



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON DC

12 DEC 2007

MEMORANDUM FOR HQ ACC/A3
HQ USAFE/A3
HQ PACAF/A3
HQ AFRC/A3
HQ NGB/A3A5

FROM: HQ USAF/A3/5
1630 Air Force Pentagon
Washington DC 20330-1630

SUBJECT: AFI 11-2A/OA-10 Volume 1_AFGM1, A-10 Differences Training

This is a Guidance Memorandum immediately implementing changes to AFI 11-2A/OA-10, Volume 1, *A/OA-10 Aircrew Training*, providing guidance for A-10 differences training. Compliance with this publication is mandatory. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*. Route AF Form 847 from the field through the appropriate functional's chain of command. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 37-123 (will convert to AFMAN 33-363), *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at <https://afirms.amc.af.mil>. To the extent its directions are inconsistent with other Air Force publications, the information herein prevails, in accordance with AFI 33-360, *Publications and Forms Management*. For this memo, the reference A-10 includes aircraft designated as OA-10.

The following guidance is to be used:

- a. A-10 Differences Training. Flying different variants of the A-10 does not constitute multiple or dual-qualification IAW 11-202 Vol 1, *Aircrew Training*. All A-10 pilots will complete the applicable formal upgrade syllabus for the A-10A, A-10A with Smart Multi-Function Color Display (SMFCD), and/or A-10C before they are certified to fly continuation training (CT) sorties in that variant. Active duty pilots will normally attend A-10C conversion training at Davis-Monthan AFB, AZ, while air reserve component pilots will normally attend A-10C conversion training at home station. Once qualified, pilots will remain qualified for each variant for which they have been previously trained. OG/CCs may designate pilots to maintain certification in multiple A-10 variants based on pilot experience, aircraft availability, and mission requirements. SQ/CCs may accept a pilot's previous qualifications in different A-10 variants based on experience and recency in the applicable variant. If differences training is required, SQ/CCs will tailor the training based on individual experience and proficiency. Pilots must be current and qualified in one of the variants prior to beginning differences training but may begin differences training upon completion of IQT, to include during MQT.

- b. Academics. Academic instruction should focus on the differences between the two variants to include pilot/vehicle interface (PVI), HOTAS, cockpit layouts, electrical systems, weapons delivery systems, and emergency procedures (EPs).
- c. Device Training. Pilots will receive device training in a Full Mission Trainer (FMT) as available. Device training should include EPs (including all boldface), practice instrument approaches, PVI, HOTAS, and weapons employment. Pilots assigned/attached to units without concurrent FMTs may accomplish these events in a HOTAS trainer or Desktop trainer, or may substitute two SEPTs if these devices are not available.
- d. Flying Training. Pilots who do not require MQT but do require differences training will fly a minimum of one supervised aircraft sortie with differences training as the primary mission objective. Flight briefing and debriefing will emphasize checklist procedures, negative transfer of habit patterns, and employment tactics, techniques, and procedures.

The directions of this memorandum become void after 180 days have elapsed from the date of this memorandum, or upon publication of an Interim Change or rewrite of the affected publication, whichever is earlier.

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



**AIR FORCE INSTRUCTION 11-2A/OA-10,
VOLUME 1**

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Flying Operations

A/OA-10--AIRCREW TRAINING

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This volume implements AFD 11-2, *Aircraft Rules and Procedures*; AFD 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 A/OA-10. 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. This publication applies to the Air National Guard (ANG). 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 AFD 11-2, paragraph 4.2. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF IMT 847, *Recommendation for Change of Publication*; route the AF IMT 847 from the field through the appropriate functional's chain of command. Records Disposition. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 37-123 (will become AFMAN 33-363), *Management of Records*, and disposed of in accordance with the Air Force *Records Disposition Schedule (RDS)*, located at <https://afrims.amc.af.mil>. 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 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 publication requires the collection and or maintenance of information protected by the Privacy Act (PA) of 1974. The authorities to collect and or maintain the records prescribed in this publication are Title 37 *United States Code*, Section 301a and Executive Order 9397, *NUMBERING SYSTEM FOR FEDERAL*

ACCOUNTS RELATING TO INDIVIDUAL PERSONS, November 22, 1943. Forms affected by the PA have an appropriate PA statement. System of records notice F011 AF XO A Aviation Resource Management System (ARMS) (December 26, 2002, 67 FR 78777) applies.

NOTE:

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

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

SUMMARY OF CHANGES

This publication contains significant revision. Of note, this revision moved FAC(A) training from MQT to specialized training, aligned RAP training with AEF cycle, changed RAP mission and event requirements, revised ground training requirements, removed paragraphs referring specifically to USAFE and PACAF, changed BMC mission requirements for TF/CB coded units, added simulator training to MQT and specialized training, deleted training requirements repeated from other publications, removed continuation training tables that are in RAP Tasking memo, incorporated targeting pod qualification, removed paragraphs on AIM-9, Maverick and Pave Penny from MQT chapter, removed basic NVG specialized upgrade already incorporated in IQT, added NVG takeoff and landing training, deleted JAAT upgrade training, added FMT application for events, currencies, and experiencing, deleted the training shortfall report, and updated office symbols with the A-staff designation. Specific changes by paragraph are as follows:

Para **1.2.4.4.** added MAJCOM/A3T review of wing syllabi. Para **1.2.5.7.** added unit's role in flying hour program accuracy. Para **1.2.5.12.** updated procedures for submitting training reports. Para **1.4.** added note regarding A-10 and OA-10 designations. Para **1.4.4.4.** added FAC(A) to Specialized Training category. Para **1.5.4.3.** included chase procedures for wingman-lead situations. Para **1.6.** added to expand on Experienced Pilot definition and to add simulator credit. Para **1.7.1.** aligned RAP training cycle with AEF 20-month cycle. Para **1.8.3.** added experiencing sorties with collateral sortie requirements. **Table 1.1.** changed RAP monthly requirements and made all other numbers a straight multiple of the 1-month look-back. Para **1.9.2.5.** removed CEP as a weapons employment recording requirement. Para **1.12.4.** updated API-6/8 rated flying authorizations, including test and ACC/IGS. **Table 1.2.** changed sortie requirements for non-API-1 pilots. Para **2.1.1.** deleted RQ course designation and added IQT graduation requirements. Para **2.2.4.2.** deleted reference to centrifuge date. Para **2.3.** changed formal course management system to ETCA. Para **3.1.** deleted various night and NVG exceptions, and FAC(A) requirements during MQT. Para **3.3.** prescribed simulator training during MQT. Para **3.4.2.** added FMT as substitute for review sortie. Para **3.4.4.1.** added TP stalls/slow flight to AHC. Para **3.4.5.** divided LASDT categories between CAT I in IQT/MQT and CAT II/III, which was moved to Specialized Training. Para **3.4.5.2.** added 2-ship training. Para **3.4.6.** restructured Attack MQT missions more in-line with formal syllabi. Para **3.5.2.2.** changed ACDE formation size criteria. Para **4.1.** restructured CT requirements for pilot categories. Para **4.1.5.2.** added initial cadre designation for test IPs. Para **4.1.5.4.** added SQ/CC discretion to direct additional FTU/test pilot training. Para **4.2.1.** added EP and TAC SIM designations. Para **4.2.2.** modified SEPT program requirements. Formerly published ground and non-RAP training tables (**Table 4.1.** and **4.2.**) deleted and moved to RAP Tasking memo. Para **4.2.5.—4.2.7.** deleted due to repetitive instructions from other publications. **Table 4.1.** (formerly Table 4.3.) added FTU ACBT, ASC, NVG Demanding, and NVG Landing;

defined currency update in FMT, expanded Precision Approach guidance and updated various notes. Para 4.3.3. deleted BALO requirements. Para 4.3.5. updated TF/CB-coded mission requirements. Para 4.8. changed proration criteria due to poor weather. Table 4.2. (formerly Table 4.4.) increased days in table. Para 4.11.1. removed flight surgeon category. Para 4.13. condensed G-awareness training requirements and provided AGSM academics as option to video. Para 5.3.4. moved number of weapons events for QUAL to RAP Tasking memo. Para 5.5.1. added requirement to set rounds limiter. Para 5.5.2.1. lowered altitude on VLD final. Para 5.5.1.4. changed 30 HAS min recovery altitude to 1,000 feet. Para 5.5.2.6. changed HARB definition to a diving delivery. Para 5.5.2.7. added Toss category and changed definitions of LAT/MAT. Para 5.5.4. changed definitions and hit criteria for rocket events. Chapter 6 added FMT desired for each upgrade, removed references to high/low threat, standardized mission profile descriptions and use of certification vs. qualification, removed separate FAC(A) IPUG. Para 6.2.4.5. added practice briefings. Para 6.2.5. added required events, updated FLUG missions and added 4-ship FLUG mission requirements. Para 6.3. added FAC(A) upgrade and included JCAS FAC(A) MOA requirements. Para 6.3.3. defined minimum hours prior to FAC(A) upgrade. Para 6.4.3.1.7. defined methods of instruction. Para 6.4.3.2.8. added IPUG for special capabilities. Para 6.6. added NVG takeoff and landing upgrade. Para 6.7. added TGP upgrade. Para 6.8. moved LASDT CAT II/III from MQT. Attachment 1 added new abbreviations and updated description of terms. Attachment 2 updated training definitions. Attachments 4 and 5 deleted.

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Chapter 1

GENERAL GUIDANCE

1.1. Abbreviations, Acronyms, and Terms. See [Attachment 1](#) and [Attachment 2](#).

1.2. Responsibilities.

1.2.1. Headquarters (HQ) Air Combat Command (ACC), Director of Air and Space Operations (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 Combat Air Forces (CAF) units. RTRB participants will include applicable ACC active and reserve component representatives. Major Command (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 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 training programs annually.

1.2.3. Direct reporting units (DRUs) will:

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

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

1.2.3.3. Review subordinate unit training programs annually.

1.2.4. Wings/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 Air National Guard (ANG) and Air Force Reserve Command (AFRC) unit training programs as required or requested in accordance with (IAW) the Air Reserve Component (ARC) unit advisory support program.

1.2.4.2. Attach Aircrew Position Indicator (API)-6/8 flyers to a flying squadron. Except when otherwise mandated, designate the training level at which each API-6 (ANG/AFRC: all flyers) will train.

1.2.4.3. Upon request, provide MAJCOM/A3 (ANG: ACC/A3G) with a list of Basic Mission Capable (BMC) and Combat Mission Ready (CMR) manning positions. Review manning programs and position designations annually.

1.2.4.4. Review unit supplements to this volume, including training programs and syllabi, annually. Forward unit supplements to MAJCOM/A3T for review upon initial release or following significant changes (ANG: upon request to ACC/A3G).

1.2.5. Squadrons/units (ANG: appropriate operations supervisor) will:

1.2.5.1. Review training and flight evaluation records of newly-assigned pilots to determine the training required for them to achieve CMR/BMC and to ensure provisions of this instruction will be met.

1.2.5.2. Ensure Ready Aircrew Program (RAP) training missions are oriented to develop basic combat skills and to practice tactical employment simulating conditions anticipated in the unit mission. Provide guidance to ensure only effective RAP missions are logged as RAP lookback counters. See **Attachment 2** and RAP Tasking memorandum for RAP mission definitions.

1.2.5.3. Identify the levels and methods of supervision required to accomplish training tasks, unless specifically directed.

1.2.5.4. Ensure adequate continuity and supervision of individual training requirements, experience, and proficiencies of all assigned and attached pilots.

1.2.5.5. Ensure all pilots are adequately prepared and proficient in missions, events, and tasks for which they plan to participate, or are being trained for that purpose.

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

1.2.5.7. Ensure proper allocation of experiencing, collateral and attrition sorties, and accurate designation of non-effective training missions to properly manage the unit flying hour program.

1.2.5.8. Establish utilization of BMC pilots and determine missions/events in which individual BMC pilots will maintain qualification versus familiarization.

1.2.5.9. Determine which CMR/BMC pilots will carry special capabilities and qualifications.

1.2.5.10. Ensure supervisors actively review in-flight aircraft mission tape recordings.

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

1.2.5.12. Submit a training report to the appropriate MAJCOM/A3T (ANG: ACC/A3G) branch periodically during the training cycle as directed. Submit an out-of-cycle report anytime MAJCOM assistance is required to prepare for Designed Operational Capability (DOC) or Air and Space Expeditionary Forces (AEF) tasking. ACC units will adhere to the following guidance:

1.2.5.12.1. Transmit a Training Health Report via e-mail every fourth month of the training cycle (end of Jan, May, Sep, and Jan). Reports will summarize the results or unresolved issues since the last report, the current training plan, and any significant shortfalls or LIMFACs affecting training. Attach a current squadron "training health slide" to summarize critical training issues. Complete the report and health slide IAW guidance posted on the ACC/A3TO website: <https://a3.acc.af.mil/DOT/DOTO/Fighter/FighterTeam.asp>. Reports will reflect different phases of training unique to each AEF pair. Primary reports are the Post-AEF (first

month after AEF vulnerable period) and the Pre-AEF (four months prior to AEF vulnerable period). Other reports provide snapshots of the squadron's training health.

1.2.5.12.2. Report only significant shortfalls or LIMFACs of events/missions that affect 15 percent or greater of the squadron's pilot force. Include planned corrective action or specific assistance required as appropriate. ACC/A3TO will coordinate to rectify or minimize noted shortfalls or LIMFACs while the training cycle is underway.

1.2.5.12.2.1. 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.

1.2.5.12.2.2. 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 supporting hardware and software.

1.2.5.12.3. Summarize and report training requirement deviations, following proration, to ACC/A3T (ANG: ACC/A3G) with the Post-AEF RAP Training Health Report IAW (end of the first month after AEF vulnerable period) the guidance at the ACC/A3TO website listed above. This report will include training requirements waived by the OG/CC. E-mail training reports to ACC/A3TO RAP manager at accdoto.rapreporting@langley.af.mil, DSN 574-8323 (ANG: E-mail training reports to ACC/A3GO at accdog.rapreporting@langley.af.mil, DSN 574-4099).

1.2.6. Individual pilots will:

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

1.2.6.2. Complete training requirements and currencies within the guidelines of this instruction to adequately prepare for and maintain proficiency in assigned flight-related activities.

1.2.6.3. Participate only in missions, events and tasks in which they are qualified, current, and prepared, or are being trained for that purpose.

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. Forward recommendations for changes to this volume to HQ USAF/A3OT for HQ USAF/A3 approval.

1.3.3.3. Address time sensitive changes by immediate action message.

1.3.4. MAJCOM/A3 (ANG: ACC/A3G) will determine training requirements for subordinate units. This includes making changes, additions, or deletions to this volume at any time via supplement or

RAP Tasking memorandum. HQ ACC/A3 will be an info addressee for all substantial changes or deletions.

1.4. Qualification Training. Training programs are designed to progress pilots from Initial Qualification Training (IQT) at a formal training course, to Mission Qualification Training (MQT) at the operational unit, and finally to Continuation Training (CT) throughout the normal training cycle. The following is an overview of qualification training:

NOTE: This volume does not use A-10 or OA-10 designations to imply a mission type, since pilots can fly any mission in either Mission Design Series (MDS). Collectively, the aircraft MDS is referred to as A/OA-10. Traditionally, the A-10 designation refers to all attack mission types, while the OA-10 designation is limited to the FAC(A) mission and Air Strike Control (ASC) events.

1.4.1. **IQT** provides pilots the basic training necessary to initially qualify in flying duties without regard to any specific unit's mission. See [Chapter 2](#). Upon completion of IQT, the pilot attains Basic Aircraft Qualification (BAQ) status. BAQ is a prerequisite for all follow-on training, including MQT. Except for general officers above the wing level, BAQ is not a long-term qualification status.

1.4.2. **MQT** provides pilots the advanced training necessary to qualify in flying duties that directly support a unit's mission. See [Chapter 3](#). Pilots maintain BAQ status until complete with MQT and subsequently designated CMR/BMC. The Formal Training Unit (FTU) IP course is equivalent to a unit MQT program. Waiver authority for any pilot other than general officers above the wing level to remain BAQ for longer than six months is MAJCOM/A3 (ANG: ACC/A3G).

1.4.3. **CT** provides pilots the training necessary to maintain flying proficiency and consists of two aspects. The first involves pilot training in the basic flying skills necessary to ensure the safe operation of the aircraft. The second consists of specific mission-related training required to accomplish the unit's assigned missions. See [Chapter 4](#).

1.4.4. **Ready Aircrew Program (RAP)** is the CT program designed to focus training on capabilities needed to accomplish a unit's core-task missions. Following completion of IQT and MQT, units will assign pilots to either a CMR position or a BMC position. CMR pilots maintain combat readiness, while BMC pilots may require additional training prior to combat. Each MAJCOM will publish a RAP Tasking memorandum to establish the CT requirements for all pilots. Post the current RAP Tasking memo following this instruction.

1.4.4.1. **Combat Mission Ready (CMR)** establishes the minimum training required for pilots to qualify and remain proficient in all of the primary missions tasked to their assigned unit and weapons system. Designate and maintain CMR pilots as follows:

1.4.4.1.1. All designated combat aircraft (CC-coded) unit active duty API-1 positions, flying squadron commander (SQ/CC), and squadron operations officers (SQ/DO) positions are designated CMR. Operations group commanders (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. (ANG/AFRC: Any pilot may be designated CMR/BMC at OG/CC discretion.)

1.4.4.1.2. CMR pilots will maintain currency and qualification in all core missions of the flying unit to which they are assigned or attached. CMR pilots will maintain currencies that affect

CMR status and will accomplish all mission ground training and all core-designated flight training. Failure to complete this training or maintain these currencies will result in regression to non-CMR (N-CMR) status unless waived by appropriate authority. While N-CMR, pilots may participate in missions, including exercise and contingency, in which they are current and qualified at the discretion of the SQ/CC.

1.4.4.2. **Basic Mission Capable (BMC)** establishes the minimum training required for pilots to be familiarized in all, and may be qualified and proficient in some, of the primary missions tasked to their assigned unit. Designate and maintain BMC pilots as follows:

1.4.4.2.1. Active duty non-CMR pilot positions above squadron level are designated BMC. BMC positions are assigned to pilots who have a primary job performing wing supervision or staff functions that directly support the flying operation. FTU Instructor Pilots (IPs), United States Air Force Weapons School (USAFWS) IPs, and operational test pilots are also designated BMC IAW paragraph 4.1.5.

1.4.4.2.2. BMC pilots will maintain familiarization with all unit core missions. They may also train for proficiency and qualification in some of those missions. For missions in which BMC pilots maintain familiarization only, they must be able to attain proficiency and qualification within 30 days. BMC pilots may be required to provide additional sortie generation capability, either in lieu of, or in addition to, the personnel assigned to the flying squadrons.

1.4.4.2.3. BMC pilots will accomplish all mission-related ground training designated by their attached SQ/CC. BMC pilots may deploy and participate in any mission for which they are proficient and qualified without additional training, as determined by the SQ/CC IAW paragraph 1.7.5. Failure to complete required training results in regression to non-BMC (N-BMC) status. While N-BMC, the SQ/CC will determine which missions the pilots may perform and the supervision required.

1.4.4.3. **N-CMR/N-BMC.** Pilots who regress to N-CMR/N-BMC status will accomplish the requirements in paragraph 4.6. in a timely manner to regain CMR/BMC status.

1.4.4.4. **Specialized Training.** Units will qualify pilots in the special capabilities necessary to carry out assigned missions and DOC tasking. Specialized training consists of training programs such as Flight Lead Upgrade (FLUG), Instructor Pilot Upgrade (IPUG), Forward Air Controller (Airborne) (FAC(A)) upgrade, Combat Search and Rescue (CSAR) upgrade, etc., as well as CT to maintain proficiency. Specialized training is accomplished after a pilot is designated CMR/BMC and in addition to basic requirements. Unless otherwise specified, pilots in CMR/BMC positions may maintain special capabilities and qualifications if they are able to accomplish the additional training requirements. See Chapter 6.

1.5. Training Concepts and Policies.

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

1.5.2. ACC Training Support Squadron (ACC TRSS) will develop and validate training programs as tasked by HQ ACC/A3. Other MAJCOMs may submit requests for training support to HQ ACC/A3.

If validated, these requests will be prioritized and tasked to ACC TRSS. Designated test units may develop syllabi to upgrade operational test pilots in support of specific test plans. The OG/CC for the test unit will be the approval authority for these syllabi and submit them to ACC TRSS for review.

1.5.3. Unit-developed RAP training missions will emphasize combat skills and scenarios that reflect procedures and operations based on employment plans, location, current intelligence, and opposition capabilities. Use of procedures and actions applicable to combat scenarios are highly desired, such as appropriate use of code words, authentication procedures, combat tactics, safe recovery procedures, tactical deception, in-flight reports, threat reactions, and intelligence briefing/debriefing. Tactical training should include use of inert and live ordnance, threat simulators, countermeasures, and dissimilar aircraft to the maximum extent possible.

1.5.4. In-Flight Supervision.

1.5.4.1. Unless specifically directed, SQ/CCs determine the level of supervision necessary to accomplish the required training. If the mission objectives include introductory tasks or instruction to correct previous training discrepancies, then an IP may be required.

1.5.4.2. IPs and Flight Lead (FL)-qualified squadron supervisors may permit a wingman to lead during limited portions of a CT mission, if appropriately briefed. This provision will only be used to allow wingmen to practice events in which they are already qualified or to help determine if they are ready for FLUG. In either case, the IP/supervisor is responsible for the flight. This paragraph does not apply to authorized chase procedures.

1.5.4.3. FLs may delegate the tactical lead to their wingman for specific tasks or may fly in a chase position on their wingman for authorized events. While leading in this capacity, the wingman may make in-flight decisions, but the FL will retain overall authority and responsibility for the flight.

1.6. Experienced Pilot Requirements.

1.6.1. Pilots require a minimum number of flight hours to be considered experienced (EXP) in the aircraft IAW AFI 11-412. Inexperienced (INEXP) pilots/aircrew must train at a higher rate to maintain currencies and proficiencies. Training tables in this volume and the RAP Tasking memorandum define requirements for both EXP and INEXP levels.

1.6.2. A/OA-10 pilots require one of the following to be considered experienced:

1.6.2.1. 500 hours Primary Aircraft Inventory (PAI), or

1.6.2.2. 1,000 hours, of which 300 are PAI, or

1.6.2.3. 600 fighter hours, of which 200 hrs are PAI, or

1.6.2.4. Previously fighter experienced and 100 hours PAI.

1.6.3. Hours are defined as FP/MP/IP/EP. Fighter time is defined as hours logged in aircraft with an assigned AFSC of 11FX. OA-10 and AT-38 time are considered fighter hours.

1.6.4. **Simulator Experience.** Units will apply hours logged in a simulator accomplishing approved training events to experience levels. The RAP Tasking memorandum will provide guidance on approved events and logging procedures, if applicable.

1.7. RAP Training Management.

1.7.1. 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 the current A/OA-10 RAP Tasking memorandum. If a unit is not assigned to an AEF pair or is assigned to multiple AEF pairs, RAP tasking is aligned to the AEF cycle itself. This volume, along with the RAP Tasking memo and MAJCOM supplements, will establish the RAP mission requirements for each qualification and experience level. These levels form the basis for additional RAP tasking, including requirements for special capabilities, mission types, training events, and weapons qualifications.

1.7.2. The total number of RAP missions for a qualification level is the primary factor for maintaining a pilot's qualification level. Units will follow guidelines for RAP mission types to the maximum extent possible, with minor variances authorized. SQ/CCs may use variations in mission types as a basis for pilot regression. Qualification in a mission is determined by the SQ/CC considering the MAJCOM guidance and the individual pilot's capabilities.

