

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

**AIR FORCE INSTRUCTION  
11-2MQ-1, VOLUME 1**



**21 JANUARY 2010**

***Flying Operations***

**MQ-1—AIRCREW TRAINING**

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This publication implements Air Force Policy Document (AFPD) 11-2, *Aircraft Rules and Procedures*; AFPD 11-4, *Aviation Service*; and Air Force Instruction (AFI) 11-202, Volume 1, *Aircrew Training*. This volume establishes minimum Air Force standards for training and qualifying pilots and sensor operators who operate United States Air Force (USAF) MQ-1 aircraft and applies to all MQ-1 units to include Air Force Reserve Command (AFRC) and Air National Guard (ANG). Major commands (MAJCOMs), Direct Reporting Units (DRUs), and Field Operating Agencies (FOAs) will forward proposed supplements to this volume to Headquarters (HQ) USAF/A3O-AT through HQ Air Combat Command (ACC)/A3YU for approval prior to publication in accordance with (IAW) AFPD 11-2. Copies of MAJCOM, DRU, and FOA-level supplements, after approved and published, will be provided by the issuing activity to HQ USAF/A3O-AT, HQ ACC/A3YU, and the user MAJCOM, DRU, or FOA and National Guard Bureau (NGB) offices of primary responsibility (OPR). Field units below MAJCOM, DRU, and FOA-level will forward copies of their supplements to this volume to their parent organization OPR for post-publication review. **Note:** The terms DRU and FOA used in this paragraph refer only to those DRUs and FOAs that report directly to HQ USAF. Maintain supplement currency by complying with AFI 33-360, *Publications and Forms Management*. See paragraph **1.3** of this volume for guidance on submitting comments and suggesting improvements to this publication. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with the AF Records Disposition Schedule (RDS) located on the AF Portal at the Air Force Records Information Management System (AFRIMS) link located at <https://www.my.af.mil/gcss-af61a/afirms/afirms/>.

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The Privacy Act of 1974 affects this volume. The Privacy Act System Number F011 AF XO A, *Aviation Resource Management Systems (ARMS)*, covers required information. The authority for maintenance of the system is 37 U.S.C. 301a, Incentive pay: Pub.L. 92-204, Appropriations Act for 1973, Section 715; Pub.L. 93-570, Appropriations Act for 1974); Pub.L. 93-294, Aviation Career Incentive Act of 1974; DoD Directive 7730.57, Aviation Career Incentive Act and Required Annual Report; Air Force Instruction 11-401, *Aviation Management*; Air Force Instruction 11-402, *Aviation and Parachutist Service*, Aeronautical Ratings and Badges; Air Force Instruction 11-421, *Aviation Resource Management*; and E.O. 9397 (SSN). The reporting requirements in this volume are exempt from licensing IAW paragraph 2.11.10 of AFI 33-324, *The Information Collections Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*.

The Paperwork Reduction Act of 1974 as amended in 1996 and the Air Force Forms Management Program IAW AFI 33-360 affect this volume.

### **SUMMARY OF CHANGES**

**This document has been substantially revised and must be completely reviewed.** This revision aligns the training cycle with the 12-month fiscal year. It clarifies that the Ready Aircrew Program (RAP) applies only to ACC and ACC-gained units. It changes MAJCOM ANG OPR from ACC/A3G to NGB/A3O, and adds AFRC MAJCOM OPR as AFRC/A3T. This revision changes the term “non-RAP” to “basic skills”. **Table 4.1** Ground Training Requirements and **Table 4.2** Basic Skills (formerly Non-RAP) requirements have been removed and replaced with tables in the RAP tasking memorandum or MAJCOM specific guidance. Numerous changes have been made to the currency table (new **Table 4.1**). This revision clarifies Launch/Recovery (L/R) evaluation requirements and approval for local L/R training. Chemical, Biological, Radiological, Nuclear, and High-Yield Explosive (CBRNE) Defense Training requirements have been clarified, including elimination of the CBRNE flight. It incorporates the use of standardized task event identifiers. This revision removes a blanket authorization for ACC aircrew to obtain multiple qualifications without a specific multiple qualification authorization. It also clarifies criteria for instructor upgrade. The difference training paragraph has been updated. This instruction also revises the definition of experienced aircrew, replaces the definition for Operational Flight Trainer (OFT) with Predator Mission Aircrew Training System (PMATS), and replaces the Pilot Proficiency Sortie definition with Pattern Proficiency Sortie (PPS). Demanding and Non-Demanding sortie definitions have been deleted, as well as definitions for Basic Delivery and Tactical Delivery as they are not applicable to MQ-1 operations.

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## Chapter 1

### GENERAL GUIDANCE

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

#### 1.2. Responsibilities:

1.2.1. HQ ACC/A3 is designated the responsible agency for this volume IAW AFPD 11-2, and AFI 11-202, Volume 1. HQ ACC/A3 will:

1.2.1.1. Chair semi-annual ACC Realistic Training Review Boards (RTRB) to review ground and flying training requirements/programs for Combat Air Force (CAF) units. RTRB participants will include applicable ACC active and Air Reserve Component (ARC: ANG and AFRC) representatives. HQ ACC/A3 will invite MAJCOM A3s and NGB/A2 with major weapons systems for which ACC is the lead command to send representatives and inputs.

1.2.1.2. Process all change requests.

1.2.2. All applicable MAJCOMs will:

1.2.2.1. Determine additional training requirements to meet expected unit tasking (Ready Aircrew Program [RAP] Tasking Memorandum [RTM] or other MAJCOM specific guidance).

1.2.2.2. Submit MAJCOM supplements to HQ USAF/A3OT for approval before publication. Provide HQ USAF/A3OT, HQ ACC/A3YU, and all applicable MAJCOM OPRs a copy of approved supplements to this publication.

1.2.2.3. MAJCOMs, other than ACC, will forward a copy of their MAJCOM specific guidance to ACC/A3YU.

1.2.2.4. 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/tactics training and forward copies to each MAJCOM/A3 and 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. Assist ARC unit training programs as requested IAW the applicable unit advisory support program.

1.2.4.2. Attach wing- and group-level aircrew assigned to Aircrew Position Indicator (API) 6 positions to a flying squadron IAW AFI 11-401, *Aviation Management* and MAJCOM Supplements.

1.2.4.3. Except when otherwise mandated, designate the training level to which each API-6/8 (ARC: all flyers) will train. Upon request, provide MAJCOM/A3 (ANG: NGB/A3) with a list of Basic Mission Capable (BMC) and Combat Mission Ready (CMR) manning positions. Review programs and manning position designations annually.

1.2.4.4. If applicable, forward supplements to this volume and other supporting documents to the MAJCOM OPR for review (NGB/A3O, AFRC/A3T). Review supplements annually.

1.2.4.5. Identify training shortfalls that adversely impact combat capability. Operational units are required to submit, through appropriate channels, anticipated shortfall reports to MAJCOM OPR (NGB/A3O, AFRC/A3T). Prior to submitting the end of cycle report, units are reminded to prorate incomplete training, as applicable.

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

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

1.2.5.2. Review training and evaluation records of newly assigned aircrew and those completing formal training to determine the training required to achieve BMC or CMR and to ensure compliance with provisions of this instruction.

1.2.5.3. Orient training missions to develop basic combat skills and practice tactics that simulate conditions anticipated in the unit mission.

1.2.5.4. (**ACC/ACC-Gained only**) Provide guidance to ensure logging of only effective RAP missions as RAP sorties.

1.2.5.5. Determine missions and events in which individual BMC aircrew will maintain qualification (QUAL) versus familiarization (FAM).

1.2.5.6. Determine utilization of BMC aircrew.

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

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

1.2.5.9. Determine program for supervisory review of armament recordings.

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

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

1.2.5.12. Ensure aircrew members only participate in missions, sorties, and events in which they are qualified, current, and prepared.

1.2.5.13. Ensure aircrew accurately record missions, sorties, and events IAW this instruction and MAJCOM specific guidance.

1.2.5.14. Develop and administer Semi-Annual Take-off/Landing/Go-around Training as described in paragraph 4.2.7.

1.2.6. Training Reports. Designed operational capability (DOC) tasked squadrons will submit a training report to higher headquarters (HHQ) IAW MAJCOM/A3 directives. Squadrons may submit out-of-cycle reports at anytime if HHQ assistance is required to prepare for UTC or deployment tasking. Report only significant shortfalls or limiting factors (LIMFACS) that affect most or all of the squadron for prolonged periods of time. Include possible solutions or specific assistance required if able. MAJCOM will attempt to rectify or minimize noted shortfalls or LIMFACS while the training cycle is under way.

1.2.6.1. Shortfalls occur when required mission training tasks are not accomplished due to shortages of equipment, munitions, ARMS software, etc. Example: unable to accomplish actual weapons release due to a shortage of training weapons. LIMFACS are factors, constraints, restrictions, etc. that degrade training effectiveness. Example: squadron's ability to accomplish actual weapons release is limited due to the lack of ranges that allow aircraft to drop munitions. This may include support hardware and software.

1.2.6.2. All deviations from these training requirements, after prorating, will be reported to MAJCOM/A3 (NGB/A3O, AFRC/A3T). This includes requirements waived by Operations Group Commander (OG/CC). Submit via e-mail training reports to appropriate MAJCOM program manager.

1.2.6.3. (N/A AFSOC) CAF OG/CCs will submit a RAP training report every fourth month during the 12-month training cycle (February, June and end of cycle report in October). In lieu of RAP reports, ACC Formal Training (TF-coded) Units (FTU) will submit Status of Formal Training reports every four months during the training cycle (Feb and Jun and end of cycle report). Reporting will be IAW guidance and examples at the ACC/A3YU Community of Practice (CoP) at <https://wwwd.my.af.mil/afknprod/ASPs/CoP/EntryCoP.asp?Filter=AC-OP-02-94>. RAP/FTU briefings should be submitted via e-mail to ACC/A3YU ([acc.a3yu@langley.af.mil](mailto:acc.a3yu@langley.af.mil)).

