Event.** The pilot detects an airborne threat via electronic means and reacts with appropriate maneuvers, pod/internal ECM switchology, and/or expendables. Airborne threat training will be accomplished only with a dedicated adversary attacking from BVR. Only one event may be logged per engagement.

A2.1.26. **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 pilot detects a surface threat via electronic means and reacts with appropriate maneuvers, pod/internal EP switchology and/or expendables. Missions flown against EW Aggressor or mobile threat emitters placed in a MOA, range, or along a low level route are acceptable. Only one EW range event may be logged per mission (Active EA must be used).

A2.1.27. **Flag Exercise Event.** Missions flown in formal MAJCOM-sponsored exercises (ie. Red Flag, Green Flag, etc.). Flag events will include operations with Full Scale Inert/Live ordnance (see 5.6.).

A2.1.28. **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. A normal event will be considered 15 flares, but 1 flare expended will satisfy the event requirement.

A2.1.29. **Forward Air Control (Airborne) [FAC(A)] Mission.** Special capability mission designed to develop proficiency in airborne forward air control of armed attack fighters in support of actual or simulated ground forces, and can be flown as element lead or the supporting wingman (if FAC(A) qualified). Mission elements include: intel scenario and mission planning, actual or simulated interface with TACS/AAGS C2 network, target acquisition and identification, FAC-to-fighter brief, target marking, positive control (Type 1, 2, or 3) of ground attack fighters employing simulated or actual ordnance against designated targets, integration of ground and heliborne fire support elements (if available), identification and neutralization of enemy air defenses, BDA, and INFLTREP. FAC(A) missions may be counted towards CAS or Commander Option mission requirements. Within a FAC(A) mission are ASC events and currency requirements.

A2.1.30. **HAVE QUICK Event.** The practice of loading the combat or HAVE QUICK training net WOD, best available TOD. Requires proper radio configuration for HAVE QUICK operation and successful utilization during tactical mission accomplishment and/or effective chattermark procedures. Limited to logging of one event per sortie.

A2.1.31. **Instructor Pilot (IP) Mission.** Special capability mission. Instructors will log an IP mission when acting in an instructor capacity to update IP currency. IP missions may be dual-logged with any other RAP mission or special capability missions.

A2.1.32. **Instrument Mission (ANG: N/A).** Basic skills mission. Training designed to ensure instrument proficiency. RAP events may be accomplished on an instrument mission provided accomplishment does not interfere with the primary goal of instrument training. Units are allocated flying hours for every pilot to accomplish their minimum basic skill requirements. Priority for this type of mission should be strange field approach training. Instrument/AHC missions may be applied to monthly look-back at a maximum of one of either per month (3 for 3 month lookback). Instrument missions logged in the MTC must have an IP or sim-IP running the IOS and critiquing performance.

A2.1.33. **J-SEAD Mission.** SEAD mission integrating non-F-16 assets operating in support of the SEAD role. Assets include, but are not limited to, RC-135 Rivet Joint, EA-6B, EP-3, ECR Tornado, etc.

A2.1.34. **Low Air-to-Air (LOW A/A) Event.** An event defined as performing realistic, mission-oriented A/A operations while below 1000' AGL to the pilot's qualified minimum altitude block (see Table 6.1.). The event includes skills necessary to search for, and engage offensively, an aerial target at low altitude. Only one event may be logged per mission. Accomplishing this event updates LOWAT currency.

A2.1.35. **Low Air-to-Ground (LOW A/G) Event.** An event defined as performing realistic, mission-oriented low altitude operations while below 1000' AGL to the pilot's qualified minimum altitude block (see Table 6.1.). The event includes low altitude navigation, tactical formation, defensive maneuvering to avoid or negate threats, and air-to-surface attacks. Only one event may be logged per mission. Accomplishing this event updates LOWAT currency.

A2.1.36. **Low/Slow Speed Threat VID Intercept Event.** 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 mission, but not on the same engagement.

A2.1.37. **Moving Target LGB Attack Event.** Self or buddy-lase LGB attack against a target in motion. Until AFTTP 3.1 hit criteria is available, units will develop simulated ordnance hit/miss criteria using available weapons publications (e.g. Jedi Knight Phase 3 report, TTPs in development, and USAFWS papers).

A2.1.38. **Moving Target Strafe Event.** Tactical strafe attack against a target in motion. Both HAS and LAS are desired. Until AFTTP 3.1 hit criteria is available, units will develop simulated ordnance hit/miss criteria using available weapons publications (e.g. Jedi Knight Phase 3 report, TTPs in development, and USAFWS papers).

A2.1.39. **Mission Commander (MCC) Mission.** Special capability mission. Mission where the pilot 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.

A2.1.40. **Non-demanding Sortie.** A day sortie that provides the pilot 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 1000 feet AGL, basic weapons delivery and basic intercepts (not to exceed 2v2). SQ/CCs may delete sorties/events from this non-demanding sortie list, depending on unit tasking and the individual's capabilities.