1.7.3. Pilots must accomplish a tactical profile or a building block-type mission that supports the unit's expected tasking to receive credit for an effective RAP training mission. Each mission profile requires successful completion of a significant portion of the events applicable to that mission type, as determined by the SQ/CC and [Attachment 2](#).

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

1.7.5. Progression from BMC to CMR requires the following:

1.7.5.1. Completion of mission-related ground training, including verification.

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

1.7.5.3. Attaining one-month lookback at the higher CMR mission rate.

1.7.5.4. Confirmation that the progressed pilot can complete the prorated number of mission/event requirements remaining at CMR by the end of the training cycle.

1.7.5.5. SQ/CC certification.

1.7.6. SQ/CCs will designate pilots to train for and maintain special capabilities or qualifications. RAP training requirements for special capabilities are accomplished in addition to baseline CMR/BMC requirements, except FL and Mission Commander (MCC) training.

1.7.7. Wing CMR/BMC pilots will fly the required number of RAP missions. If unable, refer to regression procedures, paragraph [4.6](#).

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

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

1.8. RAP Training Development.

1.8.1. RAP mission and event requirements defined in [Attachment 2](#) apply to all CMR/BMC pilots, as well as those carrying special capabilities or qualifications, IAW the RAP Tasking memorandum. The standard mission requirements at [Table 1.1](#) establish the minimum number of missions per training cycle for CMR/BMC levels of training. The RAP Tasking memo takes precedence over this instruction and may contain an updated mission requirement or missions not yet incorporated in [Attachment 2](#).

1.8.2. Basic skills or “non-RAP” requirements, such as instrument approaches and Aircraft Handling Characteristics (AHC), may be incorporated with or in addition to RAP requirements. These missions and events ensure pilots maintain basic aircraft qualification and are published in the RAP Tasking memo.

1.8.3. Experiencing and Collateral sortie requirements must be considered when developing RAP training and unit flying hour programs.

1.8.3.1. Experiencing sorties are additional training sorties necessary to achieve desired proficiency in optimum time. RAP missions may not provide sufficient hours to experience pilots to achieve overall unit experience levels. HQ USAF sets a required number of hours to experience pilots and a percentage goal of the unit pilots who should meet these requirements. The definition for an experienced pilot is given in paragraph [1.6](#) and [Attachment 2](#).

1.8.3.2. Collateral sorties, such as Cost of Business sorties, are not directly related to combat employment training but are necessary in day-to-day squadron operations. These include flight evaluations, Functional Check Flights (FCF), ferry flights, deployments, air shows, etc. During the training cycle, MAJCOMs will allocate a block of sorties to each unit for these purposes.

1.8.4. Unit flying hour programs are allocated a number of attrition sorties that compensate for non-effective training missions. Pilots may log any training mission as non-effective when a major portion of valid training for that type of mission cannot be accomplished due to poor weather, air aborts, or other unexpected circumstances. In order to allocate the number of attrition sorties accurately, it is essential that pilots log non-effective sorties appropriately.

Table 1.1. A-10 RAP Training Cycle Mission Requirements.

Component	Training Period	BMC Inexp	BMC Exp	CMR Inexp	CMR Exp
Active Duty	Training Cycle	Multiply each 1-month lookback by number of months in cycle			
	3-Month Lookback	18	15	27	24
	1-Month Lookback	6	5	9	8
ARC	Training Cycle	Multiply each 1-month lookback by number of months in cycle			
	3-Month Lookback	18	15	24	18
	1-Month Lookback	6	5	8	6

NOTE: To determine a RAP mission requirement for any training cycle length, multiply the 1-month lookback by the number of months in the desired training cycle for each BMC/CMR level.

1.9. Training Records and Reports.

1.9.1. Units will maintain pilot records for individual training and flight evaluations IAW:

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

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

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

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

1.9.2. Track the following information for all pilots, as appropriate:

1.9.2.1. Ground training.

1.9.2.2. Requirements and accomplishment of individual mission types and events cumulatively for the training cycle.

1.9.2.3. Total RAP missions for one-month and three-month lookback.

1.9.2.4. Requirements and accomplishment of individual currencies.

1.9.2.5. Weapons employment records in sufficient detail to document all employment attempts and hit percentages in any appropriate database.

1.9.3. Units will update Aviation Resource Management System (ARMS) "No Date" with either the date of the last FTU or USAFWS-equivalent training accomplished, or the unit mission certification date.

1.10. Aircraft Mission Tape Recording.

1.10.1. Pilots will use and assess training aircraft mission tape recordings such as Air Combat Maneuvering Instrumentation (ACMI) and aircraft Digital Video/Audio/Data Recorder (DVADR) tapes on all tactical missions. Pilots will review their own tapes with their flight/element member(s).

1.10.2. Review the following items as applicable: titling, weapons parameters, trigger check, accuracy, fragmentation clearance, identification procedures, adherence to Training Rules (TRs), communications procedures and discipline, flight discipline, proper Anti-G Straining Maneuver (AGSM), tactical employment, and instrument approaches.

1.11. Pilot Utilization Policy.

1.11.1. Commanders will ensure wing/group tactical pilots (API-1/6s) fill authorized positions IAW UMDs and pilot status is properly designated. The overall objective is for pilots to perform combat-related duties. For inexperienced pilots in the first year of their initial operational assignment, supervisors will limit the non-flying duties to those related to combat activities. Supervisors may assign pilots to valid, short-term tasks (escort officer, Flight Evaluation Board, Safety Investigation Board, etc.), but must continually weigh the factors involved, such as level of pilot tasking, flying proficiency, currency, and experience.

1.11.2. Squadron duties defined in various publications that may be assigned to CAF API-1 pilots are weapons and tactics officer, scheduler/programmer, Flight Safety Officer (FSO), Supervisor of Flying (SOF), mobility/contingency plans, training (except ARMS documentation), life support officer,

Standardization/Evaluation Liaison Officer (SELO), electronic combat officer, and other duties directly related to flying operations. In some instances, such as squadron-assigned FSOs, API-1 pilots may be attached to the wing. API-1 pilots will not be attached to or man any wing staff position unless total wing pilot API-1 manning is over 100 percent.

1.11.3. Commanders will ensure API-6 pilots on the wing staff perform duties justified in MAJCOM manpower standards documents and authorized in UMDs.

1.12. Sortie Allocation and Unit Manning Guidance.

1.12.1. **Sortie Allocation.** In general, inexperienced API-1 pilots should receive sortie allocation priority over experienced pilots. Priorities for sortie allocation are as follows:

1.12.1.1. **Operational Units.** CMR API-1, MQT API-1, CMR API-6, MQT API-6, and BMC.

1.12.1.2. **FTUs and USAFWS.** Formal syllabus training, IP upgrade, IP CT, authorized staff personnel not performing IP or Flight Examiner (FE) duties.

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

1.12.2. Wing API-6 authorizations are IAW UMDs.

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

1.12.4. API-8 rated personnel flying authorizations, ACC/IGS inspectors in API-6 billets, and CB-coded pilot authorizations will be IAW AFI 11-401 and MAJCOM guidance. API-8 pilots should fly the BMC rate; however, they are not required to complete BMC-specific missions/events or meet monthly lookback requirements. CB-coded pilots will fly the BMC rate as a minimum to meet monthly lookback. Units should provide assigned API-6/8 flyers adequate resources to maintain minimum training requirements. However, support for API-6 pilots will not limit the flying squadron's primary mission. API-6 flyers will accomplish non-RAP requirements with allotted BMC missions. API-8 and ACC/IGS pilots will strive to accomplish non-RAP requirements with allotted BMC missions. If attached units cannot meet attached pilot 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.

1.12.5. **Maximum Sorties.** There is no maximum sortie requirement for CMR pilots (ANG: N/A). **Table 1.2.** defines the minimum requirements and maximum allowance for non-API-1 pilots. Unique operations may occasionally require pilots to fly more than the maximum number of sorties authorized. Units must attempt to minimize the training impact this may have on other pilots.

1.12.6. Pilots assigned or attached to ACC/IGS as API-6 will maintain RAP currencies/lookback per API-8 guidance.

Table 1.2. A/OA-10 Sortie Requirements for other than API-1 Pilots.

API Level	CT Status (Minimum Sortie Requirement)	Unit's Aircraft Code	Organization Level	Maximum Sortie Allowance (Inexperienced/Experienced)
6	CMR	CC	Any	None
6	BMC	CC	Wing	160/140
6	BMC	TF	Any	160/140, or as required by PFT, whichever is higher
6	BMC	CB	Wing	160/140, or as required by test programs, whichever is higher
8	BMC	CB	Wing	160/140, or as required by test programs, whichever is higher
8	BMC	CC, TF, or CB	Above Wing	140/120
5	BMC	CC, TF, or CB	All	160/140, if qualified and current in unit aircraft. Otherwise, IAW AFI 11-401 as supplemented
Any	BAQ	Any	Any	100/80

1.13. Waiver Authority.

1.13.1. Unless specified otherwise in the appropriate section, waiver authority is the OG/CC for all provisions in [Chapter 4](#), [Chapter 5](#), and [Chapter 6](#) of this volume and the requirements published in the RAP Tasking memo. Waivers for an individual pilot's requirements will be approved on a case-by-case basis considering the experience level of the pilot. Blanket waivers for unit training programs, such as for simulator availability, must be approved on a limited basis. For all other provisions of this volume, the waiver authority is MAJCOM/A3 (ANG: ACC/A3G). All waivers will include HQ ACC/A3T as an info addressee.

1.13.2. Units subordinate to a NAF will forward requests directly to MAJCOM/A3T and info their NAF/A3. Waivers from other than MAJCOM/A3 (ANG: ACC/A3G) will include their appropriate MAJCOM/A3T (ANG: ACC/A3G) as an info addressee.

1.13.3. Waivers to this volume will be valid until the approving authority cancels it in writing or revises the publication.

Chapter 2

INITIAL QUALIFICATION TRAINING

2.1. General. This chapter outlines Initial Qualification Training (IQT) of pilots into unit aircraft.

2.1.1. Formal Training. IQT includes Initial Qualification (IQ) training, Transition (TX), and Senior Officer Course (SOC) training, which will be conducted during formal syllabus courses at FTU squadrons whenever possible. Graduates of IQT will be proficient in mission tasks as indicated by the Course Training Standards (CTS) and Required Proficiency Levels (RPL) of the FTU syllabi. As a minimum, IQT will provide the following training certifications and/or qualifications: Air Combat Training (ACBT), Low Altitude Step-Down Training (LASDT) Category I, Air Refueling (AR), Night Air Refueling (NAR), Night Vision Goggles (NVG), and primary Weapons Delivery (WD) employment events.

2.1.2. Local Training. In exceptional circumstances when FTU training is not available within a reasonable time period, or if required training qualifications remain unaccomplished, local IQT may be conducted at the unit IAW the provisions of this chapter. When local IQT is authorized, the gaining MAJCOM assumes responsibility for the burden of providing this training. Local IQT will be developed and conducted using the appropriate formal course syllabus track, flow program, requirement, and CTS/RPL.

2.2. Approval and Waiver for Local IQT.

2.2.1. Gaining MAJCOM/A3 (ANG: NGB/A3T) is approval authority to conduct local IQT. Info HQ ACC/A3T.

2.2.2. Gaining MAJCOM/A3 (ANG: ACC/A3G) is waiver authority to change the requirements of the formal course syllabus for local IQT. Coordinate changes through HQ ACC/A3T.

2.2.3. Gaining MAJCOM/CC (ANG: ACC/CG) is the approval authority for local IQT for colonel-selects and above to be conducted at the unit to which the officer is assigned.

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

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

2.2.4.2. Summary of individual's flying experience.

2.2.4.3. Date training will begin and expected completion date.

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

2.3. Prerequisites. Course prerequisites will be IAW the appropriate formal course syllabus and USAF Education and Training Course Announcements (ETCA).

2.4. Ground Training. Ground training may be tailored to the individual's background and experience or to peculiar local conditions. Incorporate available and current reference materials such as AFTTP 3-3, *Combat Aircraft Fundamentals*, instructor guides, and audiovisual programs as supporting materials to the maximum extent possible.

2.5. Flying Training.

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

2.5.2. Training will be completed within the time specified by the syllabus, as approved. Failure to complete within the specified time limit requires notification through channels to MAJCOM/A3 (ANG: ACC/A3G) with pilot's name, rank, reason for delay, planned actions, and estimated completion date.

2.5.3. Successful completion of IQT requires the Upgrade Pilot (UP) to complete an aircraft Instrument/Qualification evaluation IAW AFI 11-202V2 (AFI 11-2A/OA-10V2).

2.5.4. UPs in IQT will fly under IP supervision until completing the qualification evaluation.

2.5.5. Formal course syllabus mission objectives and mission tasks are minimum requirements for IQT. The SQ/CC may authorize additional training events to the IQT program based on UP proficiency and background. Additional training due to UP non-progression is available within the constraints of the formal course syllabus and may also 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-selects 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 the syllabus and paragraph [2.2](#).

2.6.3. If a senior officer must be trained at the base to which assigned, the officer 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 the gaining MAJCOM/CC (ANG: ACC/CG).

Chapter 3

MISSION QUALIFICATION TRAINING

3.1. General. Mission Qualification Training (MQT) is a unit-developed training program to upgrade newly assigned pilots to CMR or BMC. The local program will incorporate profiles typical of squadron tasking and ensure pilots are prepared to accomplish the primary unit mission. Applicable portions of MQT will also be used to requalify pilots who have regressed from CMR/BMC and to specifically address deficiencies that caused regression.

3.1.1. The SQ/CC will develop and maintain responsibility for the local MQT program IAW the guidance in this chapter. SQ/CCs may tailor their program for individual pilots, based on current qualification, experience, currency, documented performance, and formal training.

3.1.2. Prior to CMR/BMC certification, pilots must qualify (QUAL) in all required Weapons Delivery (WD) employment events and will complete any unaccomplished task from IQT.

3.1.3. MQT will be completed within 90 calendar days (ANG/AFRC: 120 calendar days). Timing starts from the pilot's first duty day at the gaining operational unit. If a pilot elects to take authorized 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. If training exceeds the specified limit, units will notify MAJCOM/A3 of the planned corrective action (ANG: ACC/A3G).

3.1.4. Air Refueling (AR) and initial Aircrew Chemical Defense Training (ACDT) will be accomplished NLT 90 days (ANG/AFRC: 180 days) from completion of MQT. Failure to comply will result in regression to N-CMR/N-BMC until training is complete. AR accomplished in IQT and ACDT accomplished in a previous assignment may fulfill MQT requirements as determined by the SQ/CC.

3.1.5. Pilots in MQT will not fly in Flag-level exercises, Weapons System Evaluation Program (WSEP), or accomplish any specialized training defined in [Chapter 6](#).

3.1.6. During academic and flying training, special emphasis will be placed on Aircraft Handling Characteristics (AHC), Basic Fighter Maneuvers (BFM), transition to instruments, spatial disorientation, task saturation, and conditions leading to and the effects of G-induced Loss of Consciousness (GLOC). Maximum use of mission tapes and captive missiles is encouraged on all MQT missions.

3.2. Ground Training.

3.2.1. Units will develop blocks of instruction covering areas pertinent to their missions as determined by the SQ/CC. Incorporate weapons and tactics academic training described in paragraph [4.2.3](#). Units may credit ground training accomplished during IQT towards this requirement.

3.2.2. Pilots transferring from another MAJCOM require the theater-specific portions of the Instrument Refresher Course (IRC) before flying without a theater-experienced pilot in the formation. MQT academics and the Local Area Orientation (LAO) mission in paragraph [3.4.6.1](#) may satisfy this requirement.

3.2.3. Initial Verification.

3.2.3.1. CMR pilots will demonstrate satisfactory knowledge of the squadron's assigned mission to a formal board established by the SQ/CC. Desired board composition is SQ/CC/DO (chairman),

weapons officer, electronic combat officer, intelligence officer, and plans representative. Suggested verification briefing guides are at [Attachment 3](#).

3.2.3.2. CMR pilots will complete an initial verification within 90 days (ANG: 180 days) after completing MQT. Failure to comply will result in regression to N-CMR until the verification is complete.

3.2.3.3. At the discretion of the SQ/CC, BMC pilots may accomplish an initial verification and/or participate in CT verifications to facilitate future upgrade to CMR status.

3.3. Simulator Training. Conduct MQT simulator training in a Full Mission Trainer (FMT) to the maximum extent possible. If not available, the OG/CC may authorize FMT missions in the best-available ground-training device. Each mission will include selected Emergency Procedures (EPs) and either unusual attitude recoveries, spatial disorientation recognition, or inadvertent weather entry procedures. At the SQ/CC's discretion, FMT missions and specific tasks may be combined or reorganized based on FMT availability and flight scheduling. Each FMT task is a prerequisite for the corresponding MQT flight event.

3.3.1. **FMT-1.** LAO, Instruments, EPs. Mission Objectives: Practice basic AFTTP 3-3 fundamentals of airmanship, local area flying, and aircraft systems operation. Specific Mission Tasks: Ground operations, standard departures/arrivals, local airspace/MOA navigation, emergency airfield procedures and approaches, published penetration/approaches to primary alternates and home base, divert procedures, and EPs.

3.3.2. **FMT-2.** Basic Surface Attack (BSA), Maverick, AR. Mission Objectives: Practice BSA delivery patterns, Maverick operations, and AR procedures. Specific Mission Tasks: Standard departure, weapons checks, Low Altitude Tactical Navigation (LATN), range operations, normal and degraded WD, medium/low altitude Maverick deliveries, weapons EPs, AR procedures and malfunctions.

3.3.3. **FMT-3.** Surface Attack Tactical (SAT). Mission Objectives: Practice tactical WD, CAS procedures, and threat reactions. Specific Mission Tasks: Tactical departures/arrivals, weapons checks, min-risk routing, threat recognition/avoidance, mutual support responsibilities, tactical WD in a CAS scenario, and wounded bird/battle damage procedures.

3.3.4. **FMT-4.** ACDE. Mission Objectives: Introduce operations in full ACDE gear (anti-exposure suit liner may be substituted). Specific Mission Tasks: ACDE donning, ground operations, departure, weapons checks, WD, doffing simulated contaminated ACDE. **NOTE:** Pilots will accomplish this mission once in a career for each MDS prior to the first ACDE flight.

3.4. Flying Training.

3.4.1. **Supervision.** Unless specified otherwise, an IP or FL-qualified squadron supervisor is required in the element with the UP. The SQ/CC will determine the proper flight position of the IP/supervisor. On some mission profiles, more specific or restrictive guidance is provided.

3.4.2. **Breaks in training.** If more than 14 calendar days elapse between MQT sorties, pilots will fly an additional review sortie before continuing in the program. The SQ/CC may substitute an FMT mission for a required review sortie if in the best interest of the pilot's progress through MQT.

3.4.3. **EP Training.** All pilots must conduct practice in-flight EP training during at least one of the MQT sorties. As a minimum, the training will consist of briefing, flying, and debriefing a simulated

critical action procedures scenario, to include airborne coordination with the SOF. An actual EP may fulfill this requirement.

3.4.4. Air Combat Training (ACBT) Missions. These missions will provide ACBT qualification if not accomplished in IQT. Pilots who have lost ACBT currency will use ACBT mission profiles to regain currency (see [Table 4.1.](#) and paragraph [4.5.6.](#), ACBT Recurrency). Conduct ACBT upgrades IAW Air-to-Air (A/A) training specified in AFI 11-214 and applicable flying directive publications. Units will train all pilots in offensive and defensive BFM in preparation for defensive fixed wing ACBT and offensive/defensive anti-helicopter ACBT. At a minimum, pilots will train for successful A/A self-defense at a goal of 50 percent against dissimilar aircraft or helicopters.

3.4.4.1. AHC. Mission Objectives: Practice basic aircraft handling skills. Specific Mission Tasks: Basic and tactical formation maneuvering, AGSM, stall warning tones and AOA awareness, traffic pattern stall recoveries, slow flight, turn rate/radius exercise, confidence maneuver, dive recovery exercise, vertical maneuvering and BFM warm-up exercises (IAW AFTTP 3-3.3). **NOTE:** This mission may be used to regain demanding currency.

3.4.4.2. BFM-1. Defensive BFM (1v1). Mission Objectives: Practice defense against an A/A adversary. Specific Mission Tasks: AGSM, ranging exercise, threat detection and reaction, turn circle entry exercise, weapons parameters denial, Electronic Counter Measures (ECM) and Infra-red Counter Measures (IRCM) separation, reversal opportunity recognition, and perch set up attacks from 3,000, 6,000, and 9,000 feet.

3.4.4.3. BFM-2. Offensive BFM (1v1). Mission Objective: Practice offense against an A/A adversary. Specific Missions Tasks: AGSM, AIM-9 system checks, roll slides, snatch backs, lead turn exercise, high/low yo-yos, AIM-9 employment, gun tracking exercise, high-aspect guns exercise, and perch set up attacks from 3,000, 6,000, and 9,000 feet.

3.4.4.4. ACM. Defensive ACBT (2v1). Mission Objective: Practice 2-ship defense against a single adversary. Specific Mission Tasks: AGSM, threat detection, visual search procedures, use of radar warning systems, element coordination, mutual support contracts, radio discipline, turns to avoid engagement and maintain sight, weapons parameters denial, maneuver/energy potential awareness, counter offensive maneuvering, Low Altitude Training (LOWAT), and ECM/IRCM separation. Pilots performing the attacker role must be ACBT-qualified. **NOTE:** The SQ/CC will specifically designate pilots to perform the attacker role for LOWAT.

3.4.5. Low Altitude Step-Down Training (LASDT) Missions. These missions will provide initial LASDT Category (CAT) I certification if not accomplished in IQT, and is required for all CMR/BMC pilots. Pilots must demonstrate proficiency down to 500 feet AGL for CAT I certification and to conduct tactical training below 1,000 feet AGL. Pilots who have lost Low Altitude (LOW ALT) currency IAW [Table 4.1.](#) will use LASDT mission profiles to regain currency. Conduct LASDT IAW A/A training specified in AFI 11-214 and applicable flying directive publications. During LASDT, any “Knock-It-Off” (KIO) call will include a climb to above 1,000 feet AGL. LASDT certification is required prior to performing unsupervised operations in the associated block. Paragraph [6.8.](#) outlines specialized training for LASDT CAT II and CAT III.

3.4.5.1. LASDT-1. IP will chase UP. Mission Objectives: Introduce low altitude operations down to 500 feet AGL. Specific Mission Tasks: AGSM, low altitude AHC, overbank exercise, vertical awareness exercise, climb/dive/slice maneuvers, nose low recoveries, altitude/attitude awareness, airspeed control, fuel management, LATN, practice KIO, and route abort procedures.

3.4.5.2. **LASDT-2.** Mission Objectives: Practice single-ship and introduce 2-ship low altitude operations down to 500 feet AGL. Specific Mission Tasks: Selected LASDT-1 tasks, ridge crossings, terrain masking and maneuvering, visual lookout, simulated attack maneuvering, defensive reactions, and Low Altitude Tactical Formation (LATF).

3.4.5.3. **LASDT-3.** LASDT CAT I Certification. Mission Objectives: Demonstrate proficiency in low altitude operations down to 500 feet AGL. Specific Mission Tasks: Selected LASDT-1/2 tasks chased and as a wingman, including LATN and LATF.

3.4.6. **Attack MQT Sorties.** These training profiles provide guidance for SQ/CCs to develop mission qualification programs based on unit tasking. Unaccomplished tasks from IQT will be incorporated into the appropriate MQT sortie. SQ/CCs may delay MQT night sorties until after pilots achieve CMR/BMC certification; however, pilots will accomplish required night sorties in MQT status prior to night CT.