1.2.7. Individual aircrew will:

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

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

1.2.7.3. Participate only in ground and flying activities for which they are qualified, current, and prepared.

**1.3. Processing Changes.** Forward recommendations for change to this volume to HQ ACC/A3Y on AF Form 847, *Recommendation for Change of Publication*. HQ ACC/A3Y will coordinate changes to this instruction with MAJCOM OPRs and consolidate recommended changes and forward proposed interim changes to HQ USAF/A3O-AT. HQ USAF/A3O is the approval authority for changes to this volume. Handle time-sensitive changes by immediate-action message.

**1.4. Training.** Aircrew training is designed to progress a pilot or sensor operator from Initial Qualification Training (IQT), to Mission Qualification Training (MQT), and finally to Continuation Training (CT).

1.4.1. **IQT.** IQT provides aircrew members the training necessary to initially qualify in a basic aircraft position and flying duties without regard to any specific unit's mission. See [Chapter 2](#). Upon completion of IQT, the aircrew member 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. Waiver authority for any aircrew member other than general officers above the wing level to remain BAQ for longer than six months is MAJCOM/A3 (NGB/A3O, AFRC/A3T).

1.4.2. **MQT.** MQT provides aircrew members the advanced training necessary to qualify in an assigned aircrew position to perform the missions assigned to a specific unit. See [Chapter 3](#). Aircrew will maintain BAQ status until completion of MQT. Completion of MQT or Formal Training Unit (FTU) instructor course is a prerequisite for Combat Mission Ready (CMR) or Basic Mission Capable (BMC). **Note:** CMR/BMC status requires a MSN evaluation IAW AFI 11-2MQ-1, Volume 2, *MQ-1 Crew Evaluation Criteria*.

1.4.3. **Continuation Training (CT).** CT is the training program for CMR/BMC-designated aircrew. CT is designed to maintain a minimum level of proficiency and/or to increase the capability of individual aircrew. There are two aspects of CT: Specific MAJCOM guidance (i.e., RAP TM for ACC) and Basic Skills training requirements found in [the RAP TM](#).

1.4.3.1. **(ACC/ACC-Gained only) Ready Aircrew Program (RAP).** RAP is the ACC program designed to focus training on capabilities needed to accomplish a unit's core tasked missions. Types of training sorties and events are unit specific and established by the MAJCOM and unit commander. Specifics are contained in the RTM which is released periodically and is to be filed at the back of this instruction. AFSOC follows a semi-annual training cycle: Oct-Mar and Apr-Sep. AFSOC will publish RTMs as required.

1.4.3.2. **Basic Skills Training Requirements.** These requirements ensure skills are maintained to safely and proficiently operate unit aircraft and associated equipment. These requirements apply to all MQ-1 units and generally do not change. Basic Skills sorties and events are contained in the RTM (or MAJCOM specific guidance).

1.4.4. **CT Requirements.** There are two basic designations for qualified aircrew: CMR and BMC. CMR training requirements are considerably more robust than BMC requirements.

1.4.4.1. **Combat Mission Ready (CMR).**

1.4.4.1.1. Minimum training required for aircrew to be qualified and proficient in all of the primary missions tasked to their assigned unit and weapons system.

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

at least 50 percent, if available, designated CMR. (ARC: any aircrew member may be designated CMR or BMC at OG/CC discretion).

1.4.4.1.3. CMR aircrew maintain proficiency and qualification in all core missions of the flying unit to which they are assigned/attached. CMR aircrew must maintain currency in all core designated flight training, sorties and events and all mission ground training which affect CMR status.

1.4.4.1.4. Non-CMR (N-CMR). Failure to complete CMR training or maintain designated currencies results in regression to N-CMR status unless waived by appropriate authority. While N-CMR, pilots may perform missions (including exercises and contingencies) and events in which they are current and qualified at the discretion of the SQ/CC. Aircrew that regress to N-CMR status will accomplish the requirements in accordance with paragraph 4.6

#### 1.4.4.2. Basic Mission Capable (BMC).

1.4.4.2.1. The minimum training required to be familiar with all (and may be qualified and proficient in some) of the primary missions tasked to their assigned unit and weapons system.

1.4.4.2.2. All active duty wing aircrew positions that are not designated CMR positions, are BMC positions. BMC designations are assigned to aircrew that have a primary job performing wing supervision or staff functions that directly support the flying operation. FTU/USAF Weapons School (USAFWS) instructors and operational test aircrew are also assigned BMC status.

1.4.4.2.3. BMC aircrew maintain familiarization with all unit core missions. They may also maintain proficiency and qualification in some of the unit core missions. For those missions in which they maintain familiarization only, BMC aircrew must be able to attain proficiency and qualification in 30 days or less. BMC aircrew must accomplish all mission-related ground training designated by their assigned SQ/CC.

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

1.4.4.2.5. Non-BMC (N-BMC). Failure to complete BMC required training results in regression to non-BMC (N-BMC) status. While N-BMC, SQ/CC will determine missions aircrew may perform and supervision level required. Aircrew that regress to N-BMC status will accomplish the requirements in accordance with paragraph 4.6

1.4.4.3. **Specialized Training.** Specialized training is training in any special skills that are not required by every aircrew member, but are necessary to carry out the unit's assigned missions. Specialized training is normally accomplished after an aircrew member is assigned CMR/BMC status. Unless otherwise specified in this AFI, aircrew in CMR or BMC positions may hold special capabilities/qualifications as long as any additional training requirements are accomplished.

### 1.5. Training Concepts and Policies:

1.5.1. Units will design training programs to achieve the highest degree of readiness consistent with flight safety and resource availability. Training must balance the need for realism against the expected threat, aircrew capabilities, and safety. This instruction provides

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

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

1.5.3. Design training missions to achieve combat capability in squadron-tasked roles, maintain proficiency, and enhance mission accomplishment and safety. RAP training missions should emphasize basic combat skills or scenarios that reflect procedures and operations based on employment plans, location, current intelligence, and opposition capabilities. Tactical training will include use of captive and live weapons, threat simulators, and countermeasures.

1.5.4. In-flight Supervision: Unless specifically directed, the SQ/CC determines the level of supervision necessary to accomplish the required training. If the mission objectives include introduction to new tasks, or instruction to correct previous discrepancies, an instructor pilot (IP) or instructor sensor operator (ISO) is generally required.

1.5.5. An experienced aircrew member has one of the following:

1.5.5.1. 500 hours MQ-1.

1.5.5.2. 250 hours MQ-1 and previously experienced in another MDS.

1.5.5.3. 150 hours MQ-1 and previously experienced in MQ-9.

**1.6. RAP Policy and Management (ACC/ACC-gained units only): Note:** RAP is an ACC program that tasks operational MQ-1 units with specific training sorties and events to ensure units are prepared to accomplish their DOC mission(s). Other MAJCOMs will develop and direct specific training guidance that ensures units are appropriately trained for contingency operations.

1.6.1. The ACC/ACC-gained units' RAP annual training cycle is aligned with the 12 month fiscal year calendar, October - September. AFSOC follows a semi-annual training cycle October-March and April - September.

1.6.2. Each RAP qualification level is defined by a total number and type of RAP missions, plus specific weapons delivery qualifications as determined by MAJCOM and unit commanders. The breakout of sorties and mission types is provided as a guideline; minor variations are authorized.

1.6.3. Variations in sortie/mission types may be used as a basis for regression by the SQ/CC. Qualification in a mission is determined by the SQ/CC considering the MAJCOM guidance and the individual's capabilities.

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

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

1.6.6. CMR status requires:

1.6.6.1. A 1-month look-back at the CMR mission rate.

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

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

1.6.6.4. Completion of mission-related ground training, to include a current verification (see paragraph 3.2.2 for initial verification and paragraph 4.2.5 for continuation verification).

1.6.6.5. Squadron CC certification.

1.6.7. Special Capabilities or Qualifications. SQ/CCs will determine which aircrew will train for and maintain special capabilities or qualifications. Special capability/qualification sortie and event requirements are normally accomplished in addition to baseline CMR/BMC sortie/event requirements.

1.6.8. CMR and BMC (wing-level and below) aircrew will fly the required monthly mission rate. If unable, refer to Regression, paragraph 4.7

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

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

**1.7. RAP Training Mission Program Development (ACC/ACC-Gained only): Note:** RAP is an ACC program that tasks operational MQ-1 units with specific training sorties and events to ensure units are prepared to accomplish their DOC mission(s). Other MAJCOMs will develop and direct specific training guidance that ensures units are appropriately trained for contingency operations.

1.7.1. RAP sortie and event requirements (see Attachment 2 for definitions) apply to CMR and BMC aircrew as well as those individuals carrying special capabilities or qualifications and are IAW the RAP tasking message. The requirements in Table 1.1 establish the minimum number of sortie/missions per training cycle for BMC and CMR levels of training. The current RTM takes precedence over this volume and may contain updated requirements and events not yet incorporated in Attachment 2.

1.7.2. Basic Skills requirements, missions, and events designed to ensure maintenance of basic crewmember skills are in addition to RAP requirements. Aircrew may log Basic Skills events on RAP sorties provided there is no effect on RAP sortie effectiveness. Unit flying programs contain sorties for aircrew to accomplish their minimum Basic Skills requirements.

1.7.3. Consider collateral or cost-of-business mission requirements when developing unit flying programs. These missions do not directly relate to combat employment or basic skills training but are necessary for accomplishment of day-to-day unit operations. Functional check flights and aerial demonstration support are in this category. RAP training does not require these sorties.