A2.1.41. **Non-effective Sortie.** A sortie planned and launched as a training mission, test mission, basic skills sortie, or collateral sortie that, due to some circumstance (weather, IFE, maintenance, etc.), fails to accomplish a sufficient number of planned events. While maintenance statistics support historical data for sorties that are cancelled before takeoff, a non-effective sortie or "air abort" is not usually captured by maintenance for future flying hour programming. These sorties must be accounted for in building unit flying hour programs.

A2.1.42. **NVG LOW ALT Event (ANG: N/A)**- Event is defined as performing realistic, mission oriented low altitude NVG operations below the MSA during high-illumination. Events include low altitude navigation, tactical formation, defensive maneuvering to avoid or negate threats, and air-to-surface attacks.

A2.1.43. **OCA-A Mission.** Mission designed to develop proficiency in OCA-A tactics. Mission elements include: Intel scenario and tactical mission planning, execution of striker escort and sweep 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.

A2.1.44. **Red Air Mission.** A/A mission 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 mission as Red Air. For CMR pilots, Red Air mission allocations in the RTM are

a maximum cap on degraded training. Red air missions flown above max allocation do not count toward RAP mission requirements/lookback. However, CMR pilots may accomplish individual events (e.g. formation landing, AAR, etc.) and update applicable currencies. Unused Red Air allocations should be flown in one of the other A/A training mission categories.

A2.1.45. SEAD Mission. Mission designed to develop proficiency in Suppression of Enemy Air Defense tactics. Mission elements include: Intel scenario and integrated mission planning to support force package objectives, execution of tactics to detect and negate enemy IADS, to include SAM, AAA systems, and critical IADS nodes, employing adversary tactics and weapons capabilities to disrupt force package employment/destroy package assets, and in-flight report.

A2.1.46. Secure Voice Event. Requires proper radio configuration during tactical mission accomplishment. Only one event may be logged per sortie.

A2.1.47. Slow Shadow Event. Intercepting slow flying aircraft (rotary or fixed wing) and maintaining surveillance without being detected.

A2.1.48. Surface Attack Tactics (Night) [SAT-(N)] Mission. Mission designed to develop proficiency in Surface Attack Tactics (SAT). Missions types include Strategic Attack (SA), Air Interdiction (AI), and Offensive Counterair Air-Surface (OCA-S). Mission elements include: Intel scenario and tactical mission planning, execution against actual or simulated threats, simulated or actual weapons delivery against a tactical target, and INFLTREP. Simulated attacks may be conducted against realistic targets IAW local restrictions. Additional night missions may be applied toward day requirements. All night missions should include the use of NVGs. All NVG aided missions should include covert/lights out training.

A2.1.49. Terminal Attack Control with SOF Event. Emphasis on this event is SOF interoperability and support during non-traditional CAS missions. Training requires scenario development, terminal attack, and brief/debrief with SOF personnel. One event, culminating in actual or simulated weapons release, may be logged per target.

A2.1.50. Terminal Attack with Targeting Pod Event. These training events integrate targeting pod TTPs with the terminal attack of a CAS target. TGP use includes target identification, designation, tracking, and weapons guidance. Requires JTAC/FAC(A) control culminating in actual or simulated weapons release. Any TGP (LANTIRN, Litening, or Sniper) may be used in fulfillment of this requirement.

A2.1.51. Urban Target Attack with TGP Event. Training in urban environments emphasizes target identification, attack axis limitations, and avoiding collateral damage, in close proximity to and coordination with friendly forces. One event, culminating in actual or simulated weapons release (IAM, LGB, UGB), may be logged per target.

A2.1.52. Urban Target Strafe Event. Training in urban environments emphasizes target identification, attack axis limitations, and avoiding collateral damage, in close proximity to and coordination with friendly forces. One event, culminating in actual or simulated weapons release, may be logged per target. Both LAS and HAS are desired.

A2.2. Weapons Employment Terms:

A2.2.1. Dry Pass. Weapons delivery pass during which no ordnance is expended. **A2.2.4. Familiarization (FAM).** See [Chapter 5](#).

A2.2.2. **Foul.** A penalty directed to a specific aircraft and crew for actions inconsistent with established procedures or safety considerations. Verbal warnings will not be substituted for fouls. A second foul or any dangerous pass will result in mandatory expulsion from any further deliveries during that mission and a gross error score for the event. A foul will be charged IAW flying directive publications.

A2.2.3. **Hit.** Any munitions impact within the weapons criteria established for that event.

A2.2.4. **Inadvertent Release.** Ordnance which has released without command by the pilot or by a verified system malfunction.. Impact will not be scored.

A2.2.5. **Multiple Release.** More than one weapon released against the same target on a single pass.

A2.2.6. **No Spot.** A weapons release during which no impact was observed. No score or error will be assigned.

A2.2.7. **Qualification QUAL.** See [Chapter 5](#).

A2.2.8. **Tactical Delivery.** A delivery using patterns and techniques that minimize final flight path predictability, yet allow sufficient time for accurate weapons delivery. 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. Level, IAM, LGB, MAV, and climbing deliveries may exceed 5 seconds. All tactical deliveries will normally include recovery to egress parameters.

A2.2.9. **Unintentional Release.** Ordnance released due to pilot error. Will be scored as gross error regardless of impact point.