3.4.6.1. **LAO.** IP will chase UP. Mission Objectives: Introduce local area procedures, practice instruments and AHC. Specific Mission Tasks: Local area familiarization, emergency airfield orientation, selected AHC and LASDT tasks, instrument and VFR patterns, simulated emergency patterns. **EXCEPTION:** LAO is not required for pilots who have recently flown in the local area. **NOTE:** This mission may be used to regain demanding currency.

3.4.6.2. **ACBT-1.** BFM. Mission Objectives: Practice BFM and demonstrate proficiency in local area and instrument procedures. Specific Mission Tasks: Trail departure, join-up, AR, basic and tactical formation maneuvering, lost wingman procedures, weapons system checks, AGSM, BFM warm-up exercises, offensive and defensive BFM, penetrations/approaches at primary/divert fields, and VFR patterns.

3.4.6.3. **ACBT-2.** (D)ACM. Mission Objectives: Introduce/practice similar and/or dissimilar ACBT, demonstrate proficiency in defensive BFM and tactical formation. Specific Mission Tasks: Formation takeoff (wing), High Altitude Tactical Formation (HATF), weapons system checks, AGSM, BFM, (D)ACM, LATF, LOWAT, and formation approach/landing (wing).

3.4.6.4. **BSA.** Mission Objectives: Practice conventional WD, Maverick and LATN. Specific Mission Tasks: IFR/VFR departure, HATF, AGSM, range operations, normal and degraded WD, Maverick, battle damage check, hung ordnance procedures, approach to airfield serving range, LATN, Visual Reconnaissance (VR), IFR/VFR recovery. **NOTE:** Accomplish VFR departure and recovery if locally available.

3.4.6.5. **SAT-1.** Mission Objectives: Practice tactical mission employment and demonstrate proficiency in WD and Maverick. Specific Mission Tasks: Route/threat planning, weapons system checks, HATF, AGSM, medium altitude ingress/egress, tactical WD simulating combat munitions, threat reactions, mutual support, visual lookout, battle damage check, in-flight report, authentication procedures, LATF, and tactical recovery/initial.

3.4.6.6. **SAT-2.** Mission Objectives: Practice tactical mission employment in a CAS scenario. Specific Mission Tasks: Mission planning, threat detection/reactions (adversary desired), LATF, AGSM, low altitude ingress/egress, first-run attack, CAS employment with Joint Tactical Air Controller (JTAC) and/or FAC(A), troops in contact, artillery deconfliction, convoy escort, battle damage assessment, battle damage check, safe recovery procedures, in-flight report, and authentication procedures.

3.4.6.7. **NSA.** IP Required. Mission Objectives: Introduce/practice night WD. Specific Mission Tasks: Night formation takeoff, NAR, basic formation, night WD, Maverick, instrument approach and landing.

3.4.6.8. **NSAT.** IP Required. Mission Objectives: Introduce/practice night tactical mission employment and demonstrate proficiency in night WD. Specific Mission Tasks: Route/threat planning, weapons system checks, medium altitude ingress, night WD simulating combat munitions, threat reactions, mutual support, in-flight report, and authentication procedures.

3.4.6.9. **MSN QUAL.** Mission (MSN) Evaluation/Certification. This mission will be flown IAW AFI 11-202V2 (AFI 11-2A/OA-10V2) and local Standardization/Evaluation (Stan/Eval) criteria on a mission representing the unit's primary attack mission tasking.

3.5. Initial Aircrew Chemical Defense Training (ACDT). This training will provide certification in the use of Aircrew Chemical Defense Ensemble (ACDE) and familiarization with combat capabilities while wearing ACDE. This training is intended to integrate pilot training with other functional areas (maintenance, intelligence, security, etc.) required to conduct combat operations in a chemical environment and is applicable to all CMR/BMC pilots assigned or deployable to chemical threat areas. Accomplish ACDT IAW AFI 11-301, applicable flying directive publications, and paragraph 3.1.4.

3.5.1. **ACDE Ground Training.** Units will develop local training in the following areas:

3.5.1.1. Protective gear, physiological effects, and first aid for chemical agents.

3.5.1.2. Equipment orientation, fitting, and proper wear of full ACDE.

3.5.1.3. Egress, emergency parachute, and water survival training with ACDE.

3.5.1.4. **FMT-4.** ACDE Simulator, paragraph 3.3.4. Conduct FMT-4 as close as possible to the day prior to the initial ACDE flight, but not more than 30 days prior. If an FMT is not available, accomplish in the CFT.

3.5.2. **ACDE Flight Training.** This flight training will highlight basic limitations of operating with ACDE. Pilots will practice full ACDE donning and doffing procedures/sequence in conjunction with flight training. Adhere to the following restrictions during the ACDE flight:

3.5.2.1. Wear only AERPS (or mask with filter pack) and gloves.

3.5.2.2. Supervision will be a ACDE-certified FL leading one pilot in ACDE gear. AR requires an IP/supervisor. Formations larger than a 2-ship require SQ/CC approval.

3.5.2.3. Accomplish non-demanding events in which the pilot is current and qualified.

3.5.2.4. Conduct preflight operations in Fighter Index of Thermal Stress (FITS) normal conditions, as adjusted for the partial ACDE gear.

3.5.2.5. Minimum planned formation spacing is route. Close formation may be flown only if required for safe mission accomplishment.

3.5.2.6. Minimum altitude for LOW ALT is 500 feet AGL.

3.5.2.7. Minimum weather is 1,500 feet ceiling and 3 miles visibility.

Chapter 4

CONTINUATION TRAINING

4.1. General. This chapter, along with the current A/OA-10 RAP Tasking memorandum, outlines Continuation Training (CT) requirements for BAQ, BMC, and CMR pilots. Pilots must maintain the appropriate qualification IAW AFI 11-401 and AFI 11-202V2 (AFI 11-2A/OA-10V2). During CT, pilots will update all applicable ground and flying currencies IAW AFI 11-202V1, this volume, and other ancillary training publications. Training terms and mission/event definitions referenced throughout this chapter are found in [Attachment 1](#) and [Attachment 2](#) respectively. Units will track completed training and monitor unaccomplished training using ARMS. General requirements for pilots in each category and special capability are as follows:

4.1.1. BAQ Requirements.

4.1.1.1. Completion of IQT.

4.1.1.2. Qualification (QUAL) Evaluation IAW AFI 11-202V2 (AFI 11-2A/OA-10V2). This evaluation is accomplished in conjunction with the Instrument (INSTM) Evaluation.

4.1.1.3. Sortie rate as required to accomplish basic skills (“non-RAP”) requirements. If a BAQ pilot does not fly for 21 days (inexperienced) or 30 days (experienced), the next sortie must be flown with an IP/supervisor.

4.1.1.4. Fly a supervised sortie with an IP/supervisor at least once every 60 calendar days.

4.1.1.5. Pilots in BAQ status for more than six months will be grounded unless enrolled in a program to achieve CMR/BMC or waived IAW paragraph [1.4.2](#). This does not apply to general officers above wing level.

4.1.2. BMC Requirements.

4.1.2.1. Completion of MQT, or either the FTU IP or test pilot upgrade.

4.1.2.2. Mission (MSN) Evaluation IAW AFI 11-202V2 (AFI 11-2A/OA-10V2).

4.1.2.3. LASDT CAT I certification.

4.1.2.4. RAP training IAW this chapter and the RAP Tasking memo.

4.1.2.5. Sortie rate and lookback IAW [Table 1.1](#).

4.1.2.6. FTU IPs and test pilots IAW paragraph [4.1.5](#).

4.1.2.7. API-8 and ACC/IGS inspectors IAW paragraphs [1.12.4](#) and [4.11.2](#).

4.1.3. CMR Requirements.

4.1.3.1. Completion of MQT and SQ/CC certification.

4.1.3.2. Mission (MSN) Evaluation IAW AFI 11-202V2 (AFI 11-2A/OA-10V2).

4.1.3.3. LASDT CAT I certification.

4.1.3.4. RAP training IAW this chapter and the RAP Tasking memo.

4.1.3.5. Sortie rate and lookback IAW [Table 1.1](#).

4.1.4. Special Capabilities Requirements.

- 4.1.4.1. Completion of specialized training IAW **Chapter 6** and guiding syllabi.
- 4.1.4.2. RAP training IAW this chapter and the RAP Tasking memo.
- 4.1.4.3. Failure to accomplish the requirements will result in loss of certification/qualification.
- 4.1.4.4. Recertification and requalification IAW paragraph **4.5.** and **Chapter 6.**

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

- 4.1.5.1. API-1/6 aircrew assigned or attached to TF/CB-coded units will fly at the BMC rate and accomplish the applicable basic skills (“non-RAP”) requirements as shown in the RAP Tasking memo. Formal training syllabus-directed missions and approved test plan missions apply to the BMC rate requirement.
- 4.1.5.2. IPs must be current and qualified in all events they instruct. 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.
- 4.1.5.3. Ground Training. SQ/CCs will direct additional ground training as necessary to accomplish special unit requirements, such as IP phase briefings and test preparation.
- 4.1.5.4. Flying Training. SQ/CCs will direct additional sorties if syllabus-directed or test missions provide insufficient pilot proficiency training. In this case, pilots will log insufficient training sorties as collateral sorties and not credit their monthly RAP lookback.
- 4.1.5.5. For United States Air Force Air Warfare Center (USAFAWC) and United States Air Force Weapons Test Center (USAFWTC) pilots, night flying and AR events are only required to meet syllabus or program requirements.

4.2. Ground Training. Pilots will accomplish ground training IAW the table in the RAP Tasking memo. The table is a single-source reference for MDS-specific ground training only and does not include non-MDS-specific ancillary training. Waiver authority for each event is IAW the specified reference directive. Where discrepancies exist, the reference directive takes precedence. Units may credit ground training accomplished during IQT/MQT toward CT requirements for the training cycle in which it was accomplished.

4.2.1. **Simulator (SIM).** The RAP Tasking memo depicts the SIM CT requirements that pilots will accomplish in an FMT. If an FMT is not available, the OG/CC may authorize SIM missions in the best-available ground-training device. Inexperienced pilots have priority over experienced pilots in the FMT when availability is limited. SQ/CCs will determine the required supervision for SIM missions based on SIM capabilities and mission training objectives. Units will develop scenarios that cover both EP and Tactical (TAC) SIM missions based on expected employment tasking and general systems knowledge requirements. Place emphasis 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, if approved by the SQ/CC.

4.2.1.1. **EP SIM.** Mission Objectives: Practice in-flight EPs and maintain proficiency in applying aircraft general knowledge to abnormal situations. Specific Mission Tasks: Unusual attitude recoveries, spatial disorientation, inadvertent weather entry, controlled flight departure recognition and recovery procedures, controlled and uncontrolled ejection parameters, all boldface procedures, aircraft subsystem failure checklist procedures, in-flight EPs, and precision instrument procedures. **NOTE:** Pilots may satisfy EP SIM requirements by accomplishing or administering INSTM/QUAL EP Evaluations (EPEs) or formal course EP FMTs.

4.2.1.2. **TAC SIM.** Mission Objectives: Practice in-flight malfunctions and maintain proficiency in applying tactical knowledge to combat scenarios. Specific Mission Tasks: DOC-relevant simulated combat employment, threat recognition, threat reactions and counter tactics, weapons malfunction checklist procedures, relevant boldface and aircraft subsystem failure procedures, battle damage and wounded bird procedures, controllability and structural damage checklists, controlled and uncontrolled ejection parameters. **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 monthly EP training will provide a review of abnormal and emergency procedures and aircraft systems operations/limitations during realistic scenarios. One pilot will present a situation while another discusses actions necessary to cope with the malfunction and carry it to a logical conclusion. Squadrons will incorporate the following elements into SEPT programs:

4.2.2.1.1. Emphasize boldface procedures and Special Interest Items (SIIs).

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

4.2.2.1.3. Include one EP per phase of flight and/or major aircraft subsystem (hydraulic, electrical, fuel, engine, flight control, and auxiliary power, as applicable) during each session.

4.2.2.1.4. Include periodic training on the aircraft stall warning and slat system (normal and abnormal operations), NVG contingencies, minimum fuel/emergency divert situations.

4.2.2.1.5. SQ/CCs will approve monthly SEPT scenarios, topics, and SIIs.

4.2.2.1.6. Accomplish two SEPTs each training cycle with an IP/supervisor. These supervised SEPTs, however, are not intended to be evaluations.

4.2.2.2. Pilots will accomplish a SEPT in each calendar month. Currency will expire at the end of the calendar month following the one in which the SEPT was credited, regardless of which date the SEPT was completed. Failure to maintain currency will result in grounding until subsequently completed. SQ/CCs may waive unaccomplished SEPTs from previous months due to non-flying TDYs or special circumstances.

4.2.2.3. SEPTs will be accomplished in the best-available simulator. If a simulator is not available, SEPTs may be accomplished table-top 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. Pilots may satisfy their monthly SEPT requirement by accomplishing or administering an EP SIM, an EPE, or formal course EP training.

4.2.3. Weapons and Tactics Academics. Units will establish a weapons and tactics academic program to accomplish both MQT and CT requirements. Academics are required IAW the ground training table in the RAP Tasking memo.

4.2.3.1. Academic instructors should be USAFWS graduates, or have attended the applicable academic portion(s) of the course, to the maximum extent possible. Audio-visual programs may be used in place of academic instruction.

4.2.3.2. To complete academics, pilots must pass an examination with a minimum score of 85 percent. Pilots may receive training credit in lieu of academics if an exam is passed and corrected to 100 percent, where authorized by the governing publication.

4.2.3.3. Academics and exams will include the following:

4.2.3.3.1. Weapons description, operation, parameters, fusing, limitations, preflight, tactics, normal/emergency procedures/techniques, for all weapons applicable to the unit's mission.

4.2.3.3.2. A/A principles including aerodynamics, maneuverability, formations, AHC, AGSM, signature management, flow priorities, tactical intercept principles, alert procedures and scrambles, use of GCI/AWACS, and enemy capabilities.

4.2.3.3.3. Electronic combat equipment, capabilities, operation, checks, procedures, infrared (IR) and Radar Missile Defense (RMD), countermeasures, and hostile Electronic Warfare (EW) tactics.

4.2.3.3.4. Specialized training to support specific weapons, tactics, mission capabilities, threat identification, authentication, wartime ROE, and safe passage.

4.2.3.3.5. Low altitude academics review IAW LASDT ground training, paragraph [6.8.6](#).

4.2.4. Verification.

4.2.4.1. Units will conduct periodic verifications to update pilots on the wartime mission IAW the ground training table in the RAP Tasking memo. Desired board composition is SQ/CC/DO (chairman), weapons officer, electronic combat officer, intelligence officer, and plans representative. [Attachment 3](#) contains suggested briefing guides for verifications.

4.2.4.2. Each CMR pilot will participate in a verification as a briefer, board member, or audience member. SQ/CCs should encourage BMC/BAQ pilots to participate in verifications to the maximum extent practical.

4.2.4.3. At the discretion of the SQ/CC, pilots who have deployed in support of unit tasking may receive credit for CT verification.

4.3. Multiple Qualification and Currency.

4.3.1. Commanders must not permit pilots who are qualified in primary mission aircraft to maintain qualification in support aircraft, unless required for unit mission accomplishment.

4.3.2. MAJCOM/A3 (ANG: NGB/A3) may authorize pilot qualification in more than one MDS only when such action is directed by command mission requirements and is fiscally justifiable. MAJCOM/A3s will not delegate this authority to a lower level. The A-10 and OA-10 MDS designations do not require multiple qualification approval and are known collectively as the A/OA-10 MDS.

NOTE: This volume does not use A-10 or OA-10 designations to imply a mission type, since pilots can fly any mission in either MDS. Traditionally, the A-10 designation refers to all attack mission types, while the OA-10 designation is limited to the FAC(A) mission and ASC events.

4.3.2.1. Submit multiple qualification requests with full justification through command channels to MAJCOM/A3 (ANG: NGB/A3). Approval for multiple qualifications must be provided to the appropriate host base flight management office. Pilots will not accomplish flights in more than one MDS until aircraft assignments are approved and updated in ARMS.

4.3.2.2. Multiple qualifications are valid as long as the pilot is assigned to the specific position and aircraft designated, or until rescinded by the approval authority.

4.3.3. Multiple qualification is authorized for pilots participating in the Companion Trainer Program (CTP) or maintaining tactical aircraft qualification in the applicable companion trainer/chase aircraft. Pilots assigned to these positions are preauthorized and need not submit approval requests.

4.3.4. For senior wing leadership of units with different aircraft types, multiple qualification is not appropriate. The WG/CC will qualify in only one type of aircraft in the wing, while either the WG/CV or the OG/CC will qualify in a different wing aircraft.

4.3.5. **Multiple Requirements.** Pilots will satisfy at least 50 percent of the mission requirements of their primary aircraft in that aircraft. CMR pilots will accomplish all RAP requirements for their 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.

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

4.3.7. Pilots must complete transition or conversion training IAW the approved syllabus.

4.4. Basic Skills Training Requirements. A/OA-10 pilots will accomplish basic skills (“non-RAP”) training requirements during the unit training cycle IAW the RAP Tasking memo. Failure to accomplish requirements will not affect BAQ, BMC, or CMR status, but may require additional training as determined by the SQ/CC. If any mission or event is subsequently converted to a RAP requirement in the RAP Tasking memo, failing to accomplish that requirement may affect CMR/BMC status, as designated.

4.5. Currencies, Recurrencies and Requalification.

4.5.1. **Currency.** [Table 4.1.](#) defines currency requirements for all A/OA-10 pilots. If a pilot loses a particular currency, that mission or event will not be performed except for the purpose of regaining currency with the designated supervision.

4.5.2. **Recurrency.** Pilots require additional in-flight training if a currency requirement is not met.

4.5.2.1. 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/BMC status will require regression to N-CMR/N-BMC until the pilot accomplishes the training. Training identified as not affecting CMR/BMC 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 RAP mission lookback will determine the affect on CMR/BMC status.

4.5.2.2. Unless otherwise specified, the SQ/CC will determine supervisory requirements pertaining to recurrency based on the flight position that offers the best control of the mission.

4.5.3. **MAJCOM/AOS Currency Requirements.** For the flight delivery of aircraft coordinated through MAJCOM/AOS, units will comply with the additional currency requirements IAW AFI 11-207, *Combat Aircraft Delivery*.

4.5.4. **Landing Recurrency.** Loss of landing currency for greater than six months results in unqualified status IAW AFI 11-202V1. Landing recurrency requires the following, based on timing from the last landing:

4.5.4.1. 31/46 (inexp/exp) to 90 days. Regain landing currency IAW [Table 4.1](#).

4.5.4.2. 91 to 135 days. Same as above, plus IP-supervised EP SIM.

4.5.4.3. 136 to 210/225 days (inexp/exp). Same as above, plus open/closed book examinations and EPE. **NOTE:** 210/225 days equates to a six-month loss of landing currency IAW AFI 11-202V1.

4.5.4.4. Over 210/225 days (inexp/exp). Applicable TX IQT, requalification in weapons events, and MSN flight evaluation (if expired).

4.5.5. **Loss of IP Status and Requalification.** IPs will accomplish the following to regain instructor status, based on reason for the loss:

4.5.5.1. IP currency expires, based on timing from the last instructor event as follows:

4.5.5.1.1. 61 to 180 days. Regain instructor currency with an IP.

4.5.5.1.2. Over 180 days. Regain IP qualification with a flight evaluation.

4.5.5.2. N-CMR/N-BMC. If the SQ/CC deems that loss of currency is of sufficient importance, the IP may lose qualification. If the SQ/CC does not take this action, or if the IP becomes non-current in requirements that do not affect CMR/BMC status, the IP may retain qualification, but will not instruct in that event/mission until the currency is regained.

4.5.5.3. Flight evaluation failure. The IP will successfully complete retraining and a recheck evaluation IAW AFI 11-202V2 (AFI 11-2A/OA-10V2).

4.5.5.4. Open/closed book or IRC examination failure. The IP will successfully re-accomplish the exam.

4.5.6. **ACBT Recurrency.** Pilots who have lost ACBT currency must accomplish training listed below, based on number of days out of currency. Missions are defined in paragraph [3.4.4](#). **EXCEPTION:** FTU IPs may instruct formal course ACBT missions with FTU ACBT currency; however, all other ACM participation requires ACBT currency.

4.5.6.1. 61/91 to 90/120 days (inexp/exp). Any dedicated BFM mission (e.g. ACBT-1).

4.5.6.2. 91/120 (inexp/exp) to 180 days. BFM-1 and BFM-2.

4.5.6.3. Over 180 days. Tailored ACBT requalification program, approved by the SQ/CC.

Table 4.1. A/OA-10 Pilot Currencies.

Event	To update fly:	INEXP	EXP	Affects CMR	To regain currency:	Notes
Demanding	Any Sortie	21	30	No	Non-demanding	1
Landing	Landing	30	45	No	Event	2
Night Landing	Any Landing	21	30	No	Day Event	
ACBT	ACBT	60	90	Yes	ACBT	3, 4
FTU ACBT	ACBT	N/A	180	N/A	ACBT	3, 4
LOW ALT	Event	60	90	No	Event	3, 5
LOW A/A	Event/FMT	60	90	No	Event	3, 5
WD	Event/FMT	60	90	Yes	Event	3
Night WD	Any WD/FMT	30	60	No	Day Event	
AR	DAR or NAR	180	180	Yes	Event	3
Formation T/O	Event	60	90	No	Event	3, 6
Formation Landing	Event	60	90	No	Event	3, 6
Precision Approach	Event/FMT	30	45	No	Event	7
ASC	Event	60	90	No	Event	3, 8
Instructor	Event/FMT	N/A	60	No	Event	9
NVG	Event/FMT	120	180	No	Event	3, 10
NVG Demanding	Any NVG Event	90	120	No	Non-tactical NVG	10, 11
NVG Landing	Event	90	120	No	NVG Appr/landing	3, 12

NOTES:

1. Recurrency supervision for BAQ Demanding currency will be an IP/supervisor.
2. Recurrency supervision will be an IP in chase, current and qualified in the event.
3. Recurrency supervision will be an IP/supervisor, current and qualified in the event.
4. ACM performance or instruction updates ACBT currency. Recurrency IAW paragraph 4.5.6.
5. Currency is required in the applicable LASDT category for operations below 1,000 feet AGL. Loss of currency requires regression to the next higher category in which the pilot is current. Operations in a lower altitude block category (e.g. CAT II) updates the higher block categories (e.g. CAT I). Recurrency in a pilot's LASDT category requires vertical awareness training, hard turns, LATN, LATF, threat awareness and reactions, and offensive/defensive maneuvering against the appropriate ground or air threat.
6. Flight leads may update currency from either lead or wing position. Wingmen may only update currency from the wing position. Recurrency will only be accomplished from the wing position.
7. Currency is required to fly an approach through actual weather down to Pilot Weather Category (PWC) minimums. Loss of currency requires regression to the next higher PWC. Recurrency supervision during day VFR conditions may be any pilot in chase or on the wing, current and qualified in the event. All other times regain currency IAW AFI 11-202V3, as supplemented.
8. 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. Commanders are encouraged to establish guidance and goals aimed at achieving greater Joint interoperability.
9. Loss of Instructor currency and recurrency IAW paragraph 4.5.5. USAFWS upgrade missions count as instructor missions for currency. Updating currency in the FMT requires IPs to instruct while flying the FMT.
10. Pilots should use NVGs during night missions to the maximum extent possible. Loss of NVG currency requires an NVG academic review prior to the recurrency sortie. NVG Demanding currency is required to fly NVG tactical missions (SAT, CAS, FAC(A), and CSAR).
11. NVG Demanding recurrency will be accomplished during a dedicated non-tactical mission supervised by a flight lead, current and qualified in the event.
12. NVG Landing recurrency requires a minimum of one NVG approach to a low approach, followed by an NVG landing IAW paragraph 6.6.4.