1.7.4. Unit flying programs contain a number of attrition sorties that compensate for non-effective training sorties. Log a non-effective sortie when not accomplishing a major portion of valid training for a planned RAP or Basic Skills training mission due to poor weather, air aborts, etc. In order to allocate accurate numbers of attrition sorties to unit flying programs, it is essential that units appropriately log non-effective sorties.

**Table 1.1. MQ-1 Total RAP Sortie Requirements.**

<b>PILOTS AND SENSOR OPERATORS</b>			
<b>MAJCOM</b>	<b>CYCLE</b>	<b><u>BMC</u> INEXP/EXP</b>	<b><u>CMR</u> INEXP/EXP</b>
ACC	12 Month	48/42	60/48
	1-Mo. Lookback	4/3	5/4
	3-Mo. Lookback	12/9	15/9
ARC	12 Month	48/36	54/48
	1-Month Lookback	4/3	5/4
	3-Month Lookback	12/9	14/9

### **1.8. Training Records and Reports:**

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

1.8.1.1. AFI 11-202 Volume 1.

1.8.1.2. AFI 11-202, Volume 2, *Aircrew Standardization/Evaluation Program*.

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

1.8.1.4. AFMAN 33-363, *Management of Records*.

1.8.1.5. Air Force Records Information Management System (AFRIMS) link located at <https://www.my.af.mil/gcss-af61a/afirms/afirms/>.

1.8.1.6. Applicable MAJCOM directives.

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

1.8.2.1. Ground training.

1.8.2.2. Requirements and accomplishment of individual sorties, MAJCOM-specific sorties and missions types, and events cumulatively for the training cycle.

1.8.2.3. Look-back: MAJCOM-specific mission requirements using 1-month, and 3-month running totals for look-back.

1.8.2.4. Currencies. Sortie and event currencies required for unsupervised flight.

1.8.2.5. Weapons employment records in sufficient detail to document all employment attempts and histories.

1.8.3. Units may fill in ARMS "NO DATE" with either the date of the last FTU sortie or the unit mission-certification date.

### **1.9. Mission and Armament Recording.**

1.9.1. Aircrew should use and assess all available training documentation, such as digital recording devices, on all missions. Individual aircrew should review applicable portions of mission tapes to enhance training.

1.9.2. As a guide, the following items should be reviewed after every mission: weapons parameters, accuracy, identification procedures, adherence to training rules, communications procedures and discipline, flight discipline, and tactical employment.

### **1.10. Aircrew Utilization Policy:**

1.10.1. Commanders will ensure wing/group aircrew (API-1/6) fill authorized positions IAW unit manning documents and that aircrew member status is properly designated. The overall objective is that aircrew perform combat-related duties. Supervisors may assign aircrew to valid, short-term tasks (escort officer, flight evaluation board (FEB)/mishap board member, etc.), but must continually weigh the factors involved, such as level of aircrew tasking, flying proficiency, currency, and experience. 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.

1.10.2. Commanders must ensure that MQ-1 aircrew assigned duties are commensurate with their level of assignment. Units may assign the following duties required by various publications to CAF squadron-level aircrew: tactics officer, scheduler, flying safety officer, supervisor of flying, mobility and contingency plans officer, training officer (except ARMS documentation), SQ standardization and evaluation liaison officer, and other duties directly related to flying operations. Do not attach squadron-assigned MQ-1 aircrew to wing or group staffs or man wing or group staff positions with squadron-assigned MQ-1 aircrew unless total wing, group, and squadron MQ-1 crew manning is 100 percent or better. In some instances, such as squadron-assigned flying safety officers, units may attach squadron-assigned MQ-1 aircrew to the wing. Commanders (CCs) will assure wing-and-above staff aircrew perform duties justified in MAJCOM manpower standards documents and fill positions authorized in UMDs.

1.10.3. Aircrew will not perform long-term duties which detract from their primary duties of training for, or performing, the unit flying mission.

**1.11. Sortie Allocation Guidance: Note:** Sortie allocation guidance applies to training sortie/missions, not contingency operations.

1.11.1. In general, inexperienced aircrew should receive sortie allocation priority over experienced aircrew. Priorities for sortie allocation are as follows:

1.11.1.1. Formal Training (TF-Coded) Units. Formal syllabus training, Instructor Upgrade Training, Instructor CT, authorized staff personnel not performing Instructor or Flight Examiner (FE) duties.

1.11.1.2. Operational (CC-Coded) Units. Squadron-assigned CMR, squadron-assigned MQT, wing-assigned CMR, wing-assigned MQT, and wing assigned BMC.

1.11.1.3. Test (CB-coded) Units. Requirements directed by MAJCOM, training required to prepare for assigned projects and tasking, BMC training requirements that cannot be accomplished on primary missions.

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

1.11.3. For wings consisting of both FTU and operational units, at least one of the following aircrew will maintain formal instructor status (when possible): WG/CC, WG/CV, OG/CC, OG/CD. For FTU-only wings, all API-6 aircrew will maintain instructor status (optional for WG/CC, OG/CC, and functional check flight (FCF) crews). FTU-only wings will fly API-1/6 aircrew as required by programmed flying training (PFT).

1.11.4. API-8 rated personnel flying authorizations will be IAW AFI 11-401 and MAJCOM guidance. Above-Wing-Level and test unit aircrew will fly the BMC rate; however, are not required to complete BMC-specific missions and events or meet monthly lookback requirements. They will accomplish Basic Skills requirements within their BMC number of sorties. Units should provide assigned aircrew adequate resources to maintain minimum training requirements; however, the support will not come at the expense of the flying squadron's primary mission. API 6/8 flyers will strive to accomplish Basic Skills requirements with allotted BMC sorties. If units cannot meet attached aircrew member requirements, they must request relief IAW AFI 11-401, MAJCOM Supplement. Units requiring flying hour adjustments for attached aircrew must request program changes IAW MAJCOM instructions.

1.11.5. (N/A AFRC and ANG) There is no maximum sortie count for CMR aircrew. **Table 1.2** defines the minimum and maximum sortie requirements for other aircrew. On occasion, unique operations may require aircrew to fly more than the maximum number of sorties authorized, however, this may impact training of other aircrew. Aircrew assigned or attached to ACC Office of the Inspector General (ACC/IGS) as API-6 will maintain RAP currencies/lookback per API-8 guidance.

**Table 1.2. MQ-1 Sortie Requirements for Other-Than-Squadron-Level Crews.**

Crew Position	CT Status (Minimum Sortie Requirement)	Unit's Aircraft Code	Organization Level	Maximum Sortie Allowance (INEXP/EXP)
Pilot/Sensor Operator (SO)	CMR	CC	Wing and above	As required by qualifications
Pilot/SO	BMC	CC	Wing	As required by qualifications
Pilot/SO	BMC	TF	Wing	As required by PFT
Pilot/SO	BMC	CB	Wing	As determined by test program requirements
Pilot/SO	BMC	CC/CB/TF	Above Wing	BMC Rate

### 1.12. Waiver Authority:

1.12.1. Unless specifically noted otherwise in the appropriate section, waiver authority for all requirements of the RAP tasking message/MAJCOM-specific guidance and for all

provisions in **Chapter 4**, **Chapter 5**, and **Chapter 6** of this volume is the OG/CC (Commander, Test and Evaluation Group (TEG/CC) is considered OG/CC for the purposes of this instruction). For all other provisions of this volume, the waiver authority is MAJCOM/A3, or as delegated.

1.12.2. Units subordinate to a NAF will forward requests directly to MAJCOM OPR and provide their NAF OPR with an information copy.

1.12.3. Waivers to this volume will be valid until end of training cycle, unless the approving official cancels it in writing, or revises the publication.

## Chapter 2

### INITIAL QUALIFICATION TRAINING

**2.1. General.** This chapter outlines Initial Qualification Training (IQT) for MQ-1. IQT includes Basic Training (B-Course), Re-qualification Training (TX), Launch and Recovery (L/R) Training, and Senior Officer Training.

2.1.1. IQT will normally be conducted during formal syllabus courses at an FTU. In extenuating circumstances, when FTU training is not available within a reasonable time period, and with appropriate approval, IQT may be conducted at the local unit IAW the provisions of this chapter. The following guidance applies to unit administered IQT (other than being accomplished in the FTU).

2.1.1.1. IQT Programs will be based upon the syllabus tracks, flow programs, sorties, and events required in ACC Syllabus Course MQ-1B Qualification Training (Basic course) MQ1QT, MQ-1B Launch/Recovery Training Course MQ1LR, Predator Formal Training Unit Instructor Upgrade Training Course FIUT, or Predator Foreign Remote Pilot/Sensor Operator Training Courses FORNPRED.

2.1.1.2. Completion of IQT requires a flight evaluation IAW AFI 11-202, Volume 2 and AFI 11-2MQ-1, Volume 2.

2.1.1.3. Aircrew will not be evaluated on events in which they were not specifically trained or qualified (i.e., mission ready aircrew not trained in launch and recovery (L/R) operations).

2.1.2. Completion of L/R qualification training will conclude with an AF Form 8 flight evaluation IAW AFI 11-202, Volume 2 and AFI 11-2MQ-1, Volume 2.

### 2.2. Approval/Waiver for Local IQT:

2.2.1. Gaining MAJCOM/A3 (NGB/A3O, AFRC/A3T) is the approval authority to conduct local IQT, and is waiver authority to change the formal requirements of locally conducted IQT. Provide a copy of local IQT programs and waivers to HQ ACC/A3Y.

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

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

2.2.1.1.2. Summary of individual's flying experience.

2.2.1.1.3. Date training will begin and expected completion date.

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

2.2.2. When developing unit-level L/R IQT programs, commanders will base the program on MQ-1B Launch/Recovery Training Course MQ1LR and provisions in paragraph 6.5 Forward copy of unit re-qualification program to MAJCOM POC (NGB/A3O, AFRC/A3T) and ACC/A3YU.

2.2.2.1. OG/CC is approval authority to administer local L/R training for individuals previously qualified in L/R operations in the last three years.

2.2.2.2. Gaining MAJCOM/CC (NGB/A3O, AFRC/A3T) is the approval authority for non-formal course IQT for Colonel Selects and above to be conducted at the unit to which the officer is assigned.

**2.3. Prerequisites.** Course prerequisites are IAW AFI 11-202, Volume 1, this instruction, the appropriate formal course syllabus and Air Force Education and Training Course Announcements (applicable ACC Syllabus Course). Individuals without all prerequisites met or waived may be denied entry into training.

**2.4. Ground Training.** Ground training may be tailored to an individual's background and experience. Use available and current reference materials such as Air Force Tactics, Techniques and Procedures (AFTTP), instructor guides, and audiovisual programs as supporting materials to the maximum extent possible. Accomplish simulator missions in an MQ-1 Aircrew Training Device (ATD). Use an approved Predator Mission Aircrew Training System (PMATS) to the maximum extent possible; however, OG/CCs can authorize a Cockpit Familiarization Trainer, Part-Task Trainer, Cockpit Procedures Trainer (CPT), or Ground Control Station (GCS) if a PMATS is not available.

### **2.5. Flying Training:**

2.5.1. Mission sequence and prerequisites will be based upon required events from the appropriate formal course syllabus.

2.5.2. Training will be completed within the time specified by the approved syllabus. Failure to complete within the specified time limit requires notification through channels to MAJCOM/A3 (NGB/A3O, AFRC/A3T) with aircrew member's name, rank, reason for delay, planned actions, and estimated completion date.

2.5.3. Aircrew will fly under instructor supervision until completion of IQT.

2.5.4. Formal course syllabus mission objectives and tasks are minimum requirements. The SQ/CC may authorize incorporation of additional training events into the program, based on student proficiency and background. Additional training due to student non-progression is available within the constraints of the course syllabus. SQ/CCs may add discretionary additional training sorties as required.

### **2.6. IQT for Senior Officers:**

2.6.1. All formal training courses for senior officers (Colonel selects and above) will be conducted at the FTU unless waived IAW paragraph [2.2](#)

2.6.2. Senior officers must meet course entry prerequisites and will complete all syllabus requirements unless waived IAW syllabus directives. **Note:** paragraph [2.2](#) waiver authority applies only for local IQT.

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

## Chapter 3

### MISSION QUALIFICATION TRAINING

**3.1. General.** MQ-1 Mission Qualification Training begins at the FTU during IQT, normally culminating with a mission evaluation and the aircrew member attaining BAQ status. Guidance in this chapter is provided to assist unit CCs in developing a unit-specific MQT program to upgrade newly assigned aircrew members to BMC or CMR to accomplish the unit mission. Completion of the unit-specific MQT program is required for the aircrew member to attain BMC or CMR status.

3.1.1. A unit administered MQT program will be approved by OG/CC (forward a copy of local MQT training programs to MAJCOM).

3.1.2. Units may tailor the program for each aircrew member based on experience, currency, documented performance, and formal training.

3.1.3. Sorties and events for a unit administered MQT program will include sorties and events needed to qualify an aircrew member in the unit-specific mission and TTPs. The program will incorporate unaccomplished sorties and events from the IQT syllabus.

3.1.4. Units will ensure events not accomplished at the FTU are completed or waived before the individual is certified BMC or CMR.

3.1.5. The Initial MSN Evaluation and certification to CMR/BMC will be completed NLT 120 calendar days after the individual's completion of IQT; notify MAJCOM/A3 (NGB/A3O, AFRC/A3T) if training exceeds 120 calendar days. MQT training is complete upon SQ/CC certification to BMC/CMR.

3.1.6. Aircrew in MQT should not fly in FLAG, Weapons School support deployments, Weapons System Evaluation Programs, or equivalent type exercises.

### 3.2. Ground Training:

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

3.2.2. **Initial Verification/Special Operations Planning Exercise (SOPE).** CMR aircrew 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 or DO (chairman), weapons officer, intelligence officer, a senior Instructor SO, and a plans representative. Suggested verification briefing guides are at [Attachment 3](#).

3.2.2.1. CMR aircrew 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.

3.2.2.2. 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.

3.2.2.3. AFSOC crews who participate in a SOPE will meet Initial Verification requirements.

3.2.2.4. SQ/CCs may elect to count completion of unit-specific MQT programs or combat and combat support sorties flown during MQT as satisfying the initial verification/SOPE requirement.

**3.2.3. Initial Aircrew Chemical, Biological, Radiological, Nuclear, and High-Yield Explosive (CBRNE) Defense Training.** Aircrew CBRNE training is designed to ensure aircrew proficiency in the overall use of CBRNE individual protective equipment (IPE) and to familiarize aircrew with combat capabilities while wearing CBRNE IPE.

3.2.3.1. Ground Training. Units will ensure aircrew complete appropriate CBRNE defense training courses IAW AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations*, and MAJCOM guidance. Aircrew will accomplish the following training prior to the first ATD with CBRNE IPE:

3.2.3.1.1. Physiological effects/first aid of CBRNE agents.

3.2.3.1.2. Equipment orientation/fitting of full IPE.

3.2.3.1.3. GCS entry/exit procedures.

3.2.3.2. CBRNE ATD. When tasked to deploy to a CBRNE high threat area (HTA) or medium threat area (MTA) as outlined in AFI 10-2501, aircrew will accomplish a CBRNE ATD mission. This training is typically accomplished in preparation for Launch and Recovery Element (LRE) deployment to HTA or MTA. The CBRNE ATD will be accomplished upon each tasking to deploy to an HTA or MTA. Mission will be conducted in standard ground crew CBRNE IPE as a minimum, and consist of correctly donning and checking IPE, simulated emergency procedures, basic tactical mission profile, crew coordination procedures, and doffing of simulated contaminated equipment. Both aircrew will wear the equipment at the same time in order to adapt to limitations to crew coordination. An elevated MOPP Level (3 or 4) appropriate to the simulated threat(s) will be maintained for a minimum of 30 minutes in the ATD. CBRNE ATD missions are intended to complement existing ATD mission profiles and are not additive to ATD requirements. Units without access to an ATD may use a GCS for training.

3.2.3.2.1. Aircrew members will be trained to use Ground CBRNE IPE upon the completion of initial ground and ATD training.

3.2.3.2.2. The initial CBRNE ATD mission may be credited towards CBRNE CT requirements for the training cycle in which it was accomplished.

### **3.3. Simulator Training:**

3.3.1. PMATS will be used if available. If a PMATS is unavailable, MQT simulator requirements may be combined into one or more CPT missions to accomplish appropriate switchology and emergency procedures training. MQT aircrew should fly mission profiles that replicate wartime tasking.

#### **3.3.2. MQT PMATS Event Requirements:**

3.3.2.1. Instruments and Emergency Procedures. Personal and mission preparation, normal ground operations, flight operations, navigation, emergency procedures and

approaches, published penetration and approach to any specified alternate and home base, post-flight ground operations, Critical Action Procedures (CAPs), and selected non-CAPs emergency procedures (EP).

3.3.2.2. SAT and Weapons Anomalies. Heavyweight takeoff, tactical procedures, tactical navigation, weapons deliveries (normal and backup), weapons anomalies, emergency divert/recovery procedures, hung ordnance procedures, and selected emergency procedures. These missions will be accomplished using a tactical scenario.

**3.4. Flying Training.** Unit-developed MQT programs should use profiles typical of squadron missions. Maximum use of armament recording assets and actual deliveries are encouraged on all MQT missions.

3.4.1. Supervision. An IP/ISO is required unless specified otherwise. The SQ/CC will determine the physical position of supervision unless specified otherwise.

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

3.4.3. Mission Evaluation. This mission will be administered IAW AFI 11-202, Volume 2, AFI 11-2MQ-1, Volume 2, and MAJCOM and local directives. Crews will only be evaluated on events in which they are trained.

## Chapter 4

### CONTINUATION TRAINING

**4.1. General.** This chapter, along with the current MAJCOM-specific guidance (RTM for ACC/ ACC Gained), outlines ground and flying continuation training requirements for BAQ, BMC, and CMR aircrew. Aircrew must be qualified IAW this instruction, AFI 11-401, AFI 11-202, Volume 2, AFI 11-2MQ-1, Volume 2, and applicable MAJCOM and local instructions. Aircrew must complete IQT to fly in BAQ status; MQT (or FTU instructor upgrade) to fly in BMC/CMR status. Refer to **Chapter 6**, Specialized Training, for additional training program specifics. During CT, aircrew will update all applicable ground and flying currencies IAW AFI 11-202, Volume 1, this volume, and other ancillary training publications. Training terms and sortie/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.

**4.2. Ground Training.** Ground training will be accomplished IAW the ground training table in the RTM or MAJCOM specific guidance. Waiver authority for the ground training specified is IAW the reference directive. Ground training accomplished during IQT/MQT may be credited toward CT requirements for the training cycle in which it was accomplished. The RTM is a reference for MQ-1 specific ground training only, which will be tracked in ARMS. The RTM and/or MAJCOM specific guidance does not include all Air Force ancillary training, which should be tracked at unit level. Where discrepancies exist, the reference directive takes precedence. **Chapter 6** contains specialized programs with both flying and ground training requirements.

**4.2.1. Instrument Refresher Course (IRC).** IAW AFMAN 11-210, *Instrument Refresher Program*; AFI 11-202, Volume 2; and MAJCOM supplements.