4.6. Regression.

4.6.1. **Failure to Meet Lookback.** Only RAP training and contingency operations missions may be used for lookback. If a pilot does not meet lookback requirements throughout the training cycle, the SQ/CC can either regress the pilot to N-CMR/N-BMC, remove the pilot from a CMR/BMC manning position, or initiate action to remove the pilot from active flying status.

4.6.1.1. Failure to meet one-month lookback of RAP mission requirements requires a review of the pilot's three-month lookback history. If the pilot meets three-month lookback, the SQ/CC may maintain the pilot as CMR/BMC. If the pilot does not meet three-month lookback, the SQ/CC may either place the pilot in probation status for one month or regress the pilot to N-CMR/N-BMC. A pilot on probation must reestablish a one-month lookback at the end of the probation period to regain CMR/BMC. See [Figure 4.1](#).

4.6.1.2. CMR/BMC pilots regressed to N-CMR/N-BMC must complete a SQ/CC-approved recertification program. Upon completion of the program, the pilot must then meet one-month lookback prior to returning to CMR/BMC. Missions and events accomplished during the recertification program apply toward monthly and training-cycle RAP requirements.

4.6.1.3. RAP lookback computations begin following MQT completion. Until a three-month lookback is established, pilots must meet each monthly requirement; otherwise, SQ/CCs may apply probation rules as described in paragraph [4.6.1.1](#).

4.6.2. **Failure to Maintain Weapons Qualification.** Pilots who fail to maintain weapons RAP requirements at the end of the training cycle will require the following:

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

4.6.2.2. Regression to N-CMR/N-BMC for events tasked as FAM. To regain CMR/BMC, the pilot must accomplish at least three of the weapons deliveries under the supervision of an IP/supervisor. Events accomplished for this initial qualification may count toward the cumulative CT event qualification required at the end of the next training cycle.

4.6.3. **Flight Evaluation Failure.** Pilots who fail a flight evaluation will be handled IAW AFI 11-202V2 (AFI 11-2A/OA-10V2) and will regress to N-CMR/N-BMC as applicable. Pilots will remain N-CMR/N-BMC until corrective action and re-evaluation are complete, and the pilots are recertified by the SQ/CC.

4.7. **End-of-Cycle Requirements.** Pilots who fail to complete RAP requirements by the end of the training cycle may require additional training depending on the type and magnitude of the deficiency. Refer to paragraph [4.8](#) for guidance on prorating training requirements. In all cases, report training shortfalls IAW paragraph [1.2.5.12](#).

4.7.1. Pilots who fail to meet the end-of-cycle RAP mission requirements may remain CMR/BMC as determined by lookback. The SQ/CC will determine if additional training is required.

4.7.2. Pilots who fail to meet end-of-cycle basic skills ("non-RAP") mission and/or event requirements may maintain CMR/BMC as determined by lookback. The SQ/CC will determine if additional training is required.

4.7.3. Failure to meet RAP requirements for a mission type will result in:

4.7.3.1. Regression to N-CMR/N-BMC if the SQ/CC determines that the mission type deficiency is significant. To regain CMR/BMC, the pilot will complete all deficient mission types. These missions may apply to the total requirements for the new training cycle.

4.7.3.2. Continuation at CMR/BMC if total RAP missions and lookback are maintained, and the mission type deficiencies are not significant.

4.7.4. Failure to accomplish missions in a special capability will result in loss of that certification. The SQ/CC will direct recertification and requalification IAW paragraph 4.5. and Chapter 6.

4.8. End-of-Cycle Proration. At the end of the training cycle, SQ/CCs may prorate training requirements when any of the following events preclude training for a portion of the training period: Duty Not Including Flying (DNIF), emergency/COT leaves, non-flying TDY/exercises, and combat/contingency deployments (ANG/AFRC: mandatory training required by civilian employment). Loss of training due to ordinary annual leave will not result in proration. SQ/CCs may consider proration due to poor weather that precludes the unit from flying for more than one half of the monthly scheduled flying days (ANG/AFRC: End-of-cycle proration is permitted for documented attrition, such as 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 pilot's normal monthly rate of flying). The following guidelines apply:

4.8.1. SQ/CCs will only prorate requirements to adjust for genuine circumstances of training non-availability, not to mask training or planning deficiencies.

4.8.2. Proration is based on cumulative days of non-availability for flying during the training cycle. Use Table 4.2. to determine the number of prorated months based on cumulative calendar days of non-availability.

4.8.3. If IQT or MQT is re-accomplished, a pilot's training cycle will start over at a prorated share following completion of that training.

4.8.4. **Proration Example.** A pilot was granted 17 days of emergency leave in January and then attended PME in residence from March through April for 56 consecutive calendar days. The SQ/CC authorized a total of two months of proration for the training cycle (for the 73 cumulative days of non-availability for flying). ANG/AFRC example: an experienced CMR pilot with a normal monthly requirement of six missions had eight attrition occurrences throughout the training cycle, therefore the SQ/CC prorated one month's training requirements.

4.8.5. Newly assigned/converted pilots and pilots certified as CMR/BMC after the 15th of the month are considered to be in CT on the first day of the following month. Events and missions for the remainder of the training cycle may be prorated. A prorated share of RAP missions must be completed in CT.

4.8.6. Night and AR requirements accomplished during MQT may be credited toward prorated CT requirements if accomplished during the cycle in which the pilot was declared CMR/BMC.

4.8.7. Up to one month of a pilot's last month on station may be prorated. For reporting purposes, pilots who depart for a new assignment may be considered CMR for up to 60 days from date of last flight, or until loss of CMR currency, port call date, or sign in at new duty station, whichever occurs first.

4.8.8. CMR pilots who attend USAFWS in TDY-and-return status may be reported throughout the TDY as CMR. Upon return, those pilots will accomplish a prorated share of mission/event requirements IAW [Table 4.2](#).

4.8.9. **Contingency Operations.** Deployed operations can have a positive or negative impact on a unit's CT program. A potential lack of training opportunities while deployed can place a burden on the unit, forcing it to accomplish the majority of its CT program in a reduced period of time at home station. The following proration procedures provide flexibility in accomplishing the unit's CT program:

4.8.9.1. 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 AR, 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.)

4.8.9.2. As the training quality of missions flown at contingency locations may vary considerably, OG/CCs may allow valid RAP training to be logged as such. However, SQ/CCs may not also prorate this training upon return to home station.

4.8.9.3. 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.

Table 4.2. Proration Allowance.

Cumulative Days of Non-flying	Months of Proration Allowed	Cumulative Days of Non-flying	Months of Proration Allowed
0 - 15	0	321 - 350	11
16 - 45	1	351 - 381	12
46 - 76	2	382 - 411	13
77 - 106	3	412 - 442	14
107 - 137	4	443 - 472	15
138 - 167	5	473 - 503	16
168 - 198	6	504 - 533	17
199 - 228	7	534 - 564	18
229 - 259	8	565 - 594	19
260 - 289	9	595 and over	20

4.9. Regaining CMR/BMC Status.

4.9.1. If CMR/BMC status is lost due to failure to meet the end-of-cycle event requirements or weapons qualifications, requalification is IAW paragraphs [4.5](#). and [4.7](#).

4.9.2. If CMR/BMC status is lost due to failure to meet lookback IAW paragraph 4.6.1., the following applies, based on timing from the date the pilot came off CMR/BMC status:

4.9.2.1. Up to 90 days. The pilot must complete a SQ/CC-approved recertification program IAW paragraph 4.6.1.2. In addition, all RAP event currencies must be regained. The SQ/CC will approve any other additional training prior to recertification to CMR.

4.9.2.2. 91 to 180 days. Same as above, plus Stan/Eval-generated open and closed book written examinations.

4.9.2.3. Over 180 days. Re-accomplish MQT.

4.10. Example of the Lookback, Regression, Proration, and Requalification.

4.10.1. Capt Smith is an experienced CMR pilot who flew eight times in the month of Jan and has a three-month lookback of 23 missions. On Feb 3, Smith flew an ACBT mission prior to departing for a two-month non-flying TDY. He reported back for duty on 6 Apr. The following is his status throughout his TDY and upon his return.

4.10.1.1. The SQ/CC elected to report Capt Smith as CMR throughout his TDY. Therefore, on 1 Mar, Smith's FLT/CC reported his Feb sortie count of one, which failed the one-month lookback. The FLT/CC then reviewed Smith's three-month lookback (Dec, Jan, Feb), which was also below the minimum required. Had he flown three more missions, his SQ/CC could show that Smith met lookback.

4.10.1.2. The SQ/CC carried Capt Smith on probation for one month. On 1 Apr, the SQ/CC regressed Smith to N-CMR since his monthly sortie total for Mar was zero. Upon return from TDY, the SQ/CC placed Smith in a recertification program. When he completed this program, he had to fly his one-month lookback totals by 1 May. If he failed to do so, Smith would be N-CMR for one more month until the next lookback process on 1 Jun.

4.10.1.3. If Capt Smith had returned on 22 Mar, and last landed the jet 48 days ago, he would fly a non-demanding mission to regain demanding mission and landing currency. For CMR purposes, Capt Smith would need to fly eight RAP missions for his monthly requirement and get off probation. Although Smith was still CMR in Mar, the SQ/CC flew him with an IP on his first few missions in order to regain his landing, AR, LOWAT, and formation takeoff and landing currencies.

4.10.1.4. At the end of the training cycle, the SQ/CC prorated two months off of Capt Smith's total requirements. In spite of this proration, Smith was deficient in one RAP mission type. The SQ/CC could regress Capt Smith to N-CMR, if the deficiency in training is deemed significant. After accomplishing the tailored recertification program for deficient missions, the SQ/CC recertified him as CMR. Training from this program also applied to the new training cycle.

4.11. Special Flying Categories.

4.11.1. Flight Surgeon. N/A.

4.11.2. **MAJCOM and NAF API-8 Pilots.** (ANG: Responsibilities for API-8 staff flyers are contained in AFI 11-401 as supplemented by the ANG).

4.11.2.1. Mission Directed Training (MDT) for HHQ personnel, other than that conducted in support of a formal inspection, requires coordination with the supporting unit. MAJCOM Division Chiefs and NAF/A3s are reviewing authorities for assigned personnel. They will:

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

4.11.2.1.2. Review accomplishments and currencies of assigned pilots prior to authorizing participation in MDT.

4.11.2.1.3. Provide written documentation specifying the mission types and events each pilot is authorized to fly. API-8 personnel who fly with only one unit may receive this from their attached unit commander.

4.11.2.2. HHQ pilots maintaining BMC status are exempt from academic ground training, NAR, CW training, and special training programs within authorized mission areas. Provide specific currencies to the host squadron. HHQ supervisors will determine pilot qualifications to participate in squadron scenarios for MDT.

4.11.2.3. Each HHQ pilot will:

4.11.2.3.1. Review accomplishments and currencies for accuracy.

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

4.11.2.3.3. Evaluate the demands of each mission scenario and ensure personal abilities and proficiencies will not be exceeded.

4.11.2.4. IPs may perform instructor duties with the concurrence of the OG/CC, if current and qualified in the applicable mission and events.

4.11.3. Active Duty pilots flying with ANG and AFRC units.

4.11.3.1. Wing/group air advisor rated personnel on duty with operational training units can maintain CMR and may be qualified as an IP and SEFE.

4.11.3.2. Active duty pilots other than assigned advisors are authorized to fly with Air Reserve Component (ARC) units IAW AFI 11-401.

4.11.3.3. Pilots on exchange programs from active duty units are authorized mission oriented sorties IAW the specific OPlan that establishes the exchange. SQ/CCs may authorize their participation IAW their specific experience and qualification.

4.11.3.4. 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.

4.12. Instruments.

4.12.1. An instrument training program will be developed IAW AFMAN 11-210, *Instrument Refresher Program (IRP)*.

4.12.2. Units that 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 the Instrument Refresher Course (IRC) before flying without a theater-experienced pilot in the formation. MQT academics and the LAO mission in paragraph 3.4.6.1. may satisfy this requirement.

4.12.4. RAP events may be accomplished on an instrument sortie 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 sorties. An instrument sortie is a basic skills ("non-RAP") sortie requirement, which may be credited toward monthly RAP lookback only IAW the RAP Tasking memo.

4.13. G-Awareness Continuation Training. Units will develop a program to imprint a proper Anti-G Straining Maneuver (AGSM) and provide feedback to pilots so their AGSM is integral to pulling Gs.

4.13.1. This program will give each FL, IP and supervisor the skills needed to evaluate a pilot's mission tape to ensure a proper AGSM is being performed. This program integrates flight surgeon and aerospace physiologist expertise and makes FL-assessment of the AGSM a normal debrief item during mission tape review of the mission's tactical portions.

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

4.13.2.1. Incorporate AGSM technique and assessment into the flying training program. FLs will brief, debrief, and assess the AGSM using the mission tape in the debrief on a routine basis.

4.13.2.2. Include "AGSM effectiveness" on MQT and "AGSM assessment" on FLUG and IPUG grade sheets. IPs will evaluate these areas on upgrade missions that involve tactical maneuvering, such as ACBT and SAT, and when at least five Gs are pulled or anticipated.

4.13.2.3. Pilots will accomplish a G-awareness exercise prior to tactical maneuvering IAW AFTTP 3-3. Film the exercise through the HUD and in hot mic for mission tape review.

4.13.2.4. The approved instructional video covering AGSM technique, reinforcement, and assessment, or Anti-G strain technique academics, will be presented by a qualified physiologist, flight surgeon, or IP/supervisor to all pilots as part of weapons and tactics academics. Academics will include a discussion of the limitations imposed on aircraft performance as a result of an ineffective AGSM.

4.13.2.5. Develop a program to ensure at least one tactical mission tape for each pilot is reviewed and documented each training cycle by a flight surgeon, aerospace physiologist, or squadron supervisor.

4.13.3. Pilots identified as having poor AGSM technique or low G-tolerance will be identified to the FLT/CC or appropriate operations supervisor. The SQ/DO or appropriate supervisor will determine what action is required to improve the pilot's G-tolerance. The SQ/CC will determine if commander-directed acceleration training is required IAW AFI 11-404, *Centrifuge Training for High-G Aircrew*. As a minimum, pilots identified for additional G-tolerance training will accomplish the following:

4.13.3.1. Use hot mic during the tactical portion of all missions to enable assessment of the AGSM. Intercom volume will be set at a level which is comfortable for the pilot but still allows assessment of breathing and AGSM technique in the debrief. The purpose of this is to identify breakdowns in the AGSM that commonly occur during high-task portions of a mission.

4.13.3.2. During the mission tape review, FLs will assess and debrief the pilot's AGSM effectiveness. Compare the AGSM during the G-awareness exercise to breathing techniques while fatigued, as this is usually when the AGSM breaks down and GLOC occurs.

4.14. Low/Slow Speed VID Procedures.

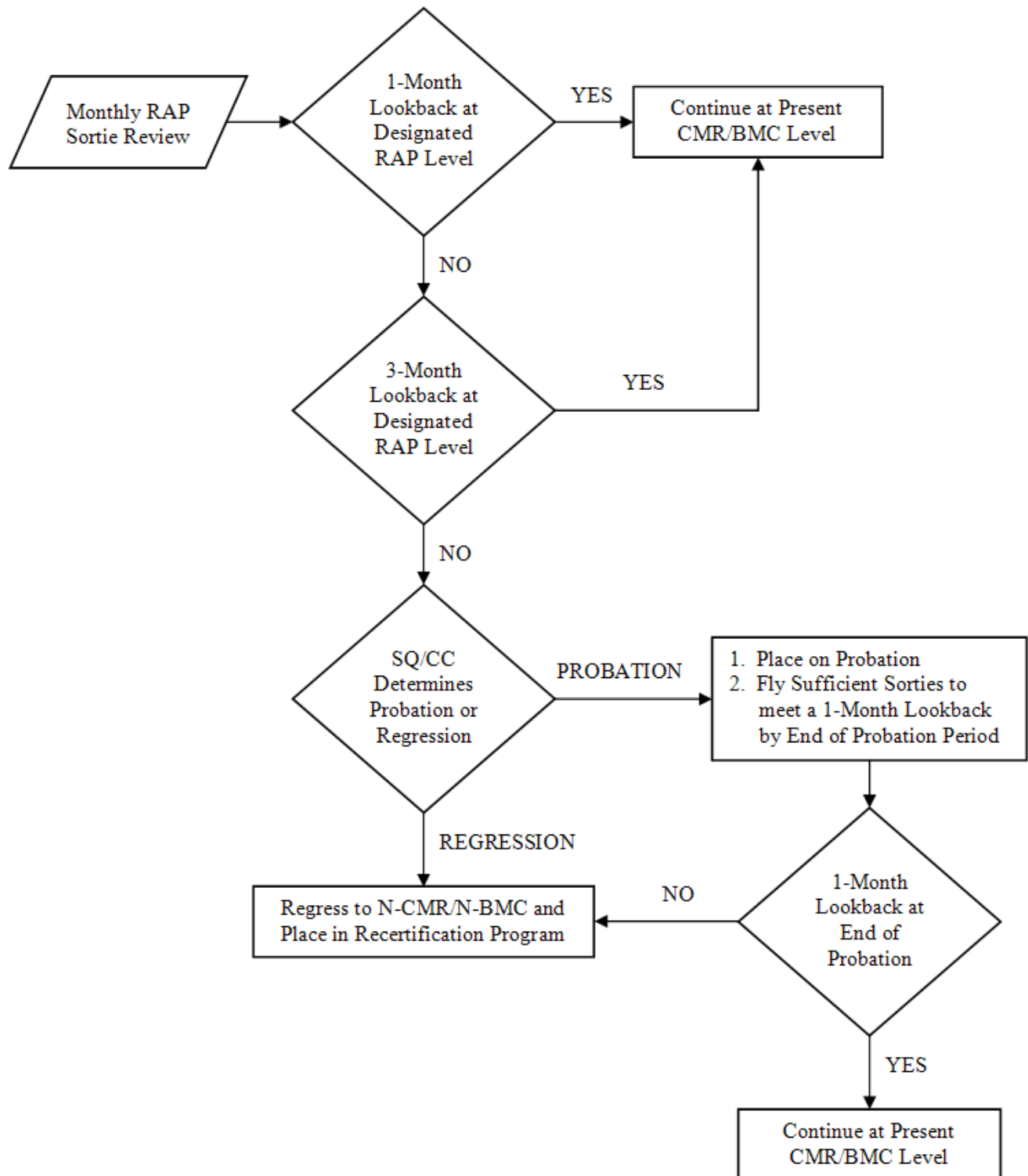
4.14.1. If required for specific tasking, the objective of this low/slow speed VID training is to expose pilots to problems associated with intercepting low/slow flying aircraft (rotary and fixed-wing) for visual identification practice in a threat environment. Emphasis should be placed on dissimilar adversaries below 5,000 feet AGL and 250 KIAS (helicopters are desired). Training will be conducted IAW AFTTP 3-1, AFI 11-2A/OA-10V3, and AFI 11-214.

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

4.14.1.2. Flying training missions should include helicopter operations and considerations to the maximum extent possible. Training assets include helicopters and propeller aircraft from any military service. Creation of a realistic environment to simulate the aircraft VID suite is essential to the conduct of low/slow VID procedures. Units must make every effort to maximize effective use of limited assets as well as to instill awareness and actions appropriate to this training. SQ/CCs will determine the depth of ground and flying training necessary prior to participating in exercises and contingency operations.

4.15. EC. Flying training missions should typically include EC-oriented operations and considerations. Available assets include ground-based threat simulators, unit-equipped ECM pods (configured with training settings), airborne ECCM devices, and dissimilar adversaries. Creation of an electronic environment to stimulate the aircraft electronic and avionics suite is essential to the conduct of realistic EC training. Units must make every effort to maximize effective use of limited assets as well as instill awareness and actions appropriate to the EC environment.

Figure 4.1. Regression Flow Chart.



Chapter 5

WEAPONS DELIVERY/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 [Attachment 2](#) for further guidance on weapons events.

5.2. Initial Weapons Qualification (QUAL). Pilots must accomplish initial qualification in all weapons events listed in the RAP Tasking memo as QUAL events. Initial qualification achieved in IQT or MQT satisfies requirements for CT initial qualification, but not for CT event requirements. Initial qualification will carry over for consecutive tours in the A/OA-10.

5.2.1. Initial qualification in a weapons event is satisfied when the pilot has achieved a minimum of three hits out of six consecutive record deliveries, if not specified otherwise.

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

5.2.3. Maverick. Deliveries must be accomplished from tactical deliveries.

5.2.4. AIM-9. Qualification in one missile category is assumed for other missile categories in such cases where only one type of missile was employed.

5.3. CT Weapons QUAL. These criteria establish the minimum standards for a pilot to maintain qualification in the appropriate RAP-tasks weapons delivery events and do not necessarily determine evaluation criteria established by other instructions or agencies (e.g., inspection/evaluation teams). The RAP Tasking memo defines specific training cycle requirements for weapons qualification.

5.3.1. CT weapons deliveries will be tactical deliveries simulating realistic employment of Unit Committed Munitions List (UCML) munitions, considering such factors as fusing, safe separation/escape, and minimum recovery altitudes. CT air-to-surface weapons event requirements should be accomplished on scoreable tactical ranges to the maximum extent practical. To maintain a combat perspective in a peacetime environment, weapons deliveries should simulate realistic employment of live munitions and Standard Conventional Loads (SCLs).

5.3.2. Pilots will maintain weapons qualification by completing the minimum number of record deliveries and record hits (if required), and also by achieving appropriate qualification percentage during the training period.

5.3.3. At the end of the training cycle, each pilot's weapons delivery scores will be reviewed to assess the pilot's qualification. If qualified, the pilot's weapons qualification remains valid through the next training period, unless qualification is lost sooner.

5.3.4. QUAL requires an overall record hit rate of 50 percent of record hits, unless specified otherwise. The RAP Tasking memo further defines QUAL requirements based on the training cycle. Additional guidance is as follows:

5.3.4.1. Strafe. Multiple strafe for the same type event is authorized if cockpit rounds count is declared between events, the appropriate total number of rounds are set in the limiter, and different

target arrays are used (e.g., a different range or at least 90 degrees heading change.) Pilots will be charged actual rounds fired or rounds set per event, whichever is greater, for each event.

5.3.4.2. **Maverick.** If a unit is equipped with various types of Mavericks, training should be equitably divided between types based on unit equipment and expected tasking to the maximum extent practical.

5.3.4.3. **AIM-9. QUAL** requires a 75 percent hit rate.

5.4. Failure to Qualify. Failure to qualify in one event does not invalidate qualification in others. SQ/CCs may declare a pilot unqualified in an event(s) and invalidate all previous record deliveries for that event at any time during a training cycle without affecting other weapons event qualifications. If QUAL is required at CMR/BMC, a pilot who fails to qualify will regress to N-CMR/N-BMC and be entered into recertification until requalification is accomplished.

5.5. Weapons Delivery Parameters. The event requirements and parameters listed below form the basic framework for pilot weapons delivery training. All deliveries will conform to the limits established for each specific event. Pattern descriptions, procedures, training rules, and foul criteria are contained in AFI 11-2A/OA-10V3 and AFI 11-214. Events performed at night may require higher minimum recovery altitudes based on AFI 11-214 minimum altitude restrictions.