4.2.1.1. Units will ensure IRC programs include briefings on recognition and how to deal with spatial disorientation, unusual attitude recoveries, transition between visual and instrument conditions, weather avoidance, and navigation procedures.

4.2.1.2. Units will also develop theater-specific instrument academic programs for inclusion in their pre-deployment spin-up training programs. Units will include a course on flight operations in icing conditions with emphasis on the MQ-1 limitations, capabilities, and avoidance in their theater-specific instrument academic training.

**4.2.2. Aircrew Training Device (ATD):**

4.2.2.1. The RTM and MAJCOM specific guidance depicts minimum ATD training requirements. Accomplish ATD training requirements in a PMATS. OG/CC can substitute other training devices as described in **paragraph 2.4** if PMATS is not available. Units will determine additional CT training device requirements based on expected employment tasking, training device capabilities, and mission training objectives. Units will determine appropriate supervision levels for ATD missions/tasks. Units will track all aircrew device training used to satisfy RAP and basic skills requirements. **Note:** Aircrew are not expected to have or gain proficiency in EPs in phases of flight in which they are not qualified (e.g., L/R ops).

4.2.2.2. Units will develop scenarios that cover all CAPs, EPs, instrument approach procedures, and other scenario requirements based on expected employment tasking and training device capabilities. Emphasis should be placed on training not readily attainable during daily flying activities. Units will review scenarios annually and update as required. Unusual attitude and inadvertent weather entry procedures training and unusual attitude recovery training will be accomplished during all instrument or emergency procedure ATD training. Unusual attitude training will include recognition of heads up display (HUD) limitations.

4.2.2.3. Tactical (TAC), EP, and CBRNE missions will be accomplished in a PMATS, if available. If a unit does not have access to a PMATS, EP and CBRNE missions will be accomplished in the best ATD available. If required, a GCS may be used to accomplish this training.

4.2.2.3.1. EP ATD. 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, CAPs, aircraft subsystem failure checklist procedures, in-flight EPs, and instrument procedures.

4.2.2.3.2. TAC ATD. 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 and counter tactics, weapons malfunction procedures, relevant CAPs and aircraft subsystem failure procedures, controllability and structural damage checklists.

#### 4.2.3. Situational Emergency Procedures Training (SEPT).

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

4.2.3.1.1. SQ/CC or SQ/DO involvement in the selection of monthly SEPT topics.

4.2.3.1.2. Develop SEPT scenarios using MQ-1 mishaps/incidents as baseline cases.

4.2.3.1.3. Discuss at least two EPs for each phase of flight--in which qualified--during the SEPT session.

4.2.3.2. Aircrew will accomplish a SEPT each calendar month. Currency will expire at the end of the following month. Aircrew with an expired SEPT are grounded until subsequently completed. ACC/ACC-gained aircrew will accomplish a minimum of two SEPTs each 12-month training cycle with an IP or SQ supervisor. AFSOC aircrew will accomplish a minimum of one SEPT each 6-month training cycle with an IP or SQ supervisor.

4.2.3.3. SEPTs should be accomplished in the best ATD available or a GCS. If an ATD or GCS is not available, SEPTs should be accomplished one-on-one, but small flight-

sized groups are allowable if all members participate to the full extent and share equal time responding to emergency situations.

4.2.3.4. Completion of an ATD EP profile satisfies the monthly SEPT requirement, if not already accomplished.

4.2.3.5. IPs/supervisors who administer/observe EP ATDs satisfy their monthly SEPT requirement.

4.2.3.6. Formal course student EP/ATDs can satisfy the monthly SEPT requirement for the IP who administers the training.

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

4.2.4.1. Academic instructors should be USAFWS graduates, tactics personnel or experienced instructors, and will determine training requirements based on unit- and theater-specific mission requirements and unit Mission Essential Task Listing (METL).

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

4.2.4.2.1. Air-to-surface weapons: description, operation, parameters, fusing, limitations, preflight, tactics, normal and emergency procedures/techniques.

4.2.4.2.2. Capabilities, characteristics, and TTPs of other CAF assets that the MQ-1 may integrate with in theater-specific operations.

4.2.4.2.3. AFTTP to include, as a minimum: AFTTP 3-1.General Planning, *General Planning and Employment Considerations*; AFTTP 3-1.Threat Guide, *Threat Reference Guide and Countertactics*; and AFTTP 3-1.Predator, *Tactical Employment – Predator*.

4.2.4.3. Develop specialized training to support specific weapons, tactics, mission capabilities, authentication, wartime Rules of Engagement (ROE), and safe passage procedures, and where applicable:

4.2.4.3.1. Counterland procedures, to include Strike Coordination and Reconnaissance (SCAR) procedures, and Close Air Support (CAS) procedures with Forward Air Controller-Airborne (FAC-A) and/or Joint Terminal Attack Controller (JTAC).

4.2.4.3.2. Intelligence, Surveillance, Reconnaissance (ISR) procedures; to include Reconnaissance Surveillance and Target Acquisition (RSTA) procedures.

4.2.4.3.3. On-Scene Commander (OSC) and Combat Search and Rescue (CSAR) procedures.

4.2.4.3.4. Combat operations lessons learned.

- 4.2.4.3.5. Theater specific threat reviews.
- 4.2.5. Continuation Verification/SOPE.
- 4.2.5.1. CT verification/SOPE updates aircrew on their squadron's wartime mission. Each CMR aircrew will participate in a squadron initial or continuation training verification/SOPE IAW the RTM or MAJCOM specific guidance as a briefer, board member, or seminar participant. Note: to facilitate future upgrades to CMR, SQ/CCs should encourage BMC aircrew to accomplish an initial verification/VPE and/or participate in CT.
- 4.2.5.2. ACC and AFRC aircrew who participate in a unit deployment in a tasked theater of operations may receive credit for CT verification (but not initial verification). Participating in remote split operations for a period of 14 days fulfills the unit deployment requirement. AFSOC: Participation in the planning and Verification Review Board (VRB) briefing of an operational, contingency, or exercise mission may be substituted for a SOPE. Unit commanders will determine which missions qualify to satisfy this requirement.
- 4.2.5.3. SQ/CC may elect to count combat and combat support sorties as satisfying the CT verification/SOPE requirement.
- 4.2.5.4. Suggested briefing guide is at [Attachment 3](#).
- 4.2.6. **Intelligence Training.** The intelligence training program will be closely aligned with the unit weapons and tactics training program. The focus and extent of academic training will be determined by the Unit/CC and be aligned with projected wartime tasking, threats, and unit equipment. In addition to threat knowledge, aircrew training should include, but is not limited to:
- 4.2.6.1. Visual Recognition (VR). Aircrew should be able to:
- 4.2.6.1.1. Visually identify aircraft (rotary and fixed-wing, including joint/allied assets) they are likely to encounter by name or numerical designator and determine whether the aircraft is a threat or non-threat.
- 4.2.6.1.2. Visually identify major combat ground vehicles and equipment, and determine friend or foe.
- 4.2.6.1.3. Visually identify major categories of naval vessels.
- 4.2.6.2. Collection and Reporting (C&R). C&R training will enable aircrew to initiate reports (In-Flight Report [INFLTREP], Communication Instructions Reporting Vital Intelligence Sighting [CIRVIS], etc.) and will familiarize them with the information requirements of the intelligence-generated Mission Report (MISREP) and Intelligence Report (INTREP).
- 4.2.6.3. Current Intelligence will also cover significant military/political developments (including threat updates), in the squadron's mission areas of interest. Use guidance contained in AFI 14-105, *Unit Intelligence Mission and Responsibilities*, and MAJCOM supplements, to develop and manage unit intelligence training programs. The Unit/CC will determine aircrew testing requirements for intelligence and Electronic Combat (EC) training.

**4.2.7. Semi-Annual Take-off/Landing/Go-around Training** (only required for L/R qualified crews).

4.2.7.1. Semi-annually, L/R qualified crews will review proper takeoff/landing techniques and procedures. Discussion will include crosswind landings, go-arounds (planned, un-planned, IP directed, etc.), hard-landings, bounces and porpoise recovery. Training will include video review of mishap landings and normal landings that show good and bad techniques and procedures. If aircrew lose landing currency, they will receive this training prior to their landing re-currency sortie.

4.2.7.2. Include hard landing training and nose-wheel first landing training in initial qualification, requalification, and IP upgrade syllabi and recurring training. Training should include approach procedures and techniques, GPS landing system (GLS) use, problems associated with limited visual cues, go-around decision making, height assessment techniques, improved head-up display (I-HUD) symbology, and procedures to recover from pilot induced oscillation and/or nose-wheel first landing. Training should include video from previous mishaps to show relationship between the lack of visual/somatic-sensory cues, and the result of continuing a bad approach/landing.

**4.2.8. Crew Resource Management (CRM).** Units will participate in MAJCOM established CRM CT. Training builds upon the basic cockpit management skills taught in SUPT and FTUs. Each aircrew member is required to participate in one session every 24 months (AFRC and ANG: Every other unit training cycle, not to exceed length of 2 x AEF cycle). Training will be tracked in ARMS. Failure to attend CRM training results in grounding (waiverable by OG/CC). Briefings and debriefings will include the core curriculum of CRM training IAW AFI 11-290 *Cockpit/Crew Resource Management Training Program* and the appropriate MAJCOM supplement to AFI 11-290. The instructor CRM course may be used to satisfy the 24-month requirement.

**4.2.9. Enlisted Sensor Operator Career Progression Training.** Enlisted Sensor Operators must maintain core competency knowledge, skills, and abilities in their enlisted career fields. Use assigned Career Field Education and Training Plan (CFETP) or Air Force Job Qualification Standard (AFJQS) to develop and manage Sensor Operator skill-level and continuation training. Failure to maintain career field training progression does not affect CMR status.

**4.3. Flying Training.** All aircrew (except API-8 and ACC/IGS aircrew) will accomplish the mission and event requirements listed in the most current RTM and MAJCOM specific guidance as applicable to their crew position and qualifications. Failure to accomplish these requirements will not affect BAQ, BMC or CMR status, but may require additional training as determined by the SQ/CC. API-8 and ACC/IGS flyers will strive to accomplish as many of the requirements as practical. In addition, the following are required:

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

4.3.1.1. Qualification flight evaluation IAW AFI 11-202, Volume 2 and AFI 11-2MQ-1, Volume 2.

4.3.1.2. Instrument flight evaluation IAW AFI 11-202, Volume 2 and AFI 11-2MQ-1, Volume 2.

4.3.1.3. Currencies IAW paragraph 4.6 (as applicable).

4.3.1.4. BAQ aircrew will fly a supervised (squadron supervisor or IP) sortie every 60 days.

4.3.1.5. In addition, if a BAQ aircrew member does not fly for 21 days (inexperienced) or 30 days (experienced) the next sortie must be flown with a squadron supervisor or IP.

4.3.1.6. Unless currently enrolled in a program to achieve CMR/BMC, BAQ aircrew that remain in BAQ status for more than six months will be grounded (except general officers). Waiver authority is the MAJCOM/A3 (NGB/A3O, AFRC/A3T).

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

4.3.2.1. Qualification flight evaluation IAW AFI 11-202, Volume 2 and AFI 11-2MQ-1, Volume 2.

4.3.2.2. Instrument flight evaluation IAW AFI 11-202, Volume 2 and AFI 11-2MQ-1, Volume 2.

4.3.2.3. Mission flight evaluation IAW AFI 11-202, Volume 2 and AFI 11-2MQ-1, Volume 2.

4.3.2.4. Currencies IAW paragraph 4.6 (as applicable).

4.3.2.5. Ground training requirements related to applicable MAJCOM specific sorties and events and as designated by flying squadron commander.

4.3.2.6. Mission rate (lookback) IAW Table 1.1 and paragraph 4.7.1 (N/A for API-8 and ACC/IGS inspectors).

4.3.2.7. FTU IPs/ISOs and test aircrew IAW paragraph 4.3.5.

4.3.2.8. RAP missions and events (amount and types) and weapons qualifications IAW the procedures in this volume and the RTM or MAJCOM specific guidance.

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

4.3.3.1. BMC requirements.

4.3.3.2. Performance satisfactory to the SQ/CC (certification).

4.3.3.3. Qualification and Mission Evaluation IAW AFI 11-202 Volume 2 and AFI 11-2MQ-1 Volume 2.

4.3.3.4. Ground training IAW the RTM or MAJCOM specific guidance.

4.3.3.5. Verification/SOPE IAW paragraph 3.2.2 and/or 4.2.5

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

4.3.4.1. Specialized training IAW Chapter 6 and guiding syllabus.

4.3.4.2. Sortie and mission requirements IAW this volume and MAJCOM specific guidance for special capability missions and other requirements established by the SQ/CC.

4.3.4.3. Certification by squadron commander (usually designated on letter of Xs).

4.3.4.4. Failure to accomplish the requirements will result in loss of certification/qualification (see paragraph 4.7 for recurrency/requalification).

#### 4.3.5. Designated Training (TF-coded) and Designated Test (CB-coded) Unit Requirements:

4.3.5.1. Aircrew assigned or attached to TF or CB-coded units will fly, as a minimum, at the BMC rate and accomplish the basic skills BMC requirements as shown in the RTM and MAJCOM specific guidance. Formal training syllabus-directed missions and approved test plan missions apply to BMC rate requirements for TF and CB-coded units respectively.

4.3.5.2. For instructors, failure to complete a RAP requirement does not affect instructor status, but requires additional training as determined by the SQ/CC before resuming instructor duties in delinquent sortie types and/or event(s). Instructors will not instruct any event in which they are not current and qualified.

4.3.5.3. Ground training as directed by the SQ/CC:

4.3.5.3.1. There is no requirement for aircrew assigned or attached to TF-coded or CB-coded units to accomplish CBRNE ATD, CBRNE Flight, or verification.

4.3.5.3.2. There is no requirement for CB-coded units to accomplish formal intelligence training or weapons and tactics academics. Aircrew will be thoroughly familiar with all current intelligence and weapons and tactics issues affecting on-going test projects.

4.3.5.4. SQ/CC will direct the addition of sorties if programmed syllabus or test missions do not provide sufficient aircrew proficiency training.

4.3.5.5. Instrument/Qualification/Mission or Instructor flight Evaluation, as applicable, IAW AFI 11-202, Volume 2 and AFI 11-2MQ-1, Volume 2. Aircrew assigned/attached to CB-coded units need not maintain instructor status.

#### 4.4. Special Categories:

4.4.1. **Flight Surgeon.** Flight surgeons may participate in continuation training missions as observers. Units will develop appropriate continuation training mission orientation programs for assigned flight surgeons.

4.4.2. **Above-Wing-Level Aircrew** (ARC: Responsibilities for API-8 staff flyers are contained in AFI 11-401 as supplemented by the ANG and AFRC):

4.4.2.1. Mission Directed Training (MDT) for Above-Wing-Level personnel (other than that conducted in support of a formal inspection) requires coordination with the supporting unit. MAJCOM Division Chiefs are the reviewing authorities for assigned personnel. They will:

4.4.2.1.1. Coordinate with the supporting agency to ensure maintenance of appropriate ARMS data and provide that data IAW AFI 11-401.

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

4.4.2.1.3. Provide each aircrew with written documentation specifying the authorized mission types and events the aircrew may fly. Above-Wing-Level aircrew who fly with only one unit may receive this from their attached unit commander.

4.4.2.2. Above-Wing-Level aircrew maintaining BMC status are exempt from academic ground training and special training programs within authorized mission areas. Specific currencies will be provided to the host squadron and squadron supervisors will determine aircrew qualifications to participate in squadron scenarios for MDT.

4.4.2.3. Aircrew will:

4.4.2.3.1. Review accomplishments and currencies for accuracy.

4.4.2.3.2. Submit qualification and authorization documentation along with currency information to the supporting squadron supervisors prior to flying with that squadron.

4.4.2.3.3. Evaluate the demands of each mission scenario and ensure that they do not exceed their ability and proficiency.

4.4.2.4. With the concurrence of the OG/CC, instructor-qualified aircrew may perform instructor duties provided they have qualification and currency for the applicable missions and events.

#### 4.4.3. Active Duty aircrew flying with ANG and AFRC units:

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

4.4.3.2. Active duty aircrew other than assigned advisors are authorized to fly with ARC units IAW AFI 11-401 as supplemented by ANG and AFRC.

4.4.3.3. Pilots on exchange programs from active duty units are authorized mission oriented sorties IAW specific operations plans (OPLAN) that establishes the exchange. SQ/CCs may authorize their participation IAW their specific experience and qualification.

4.4.3.4. HHQ staff pilots may participate in tactical training events. Each pilot will present documentation summarizing medical status (e.g., AF Form 1042, *Medical Recommendation for Flying or Special Operational Duty*), currencies, flight qualifications, etc., to the unit where flying is performed.

#### 4.5. Multiple Qualifications:

4.5.1. MAJCOM/A3 (ANG: NGB/A3 with A2 coord) may authorize qualification in more than one MDS for aircrew when command mission requirements direct such action and dual qualification is economically justifiable. MAJCOMs cannot delegate this authority. Unless required for unit mission accomplishment, commanders must not permit aircrew qualified in primary mission aircraft to maintain qualification in support aircraft.

4.5.1.1. Submit multiple qualification requests through command channels to MAJCOM/A3 (ANG: NGB/A3 with A2 coord). All requests must contain full justification. Units will provide multiple qualification approval to the appropriate host base flight management office. Do not authorize flight accomplishments until aircraft assignment is updated in ARMS.

4.5.1.2. Individually authorized multiple qualifications are valid as long as the individual remains assigned to the specific position and aircraft unless rescinded by MAJCOM/A3 (ANG: NGB/A3).

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

4.5.2. OG/CC will determine which currencies/events may be satisfied in either MDS and which currencies/events must be satisfied in both MDS.

4.5.2.1. Aircrew qualified in multiple MDS will fly at least once each 45/30 (EXP/INEXP) days in each aircraft. They will complete all other currency requirements for each aircraft.

4.5.2.2. Aircrew members qualified in multiple aircraft will satisfy at least 50 percent of their sortie requirements in their primary aircraft. If CMR in more than one MDS, an equitable distribution (as determined by OG/CC) of sortie and event requirements will be logged.

4.5.2.3. If dual qualified in L/R operations, aircrew will fly an equitable distribution (as determined by OG/CC) of emergency patterns, instrument sorties, penetrations, and approaches in each MDS to fill their basic skills requirements.

4.5.3. Aircrew must complete MDS conversion/qualification training IAW an approved syllabus.

#### **4.6. Currency, Recurrency, and Requalification:**

4.6.1. **Currency.** **Table 4.1**, as supplemented by the most current RTM or MAJCOM specific guidance, defines currency requirements for MQ-1 aircrew. If an aircrew member loses a particular currency, the individual may not perform that sortie or event except for the purpose of regaining currency as noted.

4.6.2. **Recurrency.** Aircrew require recurrency whenever they exceed a currency requirement in this volume.

4.6.2.1. Aircrew must satisfy overdue training requirements before performing tasks applicable to the type of training in which delinquent. Training annotated as affecting CMR status will require regression to N-CMR until accomplishing appropriate training as specified by SQ/CC. Training identified as not affecting CMR status does not require regression from CMR, although the deficiency may result in grounding until completing training. The duration of grounding and status of sortie lookback will determine the effect on CMR status.