5.5.1. **Strafe Events.** Pilots will set the aircraft rounds limiter to the total number of rounds for all events planned. A minimum of 50 rounds per strafe event must be set and expended to satisfy RAP strafe requirements. The maximum number of passes for each event is three.

5.5.1.1. **Low Angle Strafe (LAS).** Planned dive angle of 15 degrees or less. Foul line is 2,000 feet. Minimum recovery altitude is 75 feet AGL. Number of rounds per event is 100. Hit Criteria: 25 percent of actual rounds fired result in hits. Each valid hole or acoustic-score count is a hit. If acoustic-score is not available, adjust the number of hits by percentage of surface area when target size is other than 625 square feet or independently observed impacts (suitable targets) on all three passes.

5.5.1.2. **Long Range Strafe (LRS).** Planned dive angle of 15 degrees or less. Foul line is 2,000 feet. Minimum recovery altitude is 75 feet AGL. Open fire range is IAW range restrictions. Cease fire range is 5,000 feet for computed delivery or 3,000 feet for manual delivery. Number of rounds per event is 100. Hit Criteria: five acoustically scored impacts or independently observed impacts (suitable target) on any pass.

5.5.1.3. **Two-Target Strafe (TTS).** Planned dive angle of 15 degrees or less. Foul line is 2,000 feet. Minimum recovery altitude is 75 feet AGL. Number of rounds per event is 150. Hit Criteria: four separate impacts out of a maximum of six total attempts (three long and three short) on two targets. Impacts may be acoustically scored or independently observed (suitable targets).

5.5.1.4. **High Angle Strafe (HAS).** Planned dive angle of greater than 15 degrees. Minimum recovery altitudes are 1,000 feet AGL for planned dive angles 30 degrees or less and 1,500 feet AGL for planned dive angles above 30 degrees. Number of rounds per event is 100. Hit Criteria: acoustically scored or independently observed impact on a point target, or bullet dispersion within 75 feet of any target.

5.5.2. **Unguided Munitions Events.**

5.5.2.1. **Visual Level Delivery (VLD).** Planned level delivery with actual parameters at release of less than five degrees climb or dive. Minimum recovery altitude on final is safe escape/fuze arm for ordnance being delivered/simulated, range/target area restrictions, or 200 feet, whichever is higher. Run in altitude prior to final or pull up point will be no lower than the pilot's LASDT category. Hit Criteria: 125 feet (38 meters) for computed delivery and 250 feet (76 meters) for manual delivery.

5.5.2.2. **Low Angle High Drag (LAHD).** Planned dive angle of less than 30 degrees for a high drag or CBU weapon. Minimum recovery altitude is safe escape/fuze arm for ordnance being simulated/delivered, one-half the computed altitude loss during dive recovery, or 100 feet AGL (300 feet on a Class B/C range or over water), whichever is higher. Hit Criteria: 75 feet (23 meters) for computed delivery and 105 feet (32 meters) for manual delivery.

5.5.2.3. **Low Angle Low Drag (LALD).** Planned dive angle of less than 30 degrees for a low drag weapon. Minimum recovery altitude is safe escape/fuze arm for ordnance being simulated/delivered or 800 feet AGL, whichever is higher. Hit Criteria: 100 feet (31 meters) for computed delivery and 175 feet (53 meters) for manual delivery.

5.5.2.4. **Dive Bomb (DB).** Planned dive angle of 30 degrees or greater. Minimum recovery altitude is safe escape/fuze arm (as appropriate) for ordnance being simulated/delivered or as required to recover above 1,000 feet AGL, whichever is higher. Hit Criteria: 85 feet (26 meters) for computed delivery and 145 feet (44 meters) for manual delivery.

5.5.2.5. **High Altitude Dive Bomb (HADB).** Planned dive angle of 30 degrees or greater. Minimum recovery altitude is 4,500 feet AGL. Hit Criteria: 125 feet (38 meters) for computed delivery and 250 feet (76 meters) for manual delivery.

5.5.2.6. **High Altitude Release Bomb (HARB).** Planned dive angle of 30 degrees or greater. Minimum recovery altitude is 10,000 feet AGL. Hit Criteria: 255 feet (78 meters) for computed delivery and 510 feet (136 meters) for manual delivery.

5.5.2.7. **Toss (Dive or Level) System Delivery.** Event category in which an aircraft system is used for target designation followed by a diving or level Continuously Computed Release Point (CCRP) weapon release. Specific events and criteria are as follows:

5.5.2.7.1. **Low Altitude Toss (LAT).** Release altitude is below 10,000 feet AGL. Minimum recovery is safe escape for the ordnance being simulated/delivered. Hit Criteria: 175 feet (53 meters).

5.5.2.7.2. **Medium Altitude Toss (MAT).** Release altitude is 10,000 feet AGL or higher. Minimum recovery is safe escape for the ordnance being simulated/delivered. Hit Criteria: 300 feet (91 meters).

5.5.3. Precision Guided Munitions Events.

5.5.3.1. **Maverick (AGM/TGM-65).** An event initiated from a level, diving, or pop-up maneuver to achieve line-of-sight to the target(s), followed by acquisition, missile lock-on and launch (or two seconds stable lock-on in "no-launch" conditions), followed by a tactical escape maneuver. Hit Criteria: either actual AGM target impact or valid, recorded TGM simulated weapon release within launch parameters with stabilized target tracking.

5.5.3.2. **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.

5.5.3.3. **Inertially Aided Munition (IAM).** An event in which an aircraft system is used to determine release parameters for Joint Direct Attack Munition (JDAM) and Wind Corrected Munitions Dispenser (WCMD) weapons. Delivery of ordnance, actual or training, is not required. Minimum recovery is safe escape for the ordnance being simulated/delivered. Hit criteria: IAW AFTTP 3-1.

5.5.4. **Rocket Events.** Hit criteria applies only to controlled deliveries against a point target intended for direct attack. Impromptu FAC(A) target marking is validated by the timeliness and effectiveness for fighters to locate a target based on rocket placement.

5.5.4.1. **Low Angle Rocket (LAR).** Planned dive angle of 15 degrees or less. Minimum slant range is 4,000 feet. Minimum recovery altitude is 100 feet AGL. Hit Criteria: 75 feet (23 meters) for computed delivery and 100 feet (30 meters) for manual delivery.

5.5.4.2. **High Angle Rocket (HAR).** Planned dive angle of greater than 15 degrees. Minimum recovery altitude is 1,000 feet AGL. Hit Criteria: 75 feet (23 meters) for computed delivery and 100 feet (30 meters) for manual delivery

5.5.4.3. **Low Altitude Tactical Rocket (LATR).** Planned dive angle of 20 degrees or less. Tactical delivery with a slant range at release of 10,000 feet or greater from the target. Minimum recovery altitude 1,000 feet AGL. Hit Criteria: 500 feet (152 meters) for computed delivery and 1,000 feet (300 meters) for manual delivery.

5.5.4.4. **High Altitude Tactical Rocket (HATR).** Tactical delivery with a slant range at release of 10,000 feet or greater from the target. Minimum recovery altitude is 4,500 feet AGL. Hit Criteria: 250 feet (76 meters) for computed delivery and 500 feet (152 meters) for manual delivery.

5.5.4.5. **High Altitude Release Rocket (HARR).** Minimum recovery altitude is 10,000 feet AGL. Hit Criteria: 500 feet (152 meters) for computed delivery and 1,000 feet (300 meters) for manual delivery.

5.5.4.6. **Loft Rocket (LR).** Planned release angle of level to 45 degrees of climb. Tactical delivery with a slant range at release of 10,000 feet or greater from the target. Hit Criteria: 1,650 feet (500 meters).

5.5.5. **Air-to-Air Weapons Events (AIM-9 and Gun).** Hit criteria: IAW AFTTP 3-1 shot criteria, determined by mission tape review or actual delivery.

5.6. Full Scale/Live Ordnance. Full Scale Weapons Delivery (FSWD) and live ordnance training is essential to pilot combat capability. Each pilot will be given the opportunity to deliver/employ as many types of weapons inventoried on the UCML as possible. Delivery of live or inert ordnance representing a typical combat configuration in a tactical scenario qualifies as a FSWD event. Only one event may be logged per sortie. To provide this opportunity, pilots will expend full scale/live ordnance IAW the FSWD requirement specified by the RAP Tasking memo (AFI 36-2217).

Chapter 6

SPECIALIZED TRAINING

6.1. General. This chapter outlines pilot upgrade training programs for special capabilities and qualifications. Units will develop and maintain local specialized training programs based on these guidelines. SQ/CCs may tailor programs for individual UPs based on previous experience, qualifications, and documented performance.

6.2. Flight Lead Upgrade (FLUG). This program establishes the minimum guidelines for those pilots identified by the SQ/CC for FLUG training.

6.2.1. Initial FLUG entry is as a 2-ship/element FL until experience and proficiency warrant further progression. Responsibilities for leading a formation will not exceed an element of two aircraft until certified as a 4-ship FL. The SQ/CC will determine when a 2-ship FL may train to lead larger, more complex formations (4-ship, multi-ship, multi-flight package, mission commander, etc.).

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

6.2.3. The following minimum flying hours are required prior to FLUG entry:

6.2.3.1. 300 hours A/OA-10 PAI, or

6.2.3.2. 400 hours FP/MP/IP in an AFSC of 11Fxx, 11K3C, or 11K3D, of which 200 hours are A/OA-10 PAI, or

6.2.3.3. 50 hours A/OA-10 PAI, if previously qualified as an 11Fxx FL (or other US/foreign military equivalent).

6.2.3.4. ANG: For converting units, OG/CCs may select prior FL-qualified pilots to upgrade to FL concurrent with MQT regardless of PAI hours.

6.2.4. FLUG Ground Training. Units will develop local training in the following areas:

6.2.4.1. FL responsibilities. Wingman relationship, unit training objectives, and responsibilities to SQ/CC. Review of appropriate Joint/MAJCOM Instructions, Air Force Instructions, and local guidance.

6.2.4.2. Mission preparation. Wingman requirements and responsibilities, currencies, proficiencies, capabilities, delegation of mission planning duties, developing appropriate mission objectives, and briefing preparation.

6.2.4.3. Conduct of flight briefings and debriefings. Mission objectives, use of briefing guides and audiovisual aids, wingmen involvement, briefing techniques, debriefing/questioning techniques, mission tape review responsibilities and procedures.

6.2.4.4. Conduct of missions. Leadership and control of flight, flight discipline, EPs, and TRs.

6.2.4.5. Practice briefing(s). Administrative items, mission tasks, and contingencies.

6.2.4.6. **FLUG Simulator Training.** Units will incorporate FMT profiles into FLUG to the maximum extent practical, depending on simulator capabilities and availability. The intent is to ensure UPs thoroughly prepare for in-flight training, capitalize on valuable flight time, and provide training not available in the aircraft. SQ/CCs will review each FLUG for trends and common errors, and include appropriate training events in FLUG FMT profiles to avoid recurrence.

6.2.5. FLUG Flight Training.

6.2.5.1. 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:

6.2.5.1.1. All FLUG training will be under the direct supervision of an IP or FL-qualified squadron supervisor.

6.2.5.1.2. A dedicated FL certification mission is required and will be flown with the SQ/CC or designated representative.

6.2.5.1.3. Required FLUG missions/events. 2-ship: BFM, BSA, SAT, LATF, HATF, DAR, NAR, instrument trail departure, and two formation takeoffs/landings. 4-ship: ACM, BSA, SAT, LATF, HATF, and instrument trail departure.

6.2.5.1.4. Unaccomplished tasks. Scheduled training events unaccomplished need not delay certification. The SQ/CC may certify the FL with appropriate restrictions based on unaccomplished training (e.g., NAR). The FL is restricted from leading unaccomplished events until that task is successfully completed in FLUG status.

6.2.5.1.5. FLUG missions and events may be flown in any order, provided day training precedes night and 2-ship training precedes larger formations.

6.2.5.1.6. Schedule dissimilar and support assets to the maximum extent practical during FLUG ACM and CAS training.

6.2.5.2. FLUG Missions.

6.2.5.2.1. **FLUG-1.** 2-ship BFM. Mission Objectives: Introduce leading and controlling a 2-ship on a BFM mission. Specific Mission Tasks: Briefing, formation takeoff, basic formation, HATF, DAR, weapons system checks, BFM warm-up exercises, offensive and defensive BFM perch setups, formation landing, mission reconstruction and debriefing, mission tape review/assessment.

6.2.5.2.2. **FLUG-2.** 2-ship BSA. Mission Objectives: Practice leading and controlling a 2-ship on a controlled range. Specific Mission Tasks: Briefing, instrument trail departure, LATF, controlled range procedures, conventional WD, hung ordnance recovery, flight split-up, mission reconstruction and debriefing, mission tape review/assessment.

6.2.5.2.3. **FLUG-3.** 2-ship Medium Altitude SAT/CAS. Mission Objectives: Practice leading and controlling a 2-ship on a tactical range. Specific Mission Tasks: Briefing, tactical departure, HATF/LATF, tactical ingress/egress, medium altitude target area tactics and WD, Maverick, CAS employment with JTAC and/or FAC(A), tactical recovery/initial, debriefing and mission tape review/assessment.

6.2.5.2.4. **FLUG-4.** 2-ship Low Altitude SAT/CAS. Mission Objective: Practice leading and controlling a 2-ship on a tactical range (or MOA). Specific Mission Tasks: Briefing, formation

takeoff, LATF, tactical ingress/egress, low altitude target area tactics, Maverick, comm jam procedures, threat reactions to air and surface threats, formation landing, debriefing and mission tape review/assessment.

6.2.5.2.5. **FLUG-5.** 2-ship NSA/NSAT. Mission Objectives: Practice leading and controlling a 2-ship on a controlled and/or tactical range at night. SAT takes priority over SA if limited by range availability. Specific Mission Tasks: Briefing, trail departure, join-up, NAR, night range operations, night WD, ingress/egress, night target area tactics, formation instrument approach, flight split-up, debriefing and mission tape review/assessment.

6.2.5.2.6. **FLUG-6.** Element Lead BSA/SAT. Mission Objectives: Practice leading an element of a 4-ship on a controlled and/or tactical range. SAT takes priority over SA if limited by range availability. Specific Missions Tasks: Trail departure, range operations, WD, ingress/egress, 4-ship SAT, coordinated 2-ship SAT, simulated live free fall ordnance deliveries, comm jam procedures, battle damage assessment, in-flight reports, tactical recovery/initial, mission tape review/assessment.

6.2.5.2.7. **FLUG-7.** SQ/CC 2-ship FL Certification. Mission Objectives: Evaluate 2-ship flight leadership in a tactical mission scenario. Specific Mission Tasks: Briefing, mission accomplishment, flight management and control, mission reconstruction, assessment, and critique.

6.2.5.2.8. **FLUG-8.** 4-ship BSA. Mission Objectives: Introduce leading and controlling a 4-ship to a controlled range. Specific Mission Tasks: Briefing, formation takeoff, LATF, controlled range procedures, WD, flight split-up, mission reconstruction and debriefing, mission tape review/assessment.

6.2.5.2.9. **FLUG-9.** 4-ship (D)ACM. Mission Objectives: Practice leading and controlling a 4-ship (2v1+1 and/or 4v1-dissimilar) mission. Specific Mission Tasks: Briefing, instrument trail departure, HATF, weapons system checks, (D)ACM, mission reconstruction and debriefing, mission tape review/assessment.

6.2.5.2.10. **FLUG-10.** 4-ship SAT/CAS. Mission Objectives: Practice leading and controlling a 4-ship tactics mission. Specific Mission Tasks: Briefing, tactical departure, LATF, threat reactions to air and surface threats, tactical ingress/egress, 4-ship SAT, coordinated/element attacks, CAS employment with JTAC and/or FAC(A), tactical recovery/initial, mission reconstruction and debriefing, mission tape review/assessment.

6.2.5.2.11. **FLUG-11.** SQ/CC 4-ship FL Certification. Mission Objectives: Evaluate 4-ship flight leadership in a tactical mission scenario. Specific Mission Tasks: Briefing, mission accomplishment, flight management and control, mission reconstruction, assessment, and critique.

6.2.5.2.12. **FLUG-(SC).** Special Capabilities. Mission Objectives: Provide follow-on FL certification in special capabilities. Specific Mission Tasks: Reference the appropriate paragraph for special training requirements. For any new capabilities not yet addressed in this chapter, the UP will lead mission tasks representative of the approved upgrade program to attain FL certification in that capability.

6.3. 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.

6.3.1. 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 (JMTL) for a FAC(A) to attain certification and maintain qualification/currency. Following the upgrade, FAC(A)s will be capable of performing Type I, II, and III 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.

6.3.2. 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.).

6.3.3. The following minimum flying hours are required prior to FAC(A) upgrade entry:

6.3.3.1. 200 hours A/OA-10 PAI, or

6.3.3.2. 50 hours A/OA-10 PAI, if previously qualified as a FAC(A) in any aircraft.

6.3.4. **FAC(A) Ground Training.** Prior to beginning local FAC(A) flying training, UPs will successfully complete formal FAC(A) academics at an accredited school. The FAC(A) Joint Firepower Course (FACJFC) at the Air Force Air Ground Operations School (AGOS) is the primary formal course, unless specified otherwise by MAJCOM/A3. 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:

6.3.4.1. FAC(A) academics and JMTL review. Terminal attack control (Type I, II, and III), 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,

6.3.4.2. 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.

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

6.3.4.4. 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.

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

6.3.4.6. **FAC(A) Simulator Training.** Units will incorporate FMT profiles into FAC(A) training to the maximum extent practical, depending on simulator capabilities and availability. The intent is to ensure UPs thoroughly prepare for in-flight training, capitalize on valuable flight time, and provide training not available in the aircraft. SQ/CCs will review each FAC(A) upgrade for trends and common errors, and include appropriate training events in FMT profiles to avoid recurrence.

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

6.3.5.1. 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:

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

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

6.3.5.1.3. Required FAC(A) upgrade missions/events. Medium altitude ASC, Low altitude ASC, Night ASC (NASC), VR, 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).

6.3.5.1.4. 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.

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

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

6.3.5.2. **FAC(A) Missions.**

6.3.5.2.1. **ASC-1.** BSA. Mission Objectives: Introduce/demonstrate basic FAC(A) principles and practice WD on a controlled range. Specific Mission Tasks: Briefing, LATN, 1:250/50 VR, observation positions, target talk-on techniques, JTAC considerations, 9-line briefings, fighter control concepts, Maverick search, AR, controlled range procedures, conventional WD, basic and tactical rockets, hung ordnance recovery, mission reconstruction and debriefing, mission tape review/assessment. **NOTE:** For pre-FLUG UPs, this mission will introduce many single-ship operations new to wingmen.

6.3.5.2.2. **ASC-2.** Medium Altitude ASC. Mission Objectives: Introduce ASC techniques and procedures at medium altitude. Specific Mission Tasks: FAC-to-fighter briefing, VFR departure, LATN, TACS coordination, weapons systems checks, tactical ingress/egress, fighter rendezvous, medium altitude ASC, target plotting and marking, employment with a JTAC, Type I controls, encoding and decoding coordinates, BDA, threat reactions, countermeasures, in-flight reports, debriefing and mission tape review/assessment. **NOTE:** Either the fighters or JTAC may be simulated.

6.3.5.2.3. **ASC-3.** Medium Altitude ASC. Mission Objectives: Practice medium altitude ASC and introduce TIC, artillery, and comm jam procedures. Specific Mission Tasks: FAC-to-fighter briefing, tactical departure, DAR, TACS coordination, weapons systems checks, tactical ingress/egress, fighter rendezvous, medium altitude ASC, Type II control, TIC, CFF, artillery deconfliction, BDA, comm jam procedures, immediate combat rescue familiarization, in-flight reports, tactical recovery/initial, debriefing and mission tape review/assessment.

6.3.5.2.4. **ASC-4.** Low Altitude ASC. Mission Objective: Introduce ASC at low altitude. Specific Mission Tasks: FAC-to-fighter briefing, LATN, TACS coordination, weapons systems

checks, FAC(A) handoff coordination, tactical ingress/egress, fighter rendezvous, low altitude ASC with a JTAC, Type III control, airspace deconfliction, BDA, threat reactions, countermeasures, comm jam and radio relay procedures, in-flight reports, debriefing and mission tape review/assessment.

6.3.5.2.5. **ASC-5.** NSA/NASC. Mission Objectives: Practice night WD and introduce ASC at night. NASC takes priority over NSA if limited by range availability. Specific Mission Tasks: Night medium altitude navigation, NAR, weapons systems checks, night WD, basic illumination flare employment, ingress/egress, target plotting and marking, tactical flare employment, Maverick search, aircraft deconfliction, night ASC, BDA, debriefing and mission tape review/assessment.

6.3.5.2.6. **ASC-6.** FAC(A) Certification. Mission Objectives: Evaluate ASC performance in a tactical mission scenario. Specific Mission Tasks: FAC-to-fighter briefing, mission accomplishment, fighter control, airspace management, mission reconstruction, assessment, and critique.

6.4. Instructor Pilot Upgrade (IPUG). This program establishes the minimum guidelines for those highly experienced pilots identified by the SQ/CC for IPUG. OG/CCs may waive selected missions based on previous experience of the Upgrading IP (UIP). UIPs at an FTU will complete the formal syllabus IPUG course.

6.4.1. Pilots selected for IPUG must be a 4-Ship FL with either:

6.4.1.1. 1000 FP/MP/IP hours time of which 300 hours are A/OA-10 PAI, or

6.4.1.2. 700 FP/MP/IP hours in a 11Fxx AFSC of which 100 hours are A/OA-10 PAI, or

6.4.1.3. 600 FP/MP/IP hours in an 11Fxx AFSC of which 200 hours are A/OA-10 PAI, or

6.4.1.4. 500 FP/MP/IP hours in an 11Fxx AFSC of which 300 hours are A/OA-10 PAI.

6.4.1.5. ANG: For converting units, pilots may be designated by the OG/CC for IPUG regardless of time in the new PAA if they have at least 1,000 hours FP/MP/IP in a fighter AFSC and the IPUG will be conducted in a formal course at FTU.

6.4.2. **IPUG Ground Training.** UIPs must satisfactorily complete the following unit-developed blocks of instruction prior to IP qualification.

6.4.2.1. Principles of instruction. Learning objectives, training facilities and publications, IP/UP relationship, instructing versus evaluating, and responsibility for UP progression.

6.4.2.2. Techniques of instruction. Training objectives, UP interaction, learning environment and IP demeanor, maneuver demonstration, performance assessment, recognition and analysis of common errors, in-flight corrections and assistance, immediate IP correction versus allowing UP to recognize/correct errors, post-flight review and instruction, and setting objectives for follow-on missions.

6.4.2.3. Conduct of flight briefings. Mission objectives, adherence to training requirements, order of presentation, use of briefing guides and audiovisual aids, and debriefing techniques.

6.4.2.4. Conduct of phase briefings. Review of applicable phase briefings, use of visual aids, review of flying and grading standards, common UP errors, and flight preparation techniques.

6.4.2.5. UP grading. Performance objectives, training standards, grading systems, determining unsatisfactory performance, and grade sheet completion.

6.4.2.6. Practice briefing(s). Administrative items and instruction of mission events.

6.4.2.7. **IPUG Simulator Training.** Units will incorporate FMT profiles into IPUG to the maximum extent practical, depending on simulator capabilities and availability. The intent is to ensure UIPs thoroughly prepare for in-flight training, capitalize on valuable flight time, and provide training not available in the aircraft. SQ/CCs will review each IPUG for trends and common errors, and include appropriate training events in IPUG FMT profiles to avoid recurrence.

6.4.3. **IPUG Flight Training.**

6.4.3.1. Units will conduct training based on the mission outlines listed below. With OG/CC-approval, the SQ/CC may tailor IPUG programs for UIPs with previous fighter IP experience, based on currency, experience, and documented performance. The SQ/CC will ensure the following guidelines are met:

6.4.3.1.1. IPUG training will be under the supervision of an experienced IP, SQ/CC/DO, or OG/CC/CD.

6.4.3.1.2. A dedicated IP flight evaluation is required and will be flown with an FE IAW AFI 11-202V2 (AFI 11-2A/OA-10V2) and local Stan/Eval criteria. The SQ/CC will certify the new IP's status, including any restrictions, in appropriate written format (grade sheet, training folder, Letter of Xs, etc.).

6.4.3.1.3. Unaccomplished tasks. Scheduled training events unaccomplished need not delay IP qualification. The IP is restricted from instructing unaccomplished events until that task is successfully completed in an IPUG status.

6.4.3.1.4. IPUG missions may be flown in any order, as aircraft configuration and scheduling dictate. Maintain a building-block approach to the maximum extent practical.

6.4.3.1.5. UIPs must be current and qualified in all planned IPUG events. UIPs who are not FAC(A)-certified will not fly the IPUG ASC missions.

6.4.3.1.6. IPUG training objectives will be based on instruction of MQT, CT, and specialized training. Mission scenarios will reflect typical unit training missions/events and the simulation of common UP errors.

6.4.3.1.7. Method of instruction. UIPs will practice assessing performance, immediately recognizing errors, and providing timely in-flight corrections. UIPs may also instruct mission tasks through maneuver demonstration as specified in the IPUG flight profile. Briefings will cover guidelines for in-scenario/out-of-scenario instruction, and methods for pausing and/or resuming the scenario, as appropriate.

6.4.3.2. **IPUG Missions.**

6.4.3.2.1. **IPUG-1.** Transition (TR). Mission Objectives: Introduce instructing TR, AHC, and instrument procedures. Specific Mission Tasks: Briefing, UIP-chased takeoff, join-up, AR, basic and tactical formation, pitchouts and rejoins, confidence maneuver, aerobatics, AHC, instrument approaches, emergency patterns, and straight in.

6.4.3.2.2. **IPUG-2.** BFM. Mission Objectives: Introduce instructing offensive and defensive BFM. Specific Mission Tasks: Briefing, formation takeoff, enroute formations, weapons system checks, offensive and defensive BFM, recovery, UIP-chased traffic patterns.

6.4.3.2.3. **IPUG-3.** BSA. Mission Objectives: Introduce instructing WD on a controlled range. Specific Mission Tasks: Briefing, LATN, LATF, HATF, basic and tactical WD, basic Maverick, UIP-chased WD, UIP-chased traffic patterns.

6.4.3.2.4. **IPUG-4.** Medium Altitude SAT. Mission Objectives: Introduce instructing medium altitude SAT. Specific Mission Tasks: Briefing, LATN, HATF, tactical ingress/egress, medium altitude WD, tactical Maverick, threat avoidance/reactions, tactical recovery/initial.

6.4.3.2.5. **IPUG-5.** Low Altitude SAT. Mission Objectives: Introduce instructing low altitude SAT and practice instructing previous mission tasks. Specific Mission Tasks: Briefing, LATN, LATF, HATF, tactical ingress/egress, low altitude WD, tactical Maverick, threat avoidance/reactions.

6.4.3.2.6. **IPUG-6.** Medium Altitude ASC. Mission Objectives: Introduce instructing medium altitude ASC. Specific Mission Tasks: Briefing, FAC-to-fighter briefing demo, TACS coordination, tactical ingress/egress, fighter rendezvous, medium altitude ASC, TIC and artillery deconfliction, threat reactions, comm jam procedures. UIP will simulate TACS, fighters, JTACs, threats, and comm jamming as required.

6.4.3.2.7. **IPUG-7.** Low Altitude ASC. Mission Objectives: Introduce instructing low altitude ASC. Specific Mission Tasks: Briefing, LATN, TACS coordination, tactical ingress/egress, fighter rendezvous, low altitude ASC, airspace deconfliction, threat reactions, comm jam and radio relay procedures. UIP will simulate TACS, fighters, JTACs, threats, and comm jamming as required.

6.4.3.2.8. **IPUG-8.** Night TR/NSA. Mission Objectives: Introduce instructing night TR and NSA. Specific Mission Tasks: Briefing, trail departure, join-up, night formation, NAR, night WD, rejoin, formation approach, UIP-chased straight in.

6.4.3.2.9. **IPUG-9.** NSAT. Mission Objectives: Introduce instructing NSAT. Specific Mission Tasks: Briefing, route/threat planning, medium altitude ingress, night tactical WD, night target area deconfliction, threat reactions, and mutual support.

6.4.3.2.10. **IPUG-10.** IP Qualification Flight Evaluation. Mission Objectives: Evaluate UIP proficiency in a typical training mission. Specific Mission Tasks: Briefing instruction, mission accomplishment, flight management and control, in-flight decision making, mission reconstruction, assessment, and critique. This mission will be flown IAW AFI 11-202V2 (AFI 11-2A/OA-10V2) and local Stan/Eval criteria on a mission representing the unit's primary mission tasking.

6.4.3.2.11. **IPUG-(SC).** Special Capabilities. Mission Objectives: Provide follow-on IP certification in special capabilities. Specific Mission Tasks: Reference the appropriate paragraph for special training requirements. For any new capabilities not yet addressed in this chapter, the UIP will instruct mission tasks representative of the approved upgrade program to attain IP certification in that capability.

6.5. Mission Commander (MCC) Upgrade. This program establishes the minimum guidelines for those pilots identified by the SQ/CC for MCC upgrade training.

6.5.1. SQ/CCs will consider ability, judgment, technical expertise, skill, and experience when selecting pilots for MCC upgrade. Minimum qualifications are 4-ship FL.

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

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

6.5.4. **MCC Ground Training.** Units will develop local training in the following areas:

6.5.4.1. 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.

6.5.4.2. Review AFTTP 3-1 volumes for specific MCC checklists and considerations.

6.5.4.3. **MCC Simulator Training.** Units will incorporate FMT profiles into MCC training to the maximum extent practical, depending on simulator capabilities and availability. The intent is to ensure UPs thoroughly prepare for in-flight training, capitalize on valuable flight time, and provide training not available in the aircraft. SQ/CCs will review each MCC upgrade for trends and common errors, and include appropriate training events in MCC FMT profiles to avoid recurrence.

6.5.5. **MCC Flight Training.** As a minimum, the upgrading MCC will observe a certified MCC during the planning, briefing, flight, and debriefing of at least one composite force mission. Prior to certification, the upgrading MCC will then plan, brief, fly, and debrief a minimum of one mission under the supervision of an MCC-qualified IP/supervisor. Unit tasking should drive force composition, adversaries, and minimum flight size. The MCC will determine overall upgrade mission effectiveness in case of fallout.

6.6. Night Vision Goggle (NVG) Takeoff and Landing (T/L) Upgrade. This program establishes the minimum guidelines for those pilots identified by the SQ/CC for NVG T/L upgrade training.

6.6.1. SQ/CCs will consider ability, judgment, technical expertise, skill, and experience when selecting pilots for NVG T/L upgrade.

6.6.2. Prior to NVG T/L certification, the SQ/CC will review the UP's performance and completion of upgrade requirements. The SQ/CC will certify the pilot's NVG T/L status, including any restrictions, in appropriate written format (grade sheet, training folder, Letter of Xs, etc.).

6.6.3. **NVG T/L Ground Training.** Units will use formally produced academics and will develop local training in the following areas:

6.6.3.1. Publications Review. AFI 11-2A/OA-10V3, AFTTP 3-1.3/3-3.3, applicable test and evaluation reports (awaiting incorporation), and local operating procedures.

6.6.3.2. Mission Planning Considerations. Airfield and runway approach lighting configurations, non-standard ground operations, lights-out taxi procedures, moon illumination, sky glow impacts, cultural lighting, alternate recovery plan, immediate reaction to malfunctions.

6.6.3.3. Techniques and Procedures. Takeoff rotation and climbout, visual scan techniques, steer-point selection, glide path discipline, VVI reference, transition to visual references, setting altitude alerts, ground rush and flare anomalies.

6.6.4. NVG T/L Flight Training.

6.6.4.1. All NVG T/L upgrade training will be under the supervision of a certified IP/supervisor. Unless specified otherwise, the supervisor will fly chase or other deconflicted position to properly assess UP performance.

6.6.4.2. Minimum weather requirements for the NVG T/L upgrade mission is 3000/5.

6.6.4.3. Airfield lighting. Units will conduct NVG T/L training at airfields with reduced or covert lighting whenever practical. Although not required for effective training, this provides enhanced awareness of actual combat operations at a Forward Operating Location (FOL). In order to replicate FOL conditions, pilots should accomplish NVG approaches to blacked-out aerodromes equipped with the Airfield Marking Pattern (AMP)-3 or similar covert lighting. Units may accomplish NVG T/L training at airfields with normal aerodrome lighting if resources are not available to replicate FOL operations. To minimize training impacts, pilots must maintain awareness of any overt lighting near the runway and will request approach lighting be reduced or turned off as required.

6.6.4.4. Aircraft lighting procedures. Units will install IR covers on the aircraft taxi lights to accomplish training at airfields with covert/AMP lighting. At airfields with normal lighting, pilots may use landing and/or taxi lights without the IR cover installed. Pilots will exercise extreme caution during ground operations with reduced aircraft lighting.

6.6.4.5. **NVG T/L Mission.** Mission Objectives: Introduce NVG T/L operations. Specific Mission Tasks: NVG ground operations, taxi with reduced lighting, airfield lighting awareness, NVG takeoff, departure, planned mission accomplishment, two NVG approaches to low approach and climbout, runway approach lighting variations, NVG approach and landing.

6.7. Targeting Pod (TGP) Upgrade. This program establishes the minimum guidelines for those pilots identified by the SQ/CC for TGP upgrade training.

6.7.1. SQ/CCs will consider ability, judgment, technical expertise, skill, and experience when selecting pilots for TGP upgrade.

6.7.2. Prior to TGP certification, the SQ/CC will review the UP's performance and completion of upgrade requirements. The SQ/CC will certify the pilot's TGP status, including any restrictions, in appropriate written format (grade sheet, training folder, Letter of Xs, etc.).

6.7.3. Additional Certifications. At the discretion of the SQ/CC, FLs will lead a TGP mission with a certified IP/supervisor to certify as a TGP FL. IPs will fly 10 total TGP missions prior to certification as a TGP IP.

6.7.4. TGP Ground Training. Units will develop local training in the following areas:

6.7.4.1. TGP capabilities. Optical and IR capabilities and limitations, spectrum, slew rates, magnification, atmospheric effects, aircraft masking, pre-flight, power-up, shutdown, basic switchology procedures, modes of operation, and safety issues.

6.7.4.2. TGP-assisted WD. USAF directives for laser/IR pointer usage, directives for laser/IR pointer usage on local ranges, self-lasing and buddy-lasing techniques, and LGB deliveries.

6.7.4.3. Battlefield awareness. Video Down/Data Link (VDL) procedures, interoperability with ROVER ground stations, Non-traditional ISR (NT-ISR) collection,

6.7.4.4. Mission preparation. Mission objectives, currencies, proficiencies, capabilities, review of appropriate Joint/MAJCOM Instructions, Air Force Instructions, and local guidance.

6.7.4.5. **TGP Simulator Training.** Units will incorporate FMT profiles into TGP training to the maximum extent practical, depending on simulator capabilities and availability. The intent is to ensure UPs thoroughly prepare for in-flight training, capitalize on valuable flight time, and provide training not available in the aircraft. SQ/CCs will review each TGP upgrade for trends and common errors, and include appropriate training events in TGP FMT profiles to avoid recurrence.

6.7.4.5.1. **TGP FMT-1.** Mission Objectives: Introduce TGP operations and the Pilot-Vehicle Interface (PVI). Specific Mission Tasks: TGP pre-flight and post-flight procedures, ground operations, tune and focus procedures, PVI switchology and menu navigation, modes of operation, medium altitude search techniques, TGP-assisted medium altitude weapons delivery (non-LGB), self-lase WD, fault analysis and corrective actions, and unusual attitude recovery.

6.7.4.5.2. **TGP FMT-2.** Mission Objectives: Practice TGP operations and PVI, introduce VDL and night operations with NVGs. Specific Mission Tasks: Ground operations, target area search from known coordinates, coordinate generation, verbal talk-on from known start-point, visual ID offset mark, target marking, target PID, multi-target cueing, obtaining coordinates/elevation, TGP mask demo, self-lase and buddy-lase LGB deliveries, laser spot search/track, VDL with simulated ROVER ground station, tactical deconfliction procedures, and TGP operations at night with NVGs.

6.7.5. TGP Flight Training.

6.7.5.1. Supervision will be a TGP-qualified IP/supervisor. For ROVER downlink certification, pilots must complete two downlink events with a ROVER-certified IP/supervisor. For units without a ROVER-certified IP/supervisor, the SQ/CC may designate an IP who will supervise the initial cadre training. Direct connectivity with compatible ground equipment is required.

6.7.5.2. TGP missions may be flown in any order, as aircraft configuration and scheduling dictate. Maintain a building-block approach to the maximum extent practical. TGP-4 may be flown day or night, at SQ/CC discretion based on expected unit tasking or training focus.

6.7.5.3. Weapons Delivery. Accomplish actual WD, including an actual LGB delivery, to the maximum extent possible.

6.7.5.4. The Combat Laser will only be used on approved ranges after completing the required scheduling procedures. The training laser or IR marker will be used in other airspace or as directed by the range. The IR marker will be used IAW ACC Laser Command Pointer/Laser Eye Protection Guidance.

6.7.5.5. Minimum Altitude. 5,000' AGL during TGP operations. **EXCEPTION:** self-lase HAS with base altitude above 5,000' and recovery altitude IAW AFI 11-214 minimums.

6.7.5.6. TGP Missions.

6.7.5.6.1. **TGP-1.** Mission Objectives: Introduce TGP operations. Specific Mission Tasks: preflight/ground operations, tune and focus, weapons systems checks, medium altitude ingress, target area search from known coordinates, verbal talk-on from known start-point, visual ID offset mark, target marking, target PID, multi-target cueing, obtaining coordinates/elevation, TGP mask demo, self-lase WD, and laser spot search/track.

6.7.5.6.2. **TGP-2.** Mission Objectives: Practice TGP operations, and introduce SAT with TGP and VDL. Specific Mission Tasks: Selected TGP-1 tasks, compare TGP and Maverick scene on same target, buddy-lase WD, TGP tactics in a CAS scenario, formation attacks, and VDL with data-linked ROVER ground station.

6.7.5.6.3. **TGP-3.** Night. Mission Objectives: Introduce night TGP operations. Specific Mission Tasks: Selected TGP-1/2 tasks, transition to instruments exercise, target area search, verbal talk-on with NVGs from known start-point, visual ID with NVGs from offset mark, and buddy-mark HAS/Maverick.

6.7.5.6.4. **TGP-4.** Day or night. Mission Objectives: Demonstrate proficiency in TGP operations and introduce/practice tactics. Specific Mission Tasks: Selected TGP tasks, urban/moving targets, NT-ISR collection, TGP operations at minimum altitude. **NOTE:** this mission provides flexibility for unit training plans to accommodate UP performance levels and emerging missions, capabilities, and tactics.

6.8. Low Altitude Step-Down Training (LASDT), CAT II/III Upgrade. This program establishes the minimum guidelines for those highly experienced pilots identified by the SQ/CC for further LASDT upgrade. OG/CCs will assess each unit's apportionment of LASDT CAT upgrades and certifications based on expected tasking and risk management.

6.8.1. SQ/CCs will consider ability, judgment, technical expertise, skill, and experience when selecting pilots for LASDT CAT II and CAT III upgrade. 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 a minimum altitude compatible with the squadron's mission.

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

6.8.3. LASDT training is built on a multi-phase training process IAW [Table 6.1](#). There are no time limits to upgrade beyond CAT I, and progress will be based upon individual pilot proficiency and training availability. LASDT progression to a higher category requires proficiency and currency in the preceding category. Supervision will be an IP/supervisor in the UP's element and certified in the LASDT category.

Table 6.1. LOWAT Categories.

CAT	Altitude Block	Upgrade Missions To Certify
I	1,000-500	1, 2, 3 (IQT/MQT)
II	500-300	4, 5, 6
III	300-100	7, 8, 9

6.8.4. LASDT CAT upgrades 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 training are met. LASDT CAT upgrades will not be accomplished as an alternate mission. IPs/FLs must be aware of the added stress and task loading associated with low altitude operations and plan training pauses above the LOWAT altitude. Develop training profiles to emphasize upgrade mission continuity and avoid over-tasking the UP.

6.8.5. Training rules will be IAW AFI 11-214 and AFI 11-2A/OA-10V3. During LASDT, any “Knock-It Off” (KIO) call will include a climb to above 1,000 feet AGL.

6.8.6. **LASDT Ground Training.** The following outline is applicable to all LASDT training. Coverage should support the mission and concept of operations of the squadron, incorporating appropriate portions of AFTTPs 3-1 and 3-3. All academic training will be completed prior to flight training/briefing.

6.8.6.1. Low Altitude AHC. Aircraft performance, density altitude, G-loading, power settings, level turns and bank angles, vertical maneuvering, climb/dive/slice, recoveries, terrain avoidance and ridge crossings, HUD use, overbanking during turns, and cross check of aircraft attitude relative to horizon.

6.8.6.2. Environmental Factors. Cockpit visibility and Field of View (FOV) restrictions, use of the HUD, sun angle, terrain, G-excess illusions/perceptions, weather considerations, air turbulence, jet wash, and bird strike.

6.8.6.3. Task Management. Low altitude tasks, task management and prioritization, factors influencing individual proficiency, route familiarity and complacency, and airmanship.

6.8.6.4. LATN/LATF. Dead Reckoning (DR), pilotage, EGI use/techniques, tactical formations, hazards at low altitudes, task prioritization, tactical turns, and visual lookout/mutual support.

6.8.6.5. Defensive Reactions. Visual lookout and mutual support, threat weapons systems envelopes, threat reactions, and flight member de-confliction.

6.8.6.6. Special Subjects. Training rules, weather route abort procedures, aircraft emergencies, and separation/disengagement considerations.

6.8.6.7. LOWAT Employment. Level engagements, fuel management, required turning room, maximum dive angle restrictions, weapons employment, visual lookout and intercepts, and TRs.

6.8.7. **LASDT Flying Training.** See paragraph 3.4.5. for LADST-1 through LASDT-3 profiles. The mission profiles listed below are organized in a building-block approach. SQ/CCs may combine and/or modify profiles as necessary, based on an individual UP’s experience.

6.8.7.1. **LASDT-4.** IP will chase UP. Mission Objectives: Introduce low altitude operations down to 300 feet AGL. Specific Mission Tasks: AGSM, low altitude AHC, overbank exercise, vertical

awareness exercise, climb/dive/slice maneuvers, nose low recoveries, altitude/attitude awareness, airspeed control, fuel management, LATN, DR, practice KIO, ridge crossings, terrain masking and maneuvering, visual lookout, simulated attack maneuvering, defensive reactions, and route abort procedures.

6.8.7.2. **LASDT-5.** Mission Objectives: Practice single-ship and introduce 2-ship/element low altitude formations down to 300 feet AGL. Specific Mission Tasks: LASDT-4 tasks, LATF, SAT scenario with free-fall and forward-firing ordnance.

6.8.7.3. **LASDT-6.** LASDT CAT II Certification. Mission Objectives: Demonstrate proficiency in low altitude operations down to 300 feet AGL. Specific Mission Tasks: Selected LASDT-4/5 tasks, chased maneuvering, LATF, SAT.

6.8.7.4. **LASDT-7.** IP will chase UP. Mission Objectives: Introduce low altitude operations down to 100 feet AGL. Specific Mission Tasks: AGSM, low altitude AHC, overbank exercise, vertical awareness exercise, climb/dive/slice maneuvers, nose low recoveries, altitude/attitude awareness, airspeed control, fuel management, LATN, DR, practice KIO, ridge crossings, terrain masking and maneuvering, visual lookout, simulated attack maneuvering, defensive reactions, and route abort procedures.

6.8.7.5. **LASDT-8.** Mission Objectives: Practice single-ship and introduce 2-ship/element low altitude formations down to 100 feet AGL. Specific Mission Tasks: LASDT-7 tasks, LATF, SAT scenario with free-fall and forward-firing ordnance.

6.8.7.6. **LASDT-9.** LASDT CAT III Certification. Mission Objectives: Demonstrate proficiency in low altitude operations down to 100 feet AGL. Specific Mission Tasks: Selected LASDT-7/8 tasks, chased maneuvering, LATF, SAT.

6.9. Combat Search and Rescue (CSAR) Upgrade. This program establishes the minimum guidelines for those pilots identified by the SQ/CC for CSAR upgrade training.

6.9.1. CSAR pilots train to support various types of operations for rescue of downed pilots in both peacetime and combat environments. This includes on-scene command, electronic and visual search, threat suppression, helicopter escort and protection, and communications relay. CSAR upgrade training is extremely demanding, and SQ/CCs will select only the most experienced pilots for CSAR upgrade training. FAC(A) experience is highly desired. Pilots retain CSAR certification with aircraft qualification.

6.9.2. Prior to certification at each of the four CSAR mission levels, designated Sandy 1 through Sandy 4, the SQ/CC will personally interview the UP and review CSAR responsibilities, scope of duties, authority, and philosophy. The SQ/CC will certify the new pilot's Sandy status, including any restrictions, in appropriate written format (grade sheet, training folder, Letter of Xs, etc.).

6.9.3. CSAR Ground Training.

6.9.3.1. CSAR Procedures. Command and control, CSAR ordnance, tactics and techniques.

6.9.3.2. Search Patterns and Procedures. Electronic and visual search, LARS, and Quickdraw.

6.9.3.3. Helicopter Escort. Rendezvous, escort, and hover cover.

6.9.3.4. ASC Procedures. Target identification, ordnance selection, pre-strike preparation, target marking, strike control procedures, and BDA.

6.9.3.5. **CSAR Simulator Training.** Units will incorporate FMT profiles into the CSAR upgrade to the maximum extent practical, depending on simulator capabilities and availability. The intent is to ensure UPs thoroughly prepare for in-flight training, capitalize on valuable flight time, and provide training not available in the aircraft. SQ/CCs will review each CSAR upgrade for trends and common errors, and include appropriate training events in CSAR FMT profiles to avoid recurrence.

6.9.4. CSAR Flight Training.

6.9.4.1. The mission profiles listed below are organized in a building-block approach. SQ/CCs will specify refresher training for previously qualified CSAR pilots, based on the pilot's experience and currency. The SQ/CC may modify profiles as necessary, but will ensure the following guidelines are met:

6.9.4.1.1. All CSAR upgrade training will be under the supervision of a Sandy 1-certified IP. IP demonstration of each mission event is preferred prior to UP accomplishment.

6.9.4.1.2. **Certification Levels.** Upon completion of CSAR-1, pilots may fly Rescue Escort (RESCORT) as a Sandy 4 wingman. CSAR-2 completion certifies pilots for Sandy 3 duties. CSAR-4 completion certifies pilots for Sandy 2 duties. CSAR-6 completion certifies FLs to lead CSAR missions as a Sandy 1. Either CSAR-5 or CSAR-6 will be planned and flown as a 4-ship for Sandy 1 pilots to lead multi-ship CSAR missions.