4.6.2.2. Unless otherwise specified, the SQ/CC determines supervisory requirements pertaining to recurrency.

4.6.3. **Sortie Recurrency.** Loss of sortie currency requires the following action (timing starts from last sortie):

4.6.3.1. **31-90 (46-90 for Experienced) Days.** Regain sortie currency. Supervision level is an instructor qualified and current in the sortie or event.

4.6.3.2. **91-135 Days.** Same as paragraph 4.6.3.1 above, plus instructor supervised ATD including:

4.6.3.2.1. For CMR aircrew: tactics, normal, instrument, and emergency procedures.

4.6.3.2.2. For BMC aircrew: normal, instrument, and emergency procedures.

4.6.3.3. **136-210 Days.** Same as paragraph 4.6.3.2 above, plus qualification and tactical (if applicable) written examinations and EPE.

4.6.3.4. **More than 210 Days.** Sorties, events, and ATDs as determined by the SQ/CC, plus qualification and tactical written exams, EPE, and qualification and/or mission flight evaluation (as required).

4.6.4. **Landing (L/R Operations) Recurrency/Requalification.** The following actions are required to regain currency or qualification. Timing starts from last landing. (Note: aircrew may continue to fly missions not requiring aircraft landing or L/R operations).

4.6.4.1. **31-90 Days (46-90 for Experienced).** Regain landing currency. Supervision level is a qualified and current instructor pilot.

4.6.4.2. **91 to 135 Days.** Same as paragraph 4.6.4.1 above, plus instructor supervised ATD including normal, instrument, and emergency procedures.

4.6.4.3. **136-210 Days.** Same as above, plus L/R portion of written examinations and EP evaluation.

4.6.4.4. **More than 210 Days.** Complete L/R IQT (see paragraphs 2.2.2 and 6.5.1). L/R qualification expires after 210 days (inexperienced) or 225 days (experienced) from last landing (unit CCs may place additional requirements upon L/R qualification).

4.6.5. **Loss of and Requalification to Instructor Status.** Decertify instructors if:

4.6.5.1. They fail a flight check. To regain instructor status, the instructor must successfully complete a flight evaluation IAW AFI 11-202, Volume 2 and AFI 11-2MQ-1, Volume 2.

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

4.6.5.3. Instructor currency expires. To regain status, see **Table 4.1**

4.6.5.4. They become non-current in any event or sortie that causes removal from CMR or BMC status and the SQ/CC deems that loss of currency is of sufficient importance to require de-certification. If the SQ/CC does not elect this option or if the instructor becomes non-current in events or sorties which do not require removal from CMR or BMC status, the individual may retain instructor status, but the instructor will not instruct in that event or sortie until regaining the required currency.

Table 4.1. MQ-1 Aircrew Currencies (days).

Task ID	EVENT	INEXP	EXP	Affects CMR	To Regain Currency	NOTE
<b>PILOT EVENTS</b>						
ST00	Mission Currency Sortie	30	45	No	Event	4
UV20	Launch Procedures	30	45	No	Event	1, 2, 3, 4
LD00	Landing	30	45	No	Event	1, 5
UV21	Takeoff	30	45	No	Event	1, 5
AP14	Simulated Flame-out (SFO)	30	45	No	Event	1, 4, 7
AP79	Instrument Approach	30	45	No	Event	1, 9
LD40	Nose Camera Landing	30	45	No	Event	1, 5, 7
LD41	Infrared (IR) MTS Landing	30	45	No	Event	1, 5, 7
LD42	IR Nose Camera Landing	30	45	No	Event	1, 5, 7
WE22	Weapons Delivery	45	60	Yes	Event	2, 4, 8
UV40	Gaining Handover Procedures	45	60	No	Event	3, 4, 6
UV41	Losing Handover Procedures	45	60	No	Event	3, 4, 6
UV25	Buddy Lase Procedures	45	60	Yes	Event	2, 3, 4
UV31	Moving Target Track	45	60	Yes	Event	2, 3, 4
AP81	Night Nose Camera Low-Approach	180	180	No	Event	1, 4
SX16	Instructor Event	N/A	60	No	Event	5
<b>SENSOR OPERATOR EVENTS</b>						
ST00	Mission Currency Sortie	30	45	No	Event	4
LD00	Landing	30	45	No	Event	1, 3, 4
UV20	Launch Procedures	45	60	No	Event	1, 2, 3, 4
UV40	Gaining Handover Procedure	45	60	No	Event	3, 4, 6
UV41	Losing Handover Procedures	45	60	No	Event	3, 4, 6
UV25	Buddy Lase Procedures	45	60	Yes	Event	2, 3, 4
UV31	Moving Target Track	45	60	Yes	Event	2, 3, 4
WE22	Weapons Delivery	60	90	Yes	Event	2, 4, 8
SX16	Instructor Event	N/A	60	No	Event	5
NOTES:						
1. Only applicable to L/R qualified crews.						
2. Aircrew may update currency or obtain recurrency in the ATD. Requires pilot and SO to perform the event as a crew. Aircrew and instructors may update this currency or obtain recurrency once in the ATD, then the next update must be an actual event.						
3. Instructors may log this event for currency when they instruct it.						
4. The supervision level for recurrency is a sq supervisor current and qualified in the event.						
5. Supervision level for recurrency is an instructor, current and qualified in event.						
6. Non-currency for 91-180 days requires a recurrency flight with an instructor.						
7. Must be current in this event to fly unsupervised if mission requires launch, takeoff, and landing procedures.						
8. ANG and AFRC units: 90/120						
9. Either Precision or Non-Precision approach satisfies this requirement.						

#### 4.7. Regression:

4.7.1. **CMR and BMC Regression for Failure to Meet Lookback** (N/A for AFSOC). Use only RAP training, pattern proficiency sorties, and contingency operations sorties for lookback as determined by MAJCOM-specific guidance (i.e., RAP sorties for ACC/ACC-gained units). For L/R-qualified pilots, a maximum of one PPS per month can be counted towards RAP look-back. If aircrew do not meet lookback requirements throughout the training cycle, SQ/CCs may regress them to N-CMR or N-BMC status, as applicable, remove them from a CMR manning position, or initiate action to remove them from active flying status.

4.7.1.1. Failure to meet 1-month MAJCOM-directed sortie lookback requires a review of the aircrew member's 3-month sortie history. If the aircrew member meets the 3-month lookback, the aircrew member may, at SQ/CC discretion, remain CMR or BMC, as applicable. Failure to meet the 3-month lookback will result in regression to N-CMR or N-BMC status as appropriate, or the SQ/CC may place the aircrew member in probation status for 1 month. If the SQ/CC chooses probation, the only way to remove an aircrew member from probation and preserve the current status is to re-establish a 1-month lookback at the end of the probation period. (See [Figure 4.1](#)).

4.7.1.2. CMR and BMC aircrew regressed to N-CMR or N-BMC for lookback must complete a SQ/CC-approved re-certification program to return the aircrew member to CMR or BMC standards. Upon completion of the re-certification program, the aircrew member also must meet the subsequent 1-month lookback requirement prior to reclaiming CMR or BMC status. Units may credit the sorties and events accomplished during the re-certification program toward the individual's total and type sortie and event requirements for the training cycle as well as for the monthly sortie requirement.

4.7.1.3. Lookback computations begin following SQ/CC designation of the aircrew member to BMC or CMR. The aircrew member must maintain 1-month lookback until establishing a 3-month lookback. If a new CMR or BMC aircrew member fails to meet 1-month lookback while establishing 3-month lookback, SQ/CCs may apply probation rules as described in paragraph [4.7.1.1](#). In addition, 1-month lookback starts the first full month of CMR or BMC status.

4.7.2. **Regression for Weapons Qualification.** Failure to maintain MAJCOM-directed specific tasked weapons qualification at the end of the training cycle will require:

4.7.2.1. For events tasked as QUAL at CMR/BMC, regression to N-CMR/N-BMC unless waived by OG/CC. To regain CMR/BMC, the aircrew member must re-accomplish initial qualification in the deficient weapons event (see paragraph [5.2](#)). Events accomplished for this initial qualification may count toward the cumulative CT event qualification required at the end of the training cycle.

4.7.2.2. For events tasked as FAM at CMR/BMC, regression to N-CMR/N-BMC unless waived by OG/CC. To regain CMR/BMC, the aircrew member must accomplish at least three weapons deliveries reviewed by a squadron supervisor or instructor. Events accomplished for this initial qualification may count toward the cumulative CT event qualification required at the end of the training cycle.

4.7.3. **Unqualified Aircrew Evaluations.** Handle aircrew who fail a qualification, instrument, or mission flight evaluation IAW AFI 11-202, Volume 2. Aircrew will regress to N-CMR or N-BMC as applicable. These aircrew will remain N-CMR or N-BMC until successfully completing required corrective action, a reevaluation, and are re-certified by the SQ/CC.

4.7.4. **Failure to Maintain Flying Standards.** If a qualified aircrew member demonstrates lack of proficiency or knowledge during CT (not related to a flight evaluation) the SQ/CC may elect to regress the individual to N-CMR or N-BMC as applicable. These aircrew will remain N-CMR or N-BMC until successfully completing corrective action as determined by the SQ/CC, an evaluation if required, and are re-certified by the SQ/CC.

**4.8. End of Cycle Requirements.** Aircrew who fail to complete sortie or event requirements of this volume by the end of the training cycle may require additional training depending on the type and magnitude of the deficiency. Refer to paragraph 4.9 for proration policy. In all cases report training shortfalls IAW paragraph 1.2

4.8.1. Aircrew who fail to meet the total MAJCOM-directed sortie requirement may continue CT at CMR or BMC as determined by lookback. The SQ/CC will determine if these aircrew require additional training.