6.9.4.1.3. Required CSAR upgrade missions/events. Fly each mission with two to four aircraft. Helicopters are mandatory for CSAR-1, CSAR-2, and either CSAR-5 or CSAR-6. Actual on-ground personnel simulating survivor(s) are required on either CSAR-1 or CSAR-2 and either CSAR-5 or CSAR-6. SQ/CCs may waive CSAR-3 for certified FAC(A)s with appropriate experience.

6.9.4.1.4. Unaccomplished tasks. Scheduled training events unaccomplished need not delay certification. The SQ/CC may certify Sandy pilots with appropriate restrictions based on unaccomplished training. The Sandy pilot is restricted from performing unaccomplished events until that task is successfully completed in an upgrade status. CSAR mission requirements and mission tasks may be accomplished with part task training outside of a CSAR scenario.

6.9.4.2. CSAR Missions.

6.9.4.2.1. **CSAR-1.** Mission Objectives: Introduce Sandy 4 duties. Specific Mission Tasks: Search procedures, route reconnaissance, helicopter escort, and ground personnel marking demo.

6.9.4.2.2. **CSAR-2.** Mission Objectives: Introduce Sandy 3 duties. Specific Mission Tasks: Coordination procedures, lead helicopter RESCORT and route reconnaissance.

6.9.4.2.3. **CSAR-3.** Mission Objectives: Introduce Sandy ASC and suppression. Specific Mission Tasks: Sandy ASC, suppression strike control, search techniques, and coordination procedures. **NOTE:** Emphasis on this mission, which may be waived for certified FAC(A)s, will be placed on ASC procedures.

6.9.4.2.4. **CSAR-4.** Mission Objectives: Demonstrate proficiency in Sandy 2 duties. Specific Mission Tasks: Coordination procedures, control SAR assets as directed by Sandy 1, search techniques, strike control during suppression, and on-scene command if required.

6.9.4.2.5. **CSAR-5.** Mission Objectives: Practice coordinating and controlling an unopposed CSAR. Specific Mission Tasks: Plan, brief and lead an unopposed CSAR, search, on-scene command, helicopter RESCORT, survivor preparation and pick-up.

6.9.4.2.6. **CSAR-6.** Mission Objectives: Demonstrate proficiency in Sandy 1 duties during an opposed CSAR. Specific Mission Tasks: Plan, brief and lead an opposed CSAR, search, on-scene command, threat suppression, helicopter RESCORT, survivor preparation and pick-up. **NOTE:** CSAR opposition may include air threats, ground threats, and threats to the survivor. Incorporate outside assets to the maximum extent practical, such as ground aggressors, strike fighters, and FAC(A)s.

6.10. Anti-Helicopter Upgrade. This program establishes the minimum guidelines for those pilots identified by the SQ/CC for anti-helicopter upgrade training.

6.10.1. Fly anti-helicopter training IAW A/A training rules in AFI 11-214.

6.10.2. Prior to anti-helicopter certification, the SQ/CC will review the UP's performance and completion of upgrade requirements. The SQ/CC will certify the pilot's status, including any restrictions, in appropriate written format (grade sheet, training folder, Letter of Xs, etc.). The pilot may fly anti-helicopter missions down to 300 feet AGL or LASDT CAT, whichever is higher.

6.10.3. **Anti-Helicopter Ground Training.** Helicopter threat, VID, slow/low aircraft handling, AIM-9/LASTE employment, anti-helicopter tactics and techniques, and training rules.

6.10.4. **Anti-Helicopter Flying Training.** This upgrade consists of two missions flown in sequence and is supervised by an anti-helicopter-certified IP/supervisor. UPs must complete all mission tasks prior to certification, regardless of the number of missions required. UPs must be current and qualified in ACBT and LOW A/A.

6.10.4.1. **BFM-H.** 1v1 Helicopter. Mission Objectives: Practice BFM and employment techniques to kill a slow-speed target. Specific Mission Tasks: Weapons systems checks, A/A employment at various closure velocities and aspect angles against a slow-speed target simulated by an A-10. Helicopter BFM: ranging exercises, aspect and angle off determination, maneuvering to gain and maintain the advantage, weapons selection and employment, defensive maneuvers, flare and ECM usage, re-attacks and separations. **NOTE:** Demonstrate proficiency at 5,000 feet AGL and 1,000 feet AGL before progressing to lower altitudes.

6.10.4.2. **ACM-H.** 2v1 Helicopter. Mission Objectives: Practice mutual support contracts and employment to kill a slow-speed target. Specific Mission Tasks: Visual search techniques, element coordination/radio calls, threat recognition and formation defensive maneuvering, flare and ECM usage, mutual support maneuvering, weapons selection and employment, re-attacks, and element separation. **NOTE:** Demonstrate proficiency at 1,000 feet AGL before progressing to lower altitudes.

6.11. Contingency/Exercise Spin-up Training.

6.11.1. Units will conduct this training prior to deploying in support of contingency operations (if time permits) or exercises. For contingency operations, units will contact appropriate gaining command/operations to determine expected mission tasking. For exercises, units will refer to appropriate EXPLANS and contact exercise POCs prior to deployment. These EXPLANS include COMACC EXPLANS 80 for Red, Green, Maple, and Coalition Flags, EXPLANS 323 for Air Warrior I, and

EXPLANS 163 for Air Warrior II. OG/CCs will tailor this spin-up training for the theater, threat, and tactics for the assigned task. SQ/CCs are then responsible for implementing this spin-up, prosecuting the required missions, and determining the specific requirements necessary to reach the desired level of proficiency. Place emphasis on training needed for missions not accomplished in daily operations. This training will be conducted IAW all applicable instructions.

6.11.2. Pilots not directly assigned to the deploying squadron must also receive spin-up training as determined by the deploying SQ/CC. This applies to attached pilots and pilots augmenting from other squadrons. The objective of this training is to ensure non-assigned pilots are proficient to conduct all missions in support of expected tasking. The deploying SQ/CC will determine the amount of spin-up training required for each non-assigned pilot based on the pilot's level of proficiency, currency, qualification, and experience. For each augmenting pilot, the pilot's assigned SQ/CC is responsible to ensure the spin-up training is accomplished.

6.11.3. OG/CCs will ensure all participating pilots are ready to deploy and are proficient to conduct all missions in support of expected tasking.

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

6.11.4.1. **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 developing threat assessments and visual recognition training materials.

6.11.4.2. **Visual Recognition.** Pilots must be able to visually identify rotary and fixed-wing aircraft, 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.

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

6.12. Form Adopted. AF IMT 847, *Recommendation for Change of Publication*.

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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

AR—Air Refueling

AAR—Air-to-Air Refueling

AAW—Anti-Air Warfare (US Navy)

ACBT—Air Combat Training

ACC—Air Combat Command

ACM—Air Combat Maneuvering

ACMI—Air Combat Maneuvering Instrumentation

ACT—Air Combat Tactics

ADA—Air Defense Alert, Air Defense Asset

ADL—Aircraft Data Link

AEF—Air and Space Expeditionary Forces

AF—Air Force

AFORMS—Air Force Operations Resource Management System (replaced by ARMS)

AFRC—Air Force Reserve Command

AFSC—Air Force Specialty Code

AGL—Above Ground Level

AGM—Air-to-Ground Missile
AGOS—Air Ground Operations School
AGSM—Anti-G Straining Maneuver
AHC—Aircraft Handling Characteristics
AI—Air Intercept, Air Interdiction
AMP—Airfield Marking Pattern
ANG—Air National Guard
AOA—Angle of Attack
AOC—Air Operations Center
AOS—Air Operations Squadron
ARC—Air Reserve Component(s)
ARM—Anti-Radiation Missile
ARMS—Aviation Resource Management System
ASC—Air Strike Control
ASD—Average Sortie Duration
ATD—Aircrew Training Device
AVTR—Aircraft Video Tape Recorder
AWACS—Airborne Warning and Control System
BAI—Backup Aircraft Inventory
BALO—Battalion Air Liaison Officer
BAQ—Basic Aircraft Qualification
BDA—Battle/Bomb Damage Assessment
BFM—Basic Fighter Maneuvers/Maneuvering
BMC—Basic Mission Capable
BSA—Basic Surface Attack
BSA-NT—Basic Surface Attack - Night
BVR—Beyond Visual Range
C3—Command, Control, and Communications
C3I—Command, Control, Communications, and Intelligence
C&R—Collection and Reporting
CAF—Combat Air Forces
CAP—Combat Air Patrol, Critical Action Procedures

CAS—Close Air Support
CAT—Category
CA-Coded—Designated aggressor aircraft unit
CB-Coded—Designated test aircraft unit
CC—Commander
CC-Coded—Designated Combat Aircraft
CCIP—Continuously Computed Impact Point
CCRP—Continuously Computed Release Point
CD—Counter Drug
CE—Combat Edge, Civil Engineering
CEP—Circular Error Probable
CFF—Calls For Fire
CFT—Cockpit Familiarization Trainer
CFTR—Composite Force Training
CHUM—Chart Update Manual
CM—Countermeasures
CMR—Combat Mission Ready
COMM JAM—Communications Jamming
COMSEC—Communications Security
CPT—Cockpit Procedures Trainer
CRM—Cockpit/Crew Resource Management
CRO—Criterion Referenced Objectives
CRT—Cathode Ray Tube
CSAR—Combat Search and Rescue
CT—Continuation Training
CV—Vice Commander
CW—Chemical Warfare
CWD—Chemical Warfare Defense
DACBT—Dissimilar Air Combat Training
(D)ACBT—Similar or Dissimilar Air Combat Training
DACM—Dissimilar Air Combat Maneuvering
(D)ACM—Similar or Dissimilar Combat Maneuvering

DACT—Dissimilar Air Combat Tactics
(D)ACT—Similar or Dissimilar Air Combat Training
DAR—Day(time) Air Refueling
DB—Dive Bomb
DBFM—Dissimilar Basic Fighter Maneuvers/Maneuvering
(D)BFM—Similar or Dissimilar Basic Fighter Maneuvers/Maneuvering
DCA—Defensive Counter Air
DMPI—Desired Mean/Munition Point of Impact
DNIF—Duties Not Involving Flying
DO—Director of Operations, Operations Officer
DOC—Designed Operational Capability
DR—Dead Reckoning
DRU—Direct Reporting Unit
DTOS—Dive Toss
DVADR—Digital Video/Audio/Data Recorder
E&E—Escape and Evasion
E&R—Escape and Recovery
EC—Electronic Combat
ECM—Electronic Countermeasures
ECCM—Electronic Counter Countermeasures
ECO—Electronic Combat Officer
ECR—Electronic Combat Range
EEI—Essential Elements of Information
EM—Energy Maneuverability
EO—Electro-Optical
EP—Emergency Procedure
EPE—Emergency Procedures Evaluation
EW—Electronic Warfare
EW O—Electronic Warfare Officer
EWWS—Electronic Warfare Warning Set
FAC(A)—Forward Air Controller (Airborne)
FACJFC—Forward Air Controller Joint Firepower Course

FAM—Familiarization, Functional Area Manager

FEB—Flight/Flying Evaluation Board

FEF—Flying Evaluation Folder

FENCE—Firepower, Emitters, Navigation, Communication, and Electronic Countermeasures

FL—Flight Lead

FLIR—Forward-Looking Infrared

FLUG—Flight Lead Upgrade

FMT—Full Mission Trainer

FOR—Field of Regard

FOT&E—Follow-on OT&E

FOV—Field of View

FP—First Pilot

FPA—Flight Path Angle

FPM—Flight Path Marker

FS—Fighter Squadron, Flight Surgeon

FSCL—Fire Support Coordination Line

FSWD—Full Scale Weapons Delivery

FTR—Fighter

FTU—Formal Training Unit

FW—Fighter Wing

G—Gravitational load factor

GBU—Guided Bomb Unit

GCI—Ground Controlled Intercept

GLO—Ground Liaison Officer

GLOC—G-induced Loss of Consciousness

GP—General Purpose

GS—Ground Speed

HADB—High Altitude Dive Bomb

HARB—High Altitude Release Bomb

HAS—High Angle Strafe

HASD—High Altitude Systems Delivery

HHQ—Higher Headquarters

HUD—Head-Up Display
HVAA—High Value Airborne Asset
IAM—Inertially Aided Munition
IAW—In Accordance With
ICDT—Initial Counter Drug Training
ID—Identify/Identification
IFE—In Flight Emergency
IFF—Identification Friend or Foe
IFR—Instrument Flight Rules
IIR—Imaging Infrared
ILS—Instrument Landing System
IMC—Instrument Meteorological Conditions
INFLTREP—In Flight Report
INS—Inertial Navigation System
INTREP—Intelligence Report
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
ISD—Instructional Systems Development
ISOPREP—Isolated Personnel Report
JAAT—Joint Air Attack Team
JFT—Joint Force Training
JTAC—Joint Tactical Attack Controller
JVID—Joint Visual Identification
KCAS—Knots Calibrated Airspeed
KIAS—Knots Indicated Airspeed

KIO—Knock It Off

KS—Killer Scout

KTAS—Knots True Airspeed

LAD—Low Altitude Delivery

LADT—Low Altitude Dive Toss

LAHD—Low Angle High Drag

LAI—Low Altitude Intercept

LALD—Low Angle Low Drag

LALD—Low Angle Low Drag

LANTIRN—Low Altitude Navigation and Targeting Infrared for Night

LAO—Local Area Orientation

LASD—Low Altitude Systems Delivery

LASDT—Low Altitude Step Down Training

LASTE—Low Altitude Safety and Targeting Enhancement

LAT—Low Altitude Toss

LATF—Low Altitude Tactical Formation

LATN—Low Altitude Tactical Navigation

LGB—Laser Guided Bomb

LOC—Limited Operational Capability

LOS—Line of Sight

LOW A/A—Low Altitude Air-to-Air

LOW ALT—Low Altitude

LOWAT—Low Altitude Training

LRS—Long Range Strafe

LSO—Life Support Officer

LTDSS—Laser Target Designator Scoring System

MAD—Medium Altitude Delivery

MADT—Medium Altitude Dive Toss

MAJCOM—Major Command

MAT—Medium Altitude Toss

MAV—Maverick

MCC—Mission Commander

MDS—Mission Design Series
MDT—Mission Directed Training
MEA—Minimum Enroute Altitude
MIJI—Meaconing, Intrusion, Jamming and Interference
mil—Milliradian
MIL—Military Power
MISREP—Mission Report
ML—Mission Lead
MOA—Military Operating Area
MP—Mission Pilot
MQF—Master Question File
MRM—Medium Range Missile
MS—Mission Support
MSA—Minimum Safe Altitude
MTT—Multi-Tactics Trainer
N/A—Not Applicable
NAR—Night(time) Air Refueling
NAF—Numbered Air Force
NAV—Navigation
NCO—Noncommissioned Officer
NGB—National Guard Bureau
NLT—Not Later Than
NSA—Night Surface Attack
NSAT—Night Surface Attack Tactical
NT—Night
NT-ISR—Non-Traditional Intelligence, Surveillance, and Reconnaissance
NVD—Night Vision Device
NVG—Night Vision Goggles
OCA—Offensive Counter Air
OCA-A—Offensive Counter Air - Air-to-Air
OCA-S—Offensive Counter Air - Air-to-Surface
OFT—Operational Flight Trainer

OG—Operations Group
OPR—Office of Primary Responsibility
OPS—Operations
OPSEC—Operations Security
OTD—Operations Training Development
OT&E—Operational Test and Evaluation
ORI—Operational Readiness Inspection
PACAF—Pacific Air Forces
PAI—Primary Aircraft Inventory
PAR—Precision Approach Radar
PCS—Permanent Change of Station
PDAI—Primary Development/Test Aircraft Inventory
PFT—Programmed Flying Training
PGM—Precision Guided Munitions
PMAI—Primary Mission Aircraft Inventory
POAI—Primary Other Aircraft Inventory
PPB—Positive Pressure Breathing
PPG—Positive Pressure-breathing for G
PTAI—Primary Training Aircraft Inventory
PTT—Partial/Part Task Trainer
PUP—Pull Up Point
QUAL—Qualification
RAP—Ready Aircrew Program
RCO—Range Control Officer
RCS—Radar Cross Section
RECCE—Reconnaissance
RF—Radio Frequency
RFMDS—Red Flag Mission Debriefing System
RMU—Runway Monitoring Unit
ROE—Rules of Engagement (combat only)
ROVER—Remotely Operated Video-Enhanced Receiver
RPI—Rated Position Indicator

RT—Radio Terminology
RTT—Realistic Target Training
RW—Reconnaissance Wing
RWR—Radar Warning Receiver
RX—Rocket(s)
SA—Situational Awareness, Strategic Attack
SAAC—Simulator for Air-to-Air Combat
SAFE—Selected Area For Evasion
SAR—Search and Rescue
SAT—Surface Attack Tactics
SAT-NT—Surface Attck Tactics - Night
SCAR—Strike Control and Reconnaissance
SCL—Standard Conventional Load
SCP—Set Clearance Plane
SEAD—Suppression of Enemy Air Defenses
SEAD-A—Suppression of Enemy Air Defenses - Anti-Radiation
SEAD-C—Suppression of Enemy Air Defenses - Conventional
SEAD-E—Suppression of Enemy Air Defenses - Electronic
SEFE—Standardization/Evaluation (Stan/Eval) Flight Examiner
SELO—Stan/Eval Liaison Officer
SEPT—Situational Emergency Procedure Training
SIF—Selective Identification Feature
SLD—System Level Delivery
SOCC—Sector Operations Control Center
SOF—Supervisor of Flying
SORTS—Status of Resources and Training System
SQ/CC—Squadron Commander
SRM—Short Range Missile
SSE—Simulated Single Engine
STR—Strategic Training Range
TA—Terrain Avoidance
TACAN—Tactical Air Navigation

TACS—Theater Air Control System

TAI—Total Active Inventory

TD—Tactical Deception

TDY—Temporary Duty

TES—Test and Evaluation Squadron, Tactics Evaluation Squadron

TEWS—Tactical Early Warning System

TF—Terrain Following

TF-Coded—Designated Training Aircraft

TFR—Terrain Following Radar

TGM—Training Guided Munition

TGT—Target

T/L—Takeoff and Landing

T.O.—Technical Order

TOD—Time of Detonation, Time of Day

TOT—Time Over/On Target

TR—Training Rules, Transition

TX—Transition

UCML—Unit Committed Munitions List

UE—Unit Equipped

UIP—Upgrading Instructor Pilot

UMD—Unit Manning Document

UNITREP—Unit Status and Identity Report

UP—Upgrading Pilot

USAF—United States Air Force

USAFE—United States Air Forces in Europe

USAFR—United States Air Force Reserve

USAFWS—United States Air Force Weapons School

USAFWC—United States Air Force Warfare Center

USAFWTC—United States Air Force Weapons Test Center

UTD—Unit Training Device

UTE—Utilization rate

VDL—Video Down/Data Link

VID—Visual Identification
VFR—Visual Flight Rules
VLD—Visual Level Delivery
VMC—Visual Meteorological Conditions
VR—Visual Recognition
VRD—Vision Restricting Device
VTR—Video Tape Recorder
WD—Weapons Delivery
WDL—Weapon Data Link
WG—Wing
WIC—Weapons Instructor Course
WSEP—Weapons System Evaluation Program
WS—Weapons School
WSO—Weapon Systems Officer
WST—Weapon System Trainer
WSTO—Weapons System Training Officer
WTT—Weapons and Tactics Trainer
WVR—Within Visual Range
WX—Weather

Terms

Air Combat Training (ACBT)—A general training term that encompasses (D)BFM, (D)ACM, and (D)ACT (AFI 11-214).

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

Certification—The process to train and certify a pilot for specific tactical employment capabilities, special weapons capabilities, procedures, and rules. Similar to a pilot qualification, but not involving a flight evaluation.

Circular Error—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 familiarity and practice of normal procedures and emergency procedures (AFP 50-11).

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 training (AFP 50-11).

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

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

Counter Drug (CD) Training—Training to maintain proficiency in day/night intercepts on slow/low-flying aircraft, with emphasis on target identification and shadowing procedures.

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

Delivery Parameters—Weapons-related data reflecting current delivery considerations for proper ordnance function and tactical survivability. Appropriate aircraft/weapons technical orders must be consulted for live ordnance safe escape criteria and aircraft performance charts for recovery altitudes.

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

Emergency Procedures Evaluation (EPE)—An evaluation of a pilot's knowledge and responsiveness to critical and non-critical EPs conducted by a SEFE in an approved aircraft simulator or cockpit.

Experienced Pilot (EXP)—A pilot who has flown the aircraft for a specified number of hours, which then permits training at a reduced rate to maintain a safe level of proficiency (AFI 11-412). Unit manning levels and assignment decisions are based on pilot experience. Hours logged in the FMT accomplishing approved training events will be counted as hours when determining experience level.

Flight Lead (FL)—As designated on flight orders, the pilot responsible for overall mission conduct from preflight preparation and briefing to post-flight debriefing, regardless of actual position within the formation. A 2-ship FL is authorized to lead an element in a larger formation. If approved by the SQ/CC, a 4-ship FL is considered a multi-ship FL and may lead formations and missions in excess of four aircraft.

Full Mission Trainer (FMT)—A training device that dynamically simulates flight characteristics in real time. Used for normal, emergency, and instrument procedures, to include safety of flight, warfighting tasks, and skills-integration training (AFP 50-11).

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

Initial Qualification Training (IQT)—Formal training to qualify a pilot in general aircraft flying duties without full regard to any particular unit's operational mission. Completion of IQT is the minimum requirement for BAQ status. IQT provides an aircraft instrument and qualification certificate, and prepares the pilot for follow-on mission qualification and specialized training.

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

Killer Scout (KS) Operations—The employment of armed attack fighters in an Interdiction or Strategic Attack scenario for a specified geographic location flown to validate tasked targets, mark targets, and direct dedicated ground attack fighters against lucrative targets. Killer Scouts are normally used as part of

the C3I interface, to coordinate flights, identify or neutralize targets and enemy air defenses, and provide Bomb Damage Assessment (BDA).

Limited-Threat VID—Visual identification of a bogey in a limited threat environment, such as during counter-drug operations or NORAD procedures (IAW AFTTP 3-1).

Low Altitude Training (LOWAT, LOW A/A, LOW ALT)—Tactical training operations in a certified low altitude block, which is divided into Low Altitude Step-Down Training (LASDT) categories. This tactical training does not apply to traffic pattern operations or other basic transitions through the low-altitude structure. A LOWAT event involves performing realistic, mission-oriented low altitude operations while in a LOWAT-certified low altitude block, in which pilots practice realistic reactions to air and ground threats. LOWAT is divided into two currencies/events, LOW A/A and LOW ALT. LOW A/A events include skills necessary to search for and engage an aerial target at low altitude offensively or defensively. LOW ALT events include LATN, LATF, defensive maneuvering to avoid or negate ground threats, and low altitude WD.

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

Low Altitude Tactical Formation (LATF)—Flying tactical formation while navigating in the low-altitude structure (AFI 11-214).

Low Altitude Tactical Navigation (LATN)—A low altitude training event using onboard systems, dead reckoning and point-to-point low altitude navigation, with or without prior route planning (AFI 11-214).

Medium Altitude Tactics—Day or night tactical formation above 5,000 feet AGL. Tactics include ingress to a target area, employment (actual or simulated) of ordnance using appropriate delivery parameters, and egress away from the target area with mutual support.

Mission Qualification Training (MQT)—Training required to achieve the required level of competence in a unit's primary-task missions. This training follows IQT and is a prerequisite for CMR/BMC status. MQT provides an aircraft mission qualification certificate, and allows the pilot to prepare for follow-on specialized training.

Operational Flight Trainer (OFT)—A training device which dynamically simulates flight characteristics in real time. Used for normal, emergency, and instrument procedures, to include safety of flight, warfighting tasks, and skill integration training (AFP 50-11).

Primary Aircraft Inventory (PAI)—Aircraft authorized for performance of the operational mission. PAI forms the basis for Primary Aircraft Allocation (PAA), which provides operating resources of manpower, support equipment, and flying-hour funds. The operating command determines the PAI required to meet their assigned missions (AFI 16-402).

Proficiency—Demonstrated ability for a pilot to successfully accomplish a flying event safely and effectively. For purposes of this instruction, proficiency also requires any applicable currency for the event.

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

Specialized Training—Training in additional flight responsibilities, tactics, and weapons systems, such as FL, IP, FAC(A), TGP, and CSAR. Specialized training provides CMR/BMC pilots with advanced qualifications and certifications to support the unit's mission tasking. This training follows MQT as pilot

skills and proficiency warrant. Although specialized training is related to pilot experience in the aircraft, it is not based solely on flying hours and remains in the judgment of the commander.

Squadron Supervisor—Squadron Commander (SQ/CC), Operations Officers and Assistants (SQ/DO/ADO), and Flight CCs (FLT/CC). (ANG/AFRC: as designated by the OG/CC)

Tactical Deception—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 friendly forces (AFI 10-704).

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

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

Unit Training Device (UTD)—A unit-level training device that dynamically simulates flight characteristics in real time. Used for normal, emergency, and instrument procedures, to include safety of flight, warfighting tasks, and skill integration training (AFP 50-11).

Verification—A unit briefing for pilots to update and verify tactical knowledge required to accomplish the unit's wartime mission tasking. Verification includes initial and continuation phases in which a formal board is convened to assess pilot knowledge of tactical employment.

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

Weapons and Tactics Trainer (WTT)—A part-task training device used primarily for warfighting tasks, and skill integration training (AFP 50-11).

Attachment 2

GLOSSARY OF MISSION AND EVENT DEFINITIONS

A2.1. Mission Definitions.

A2.1.1. **Air Combat Maneuvers (ACM) Mission.** Building-block demanding mission. 2v1 (or greater) training mission designed to achieve proficiency in element formation maneuvering and the coordinated application of BFM to achieve a simulated kill or effectively defend against one or more aircraft from a pre-planned starting position (AFI 11-214).

A2.1.2. **Aircraft Handling Characteristics (AHC) Sortie.** Basic-skills non-demanding sortie. Training for proficiency in utilization and exploitation of the aircraft flight envelope, consistent with operational and safety constraints, including, but not limited to: high/maximum AOA maneuvering, energy management, minimum-time turns, maximum/optimum acceleration and deceleration techniques and confidence maneuvers (AFI 11-214).

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

A2.1.4. **Basic Fighter Maneuvers (BFM) Mission.** Building-block demanding mission. 1v1 training mission designed to apply aircraft handling skills to gain proficiency in recognizing and solving range, closure, aspect, angle off, and turning room problems in relation to another aircraft to either attain a position from which weapons may be launched or defeat weapons employed by an adversary (AFI 11-214).

A2.1.5. **Basic Surface Attack, Day (BSA) Mission.** Building-block non-demanding mission. Training designed to achieve proficiency in day air-to-surface weapons delivery events.

A2.1.6. **Basic Surface Attack, Night (NSA/BSA-NT) Mission.** Building-block demanding mission. Training designed to achieve proficiency in night air-to-surface weapons delivery events. NSA/BSA-NT non-tactical training is considered non-demanding for the purposes of NVG training currency.

A2.1.7. **Close Air Support (CAS) Mission.** Day/night demanding mission. Mission flown in support of ground forces under the positive control of a JTAC/FAC(A). Mission elements include: intel scenario, tactical mission planning, interface with the TACS/AAGS network, execution against threats, and weapons employment against JTAC/FAC(A)-designated targets. Except for the role of a JTAC/FAC(A), mission elements and roles may be simulated during training.

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

A2.1.9. Combat Search and Rescue (CSAR) Mission/Event. Special-capability demanding mission/event. A specific mission/event performed by rescue forces to recover distressed personnel during war or military operations other than war. Mission elements include: Intel scenario and mission planning, actual or simulated interface with Theater Air Control System (TACS) C2 network, electronic and visual search patterns and procedures, identification and authentication of survivor, target marking, ordnance selection, positive control of ground attack fighters employing simulated or actual ordnance against designated threats to survivor, identification and neutralization of ingress and egress route enemy air defenses, rescue force protection (including rendezvous, escort, and hover cover), Battle Damage Assessment (BDA), and in-flight report.

A2.1.10. Commander Option Missions. An allotment of missions to each pilot for allocation at commander's discretion in support of training requirements and unit objectives. Commander Option missions are part of the pilot's overall training cycle sortie allotment and may be designated uniquely for each pilot or generally for all in the unit. IAW the RAP Tasking memo, units will allocate Commander Option missions to any mission type, which then credits each pilot's individual training requirements for those missions. Units may also designate a mission type labeled "Commander Option" in which pilots log the directed training. This allows maximum flexibility for commanders to allocate and define the missions throughout the training cycle.

A2.1.11. Contingency Mission. A mission tasked and flown while deployed for a contingency operation in which training is limited. This type of mission is logged as a Contingency Operations Mission (SC13) in ARMS. These missions and the events accomplished do not count towards training cycle requirements, which are prorated accordingly; however, the missions may be used for lookback and the events may update currencies.

A2.1.12. Demanding Mission. Missions that task the pilot to the extent that flying frequency and continuity are most critical. Missions and events requiring demanding mission currency are: BFM, (D)ACM, (D)ACT, LOWAT (below 1,000 feet AGL), CAS, SAT, CFTR, JFT, night, instructor duties, aerial demonstrations, etc. SQ/CCs may add missions/events to the demanding mission list, depending on unit tasking and pilot capabilities. See Non-Demanding Mission. **EXCEPTION:** A dry, level pass at or above 500 feet AGL, followed by limited maneuvering (IAW AFI 11-214), is considered a non-demanding event. This definition does not apply to NVG Demanding currency as specified by the Night Mission type.

A2.1.13. Flight Lead (FL) Mission. Special-capability mission. Mission where the FL maintains control of a flight of two or more aircraft. May be logged in conjunction with baseline training requirements. 2-ship FLs (2FL) are limited to leading two aircraft in a formation, while 4-ship FLs (4FL) may lead larger formations of three or more.

A2.1.14. Forward Air Control (Airborne) (FAC(A)) Mission. Special-capability day/night demanding mission. Mission flown to provide Air Strike Control (ASC) of armed attack fighters in support of actual or simulated ground forces. Mission elements include: Intel scenario and mission planning, actual or simulated interface with Theater Air Control System/Army Air-to-Ground System (TACS/AAGS) C2 network, target acquisition and identification, FAC-to-fighter 9-line brief, target marking, positive control of ground attack fighters employing simulated or actual ordnance against designated targets, integration of ground and heliborne fire support elements, identification and neutralization of enemy air defenses, BDA, and in-flight report.

A2.1.15. Instructor Pilot (IP) Mission. Special-capability demanding mission. Mission in which an IP instructs another pilot during a building-block mission (BFM, ACM, BSA), MQT, FLUG, IPUG, or any mission where IP duties preclude effective combat mission training. An IP mission is not dual-logged with another RAP mission.

A2.1.16. Instrument Sortie. Basic-skills non-demanding sortie. Non-RAP training designed to ensure instrument proficiency. RAP events may be accomplished on an Instrument sortie provided accomplishment does not interfere with the primary goal of instrument training. Units are allocated sorties for every pilot to accomplish their non-RAP requirements and maintain minimum basic skills.

A2.1.17. Mission Commander (MCC) Mission. Special-capability demanding mission. Mission where a pilot acts in the capacity of an 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. MCC missions may be logged in conjunction with base-line training requirements.

A2.1.18. Night Mission. A mission on which either takeoff or landing and at least 50 percent of flight duration or one hour, whichever is less, occur between the end of evening twilight and the beginning of morning civil twilight, as published in the American Air Almanac, converted to local time. A night mission is considered an overall demanding mission type; however, individual non-tactical events are considered non-demanding for the purposes of NVG training currency.

A2.1.19. Non-Demanding Mission. A day mission that provides the pilot with the opportunity to regain basic flying proficiency after a period of non-flying. Events in this mission will not excessively task pilot skills that have been underused. Authorized missions/events flown on a non-demanding mission are: Instruments, AHC, BSA, LATN/LATF above 500 feet AGL, and dry level passes followed by limited maneuvering (IAW AFI 11-214) at or above 500 feet AGL. SQ/CCs may delete missions/events from this non-demanding mission list, depending on unit tasking and the individual's capabilities. See Demanding Mission.

A2.1.20. Surface Attack Tactics (SAT) Mission. Basic-capability day/night demanding mission. Mission designed to develop tactical surface attack proficiency. Mission elements include: mission planning, execution with actual or simulated threats, and weapons delivery IAW unit taskings, simulating UCML munitions, and SCLs against a tactical target during the day. Simulated attacks may be conducted against realistic targets IAW local restrictions. Missions types include: Strategic Attack, Air Interdiction (AI), Offensive Counterair Air-to-Surface (OCA-S), and Suppression of Enemy Air Defenses-Conventional (SEAD-C).

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

A2.2.1. Accomplishment of a specific training element, function, or task.

A2.2.2. A specific type of weapon delivery performed during a mission, defined by aircraft flight path, ordnance delivered, delivery method, or target struck.

A2.2.3. Expending ordnance against a target according to predetermined flight path parameters and delivery methods. A single delivery constitutes an event except for some strafe events, which require satisfaction of additional criteria.

A2.3. Weapons Delivery Events.

A2.3.1. A delivery is defined as a pass at a target on which ordnance is expended or simulated or meets the criteria defining a specific weapon delivery. Weapon events are defined in [Chapter 5](#). All deliveries will be recorded, but not necessarily as a record delivery. The two types of deliveries are as follows:

A2.3.1.1. **Basic Delivery.** A delivery using a conventional box pattern. It may be used as a record event only for initial qualification. There is no restriction on the number of dry passes made before or during basic deliveries in a record event for initial qualification; however, only the first two deliveries per event may count for record.

A2.3.1.2. **Tactical Delivery.** A delivery using patterns and techniques that minimize final flight path predictability, yet allow sufficient time for accurate weapons delivery. When a tactical delivery is flown for record, dry passes in the event are not permitted before or during the event. Wings level time on final is limited to five seconds when the aircraft will descend below 4,500 feet AGL, except for level, LGB, MAV, and climbing deliveries. Timing will be from completion of roll-out until initiation of weapons release and exceeding five seconds will result in gross error. All tactical deliveries will normally include recovery to egress parameters.

A2.3.2. A delivery constitutes a Weapons Delivery Event based on two categories, record keeping (Record or Non-Record), and RAP tasking (FAM and QUAL), as follows:

A2.3.2.1. Record Keeping.

A2.3.2.1.1. **Non-Record.** Weapons delivery accomplishments not credited toward weapons qualification provided the pilot declares “non-record” prior to beginning the event.

A2.3.2.1.2. **Record.** Weapons delivery scored for individual qualification. Scoring shall be accomplished by ground, air, or mission tape (for guided weapons), as appropriate. A maximum of two record deliveries may be credited during a mission from a single run-in heading. Additional record deliveries may be accomplished from headings differing by at least 90 degrees or on different targets/ranges. Record deliveries may not be preceded by non-record deliveries in the event on the same sortie. The first two deliveries in each event will be considered record unless otherwise declared prior to the roll-in to final. Additional guidelines are:

A2.3.2.1.2.1. **Basic.** Must be scored on a Class A range (IAW AFI 13-212V1/2/3).

A2.3.2.1.2.2. **Tactical.** A minimum of 50 percent must be accomplished on a ground scored range, except for simulated precision munition events. Remaining record hits may be air scored by reference to known distances from the target.

A2.3.2.1.2.3. **Strafe.** Aircraft rounds limiter will be set to total number of rounds for the planned strafe events. A minimum of 50 rounds per strafe event must be set and expended to satisfy RAP strafe requirements. See paragraph [5.5.1](#).

A2.3.2.1.2.4. **LGB.** Designator and bomber functions are accomplished simultaneously by a single aircraft using self-lase procedures. To record a complete LGB delivery using buddy-lase designation techniques, one simulated or actual weapons release and one designation must be performed, if authorized by the SQ/CC.

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

A2.3.2.2. **RAP Tasking.** See current RAP Tasking memo for training cycle requirements.

A2.3.2.2.1. **FAM.** Weapons events tasked at FAM may be basic/tactical record deliveries. Each single hot pass counts as one delivery. Hit percentage criteria for FAM events is not specified and is tracked at unit's discretion.

A2.3.2.2.2. **QUAL.** Weapons events tasked at QUAL must be tactical, record deliveries. QUAL tasking demonstrates the pilot's ability to put appropriate ordnance on target. Unless otherwise specified in the RAP Tasking memo or formal course syllabi, [Chapter 5](#) establishes QUAL criteria for each event.

A2.3.3. Miscellaneous definitions of weapons deliveries and events.

A2.3.3.1. **Dry Pass.** Weapons delivery pass during which no ordnance is expended. Such dry passes prior to completion of record deliveries in an event are charged to the pilot as gross error unless the pass was dry because of safety considerations, system malfunctions, basic delivery requirements, or directed for flight integrity purposes.

A2.3.3.2. **Foul.** A penalty directed to a specific aircraft and pilot for actions inconsistent with established procedures or safety considerations. A foul will result in a gross error for that delivery (except non-acousti-scored strafe which will be penalized one-half the event score). 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. Verbal warnings do not constitute a foul.

A2.3.3.3. **Full Scale Weapons Delivery.** Delivery of live or inert ordnance representing a typical combat configuration or SCL in a tactical scenario.

A2.3.3.4. **Gross Error.** A penalty score or miss assigned to a pilot's records when a weapons delivery attempt results in: munitions impact outside the range scoring capability, a chargeable dry pass, a foul, an unintentional release, or exceeding tactical delivery time on final requirements.

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

A2.3.3.6. **Multiple or Unexpected Release.** More than one weapon released against the same target on a single pass or a weapon released without approval, and assessed as follows:

A2.3.3.6.1. **Intentional.** Predetermined multiple ordnance release. The pilot will advise the range officer prior to delivery and may designate which impact to score.

A2.3.3.6.2. **System Malfunction.** Undeclared multiple release caused by a verified system malfunction. Score is void after the system malfunction is verified, otherwise unintentional rules apply.

A2.3.3.6.3. **Inadvertent.** Unexpected ordnance release by the aircraft, uncommanded by the pilot. Impact will not be scored.

A2.3.3.6.4. **Unintentional.** Unexpected ordnance released due to pilot error. Scored as a gross error regardless of impact point.

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

A2.3.3.8. **Void Delivery.** Weapons delivery not successfully completed due to a documented and verified weapons system malfunction, a pass aborted for safety, no spot, or circumstances beyond the control of the pilot.

A2.4. Tactical Events. The alphabetical listing of tactical events below will be used for fulfilling tasked requirements. In the absence of guidance, units will determine the content of tasked events and how often they may be logged.

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

A2.4.2. **Air Strike Control (ASC) Event.** Special-capability demanding event. A Forward Air Control (Airborne) mission event that involves the control of armed attack fighters in support of actual or simulated ground forces. Types of controls are divided into Type I, Type II, and Type III, which are defined in Joint Publication 3-09.3. IAW the current JCAS FAC(A) MOA, FAC(A)s will perform two controls to update ASC currency. No more than two controls may be logged 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.

A2.4.3. **Air Refueling (AR) Event.** Requires tanker rendezvous, hook-up and transfer of fuel or two minutes of dry contact. More than one event may be credited if receivers accomplish another rendezvous, hook-up and fuel transfer/dry contact.

A2.4.4. **Chaff Event.** Inflight dispensing of chaff during a tactical mission profile as a threat response. Event requires actual release and is limited to logging one event per engagement.

A2.4.5. **Composite Force Training (CFTR) Event.** Scenarios employing multiple flights of the same or different types of aircraft, each under the direction of its own flight leader, performing the same or different roles. Only one event may be logged per mission **EXCEPTION:** if AR separates events, a maximum of two events may be logged per sortie (AFI 11-214).

A2.4.6. **EC Event A/A.** Detecting an airborne threat via electronic means and reacting with appropriate maneuvers, pod/internal ECM switchology, and expendables. Airborne threat training will be accomplished only with a dedicated adversary attacking from beyond visual range. Only one event may be logged per mission.

A2.4.7. **EC Event A/G.** Detecting a surface threat via electronic means and reacting with appropriate maneuvers, pod/internal ECM switchology and/or expendables. Only one event may be logged per mission.

A2.4.8. **Escort.** Inflight escort of helicopter or fixed-wing aircraft during a tactical mission profile based on protection from an actual or simulated threat. Includes Rescue Escort (RESCORT) during CSAR missions and Wounded Bird exercises. Only one event may be logged per mission.

A2.4.9. **Flag Exercise Event.** Demanding event. Includes Air Warrior I/II and other MAJ-COM-sponsored large-scale exercises.

A2.4.10. **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 one event per engagement.

A2.4.11. **Full Scale Weapons Delivery (FSWD)/Heavy Weight (HVT WT) Event.** Delivery of live or inert ordnance representing a typical combat configuration in a tactical scenario. Only one event may be logged per mission.

A2.4.12. **Have Quick Event.** Requires proper radio configuration for Have Quick operation and successful utilization during tactical mission accomplishment. The practice of loading the combat or MAJCOM Have Quick training net is highly desired. Only one event may be logged per mission.

A2.4.13. **Instructor Event.** An event logged by an IP when performing instructor duties during the mission while simultaneously performing flight duties. IP qualification is required for all instructed mission elements. Examples include upgrade missions, updating lost currencies, and evaluators on evaluation missions. Logging this event updates instructor currency.

A2.4.14. **Illumination Event.** Delivery of target area illumination in a tactical scenario for the purpose of enhancing weapons delivery. Event includes LUU-type parachute flares and illumination rockets, but does not include self protection flares. Only one event may be logged per mission.

A2.4.15. **Joint Air Attack Team (JAAT) Event.** At least one attack in a CAS scenario coordinated and flown with actual helicopters. Only one event may be logged per mission.

A2.4.16. **Low Air-to-Air (LOW A/A).** Performing realistic, mission-oriented air-to-air operations while in a LOWAT-certified low altitude block. The event includes skills necessary to search for an aerial target while at low altitude, and then engage offensively or react defensively. Logging this event updates currency and the LOWAT event (AFI 11-214).

A2.4.17. **Low Altitude (LOW ALT).** Performing realistic, mission-oriented low altitude operations while in a certified LOWAT altitude block. The event includes low altitude navigation, tactical formation, defensive maneuvering to avoid or negate threats, and air-to-surface attacks. Logging this event updates currency and the LOWAT event (AFI 11-214).

A2.4.18. **Low Altitude Training (LOWAT) Event.** An event defined as performing realistic, mission-oriented low altitude operations while in a certified LOWAT altitude block. The event includes low altitude navigation, tactical formation, defensive maneuvering to avoid or negate threats. Only one event may be logged per mission, and is updated by LOW A/A or LOW ALT (AFI 11-214).

A2.4.19. **Low Altitude Tactical Formation (LATF).** Flying tactical formation while conducting LATN. Only two events may be logged per mission (AFI 11-214).

A2.4.20. **Low Altitude Tactical Navigation (LATN).** Low altitude training using the fundamental aspects of dead reckoning and point-to-point low altitude navigation, with or without prior route planning. Only two events may be logged per mission (AFI 11-214).

A2.4.21. **Maverick Event.** Event designed to achieve proficiency in the employment of the Maverick. Includes tactical mission planning, execution, and simulated/actual weapons delivery.

A2.4.22. **Medium Altitude Tactics.** Tactical formation generally flown above 5,000 feet AGL while ingressing to a target area, employing actual or simulated ordnance, and egressing with mutual support. A maximum of two medium altitude tactics events may be logged on any air-to-surface tactical mission.

A2.4.23. **Non-ADF Electronic Search Event.** Applies to CSAR-certified pilots only. Event using on-board non-ADF electronic search equipment (such as LARS or Quickdraw) for the purpose of locating ground personnel in a tactical scenario. Only one event may be logged per mission.

A2.4.24. **Pave Penny Event.** Event in which the pilot uses Pave Penny as a primary method to confirm target location. Training in a tactical scenario incorporating a JTAC and JLASER terminology is highly desired; however, conventional patterns may be flown due to range restrictions/equipment limitations. Only one event may be logged per mission.

A2.4.25. **SEAD-C.** A tactical event employing simulated or actual conventional munitions against any portion of a simulated air defense system, to include SAMs, AAA, GCI, and integrated systems.

A2.4.26. **Secure Voice.** Requires proper radio configuration for secure voice operation and successful utilization during tactical mission accomplishment. Only one event may be logged per mission.

A2.4.27. **Targeting Pod (TGP) Event.** Event designed to achieve proficiency in the employment of targeting pods. Includes any event where the TGP is used for target search/identification, target designation/track/mark, simulated/actual weapon guidance, or coordinate generation.

A2.4.28. **Target Mark.** A tactical event used in conjunction with a FAC(A)/CSAR target briefing and final Air Strike Control. A target mark includes actual expenditure of rockets, strafe, and illumination flares, and directing of lasers and IR pointers to mark or illuminate a target. Only one event may be logged per target marked. Multiple marks on the same target should integrate different fighters or a new target briefing to the maximum extent practical. For FAC(A) training, strafe or BDU-33s are considered secondary to rockets as a visual method for target marking and should be used on a limited basis if rockets are not readily available.

A2.4.29. **Visual Reconnaissance.** An event 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, basic navigational techniques, recognition of terrain features, pilotage, and DR. Only two events may be logged per mission.

Attachment 3**VERIFICATION GUIDE FOR AIR-TO-SURFACE****A3.1. Verification Briefing Outline.**

The following outline is provided as a guideline for the development of verification briefings:

1. OVERVIEW:

- a. Introduction (participants and briefing classification).
- b. Mission overview.

2. AREA OF OPERATIONS:

- a. Geography (topography, population centers, lines of communications, chokepoints and natural obstacles, major visual and radar significant identification points).
- b. Climatology (effects on unit operations, ground troop movements, and in-flight operations).
- c. Operating base (location, facilities, procedural constraints, strengths and limitations).
- d. Status of friendly forces (ground, air and support).

3. STATUS OF ENEMY FORCES:

- a. Ground forces and accompanying air defense threats (SAMs, AAA, EC, and MIJI), capabilities, strengths and weaknesses.
- b. Airborne forces (numbers, locations, capabilities and tactics).

4. MISSION EMPLOYMENT BRIEFING:

- a. Ground operations.
- b. Departure (WX contingencies, options).
- c. Route of flight (threat analysis, alternatives, fuel requirements, decision points).
- d. Target ingress (IP-to-target specifics, WW: EOB).
- e. Target area tactics.
- f. Weapons employment (target data, DMPI, attack parameters, load, fusing, suitability, delivery modes/backups).
- g. Egress plan (route, mutual support agreements).
- h. Re-attack plan/options.
- i. Downed pilot/wounded bird plan.
- j. Recovery (safe corridor procedures, IFF procedures, ASLAR, alternate and emergency air-fields).

5. ESCAPE AND EVASION:

- a. SAFEs.

- b. SAR procedures.

6. **ESSENTIAL ELEMENTS OF INFORMATION/REPORTS.**

- a. EEIs.

- b. Required reports and reporting procedures.