4.8.2. Aircrew who fail to meet other CT sortie or event requirements may continue at CMR or BMC as determined by lookback. The SQ/CC will determine if these aircrew require additional training.

4.8.3. Failure to meet RAP Sortie Requirements will result in the following:

4.8.3.1. Regression to N-CMR or N-BMC if the SQ/CC determines that the sortie type deficiency is significant. To regain CMR or BMC, the aircrew member will complete all deficient sortie types. Units may count these sorties against the total requirements for the new training cycle.

4.8.3.2. Continuation at CMR or BMC if the aircrew member maintains total MAJCOM-directed sorties and lookback and the SQ/CC deems the sortie type deficiencies insignificant.

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

4.8.5. Failure to accomplish sorties required for Special Capabilities/Qualifications will result in loss of that qualification unless otherwise specified in this publication or the MAJCOM-specific guidance. The SQ/CC will determine re-qualification requirements.

**4.9. Proration of End-of-Cycle Requirements.** At the end of the training cycle, the SQ/CC may prorate all training requirements when duty not to include flying (DNIF), emergency leaves, non-flying temporary duty (TDY), exercises, contingency operations, or direct combat support preclude training for a portion of the training period (ARC: or mandatory training required by civilian employment). Do not consider normal annual leave as non-availability. Units may consider extended bad weather that precludes the unit from flying for more than 15 consecutive days as non-availability. ANG and AFRC aircrew unable to fly during their monthly availability period due to weather may prorate one month's portion of total training cycle RAP sorties and events. The following guidelines apply:

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

4.9.2. Proration is based on cumulative days of non-availability for flying (to include post-deployment comp time) during the training cycle. Use **Table 4.2** to determine the number of months to be prorated based on cumulative calendar days of non-availability.

4.9.3. Prorated numbers resulting in fractions of less than 0.5 will be rounded to the next lower whole number, but no requirement shall be prorated below one (except when 100 percent of logged missions/sorties are contingency operations).

4.9.4. Consider newly assigned or converted aircrew and aircrew achieving CMR or BMC status after the 15th of the month to be in CT on the first day of the following month for proration purposes. Aircrew will complete prorated RAP sorties/events in CT.

4.9.5. If IQT is re-accomplished, an aircrew member's training cycle will start over at a prorated share following completion of IQT/MQT training.

4.9.6. SQ/CCs may prorate an aircrew member's last month on station prior to departing permanent change of station (PCS) provided they do not exceed one month's proration. Units may consider individuals departing PCS CMR for reporting purposes for 60 days from date of last flight, or until loss of CMR currency, port call date, or sign in at new duty station.

4.9.7. Contingency Operations. Contingency operations can have a positive or negative impact on a unit's CT program, as emphasis is on supporting the actual contingency. A potential lack of training opportunities while 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 are intended to provide flexibility in accomplishing the unit's CT program.

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

4.9.7.2. As the training quality of missions flown at contingency locations varies considerably, OG/CCs are authorized to allow sorties that provide valid training to be logged as MAJCOM-directed sorties. Events accomplished on these sorties may count toward MAJCOM-specific event requirements, and these sorties/events cannot be prorated upon return to home station.

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

**Table 4.2. Proration Allowance.**

<b>Cumulative Days of Training Non-Availability</b>	<b>Months of Proration Allowed</b>
0 - 15	0
16 - 45	1
46 - 75	2
76 - 105	3
106 - 135	4
136 - 165	5
166 - 195	6
196 - 225	7
226 - 255	8
256 - 285	9
286 - 315	10
316 - 345	11
Over 346	12

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

#### **4.10. Regaining CMR and BMC Status:**

4.10.1. If CMR/BMC status is lost due to failure to meet the End-of-Cycle weapons qualifications requirements or end-of-cycle MAJCOM specific event requirements, requalification is IAW paragraph 4.7

4.10.2. If an aircrew member loses CMR or BMC status due to failure to meet sortie lookback IAW paragraph 4.7, the following applies (timing starts from the date the aircrew came off CMR or BMC status):

4.10.2.1. **Up to 90 Days.** The aircrew member must complete a SQ/CC directed re-certification program IAW paragraph 4.7.1.2 In addition, the aircrew member must regain event currencies. The SQ/CC will approve any other additional training prior to re-certification to CMR.

4.10.2.2. **91-180 Days.** Same as 4.10.2.1 above, plus OGV-administered qualification and tactical written examinations.

4.10.2.3. **181 Days and Beyond.** Re-accomplish MQT. Sorties, events, ATDs, and ground training as determined by the SQ/CC, plus qualification (and tactical if applicable) written exams, EPE, and mission flight evaluation. The individual's training cycle will start over at a prorated share following completion of the flight evaluation. The instrument and/or qualification flight evaluations must be re-accomplished only if overdue.

**4.11. Example of the Lookback, Regression, Proration, and Requalification Process.** Captain Smith is an experienced CMR aircrew member with a 1- and 3-month

lookback requirement of 4 and 10 RAP sorties respectively. On February 3, Captain Smith flew a counterland sortie prior to departing for a non-flying TDY staff tour for two months. Captain Smith reported back for flight duty on 6 April. What is Captain Smith's status throughout the TDY and on return to flying duty?

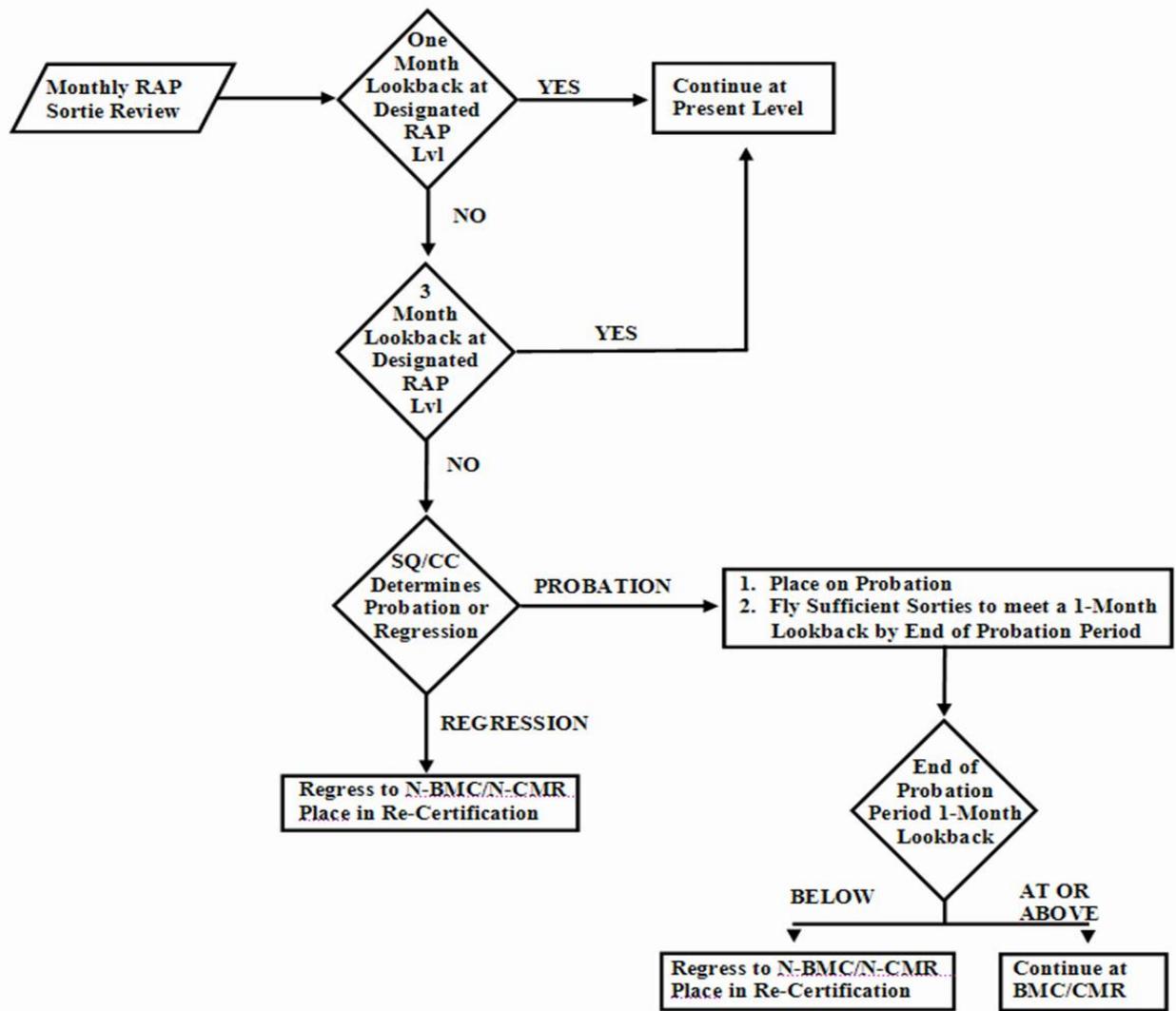
4.11.1. The SQ/CC wanted to list Captain Smith as a countable CMR aircrew member for reporting purposes throughout the TDY. Therefore, on 1 March, Captain Smith's Flight Commander (FLT/CC) performed the mandatory 1-month lookback (February). Captain Smith only flew one MAJCOM-specific sortie, failing the 1-month lookback. The FLT/CC then performed a 3-month lookback (Dec, Jan, and Feb). This 3-month lookback showed that Captain Smith flew only 7 sorties for the period. Had Captain Smith flown two more sorties, the SQ/CC could continue him at CMR. However, with 7 sorties, Captain Smith did not meet the 3-month lookback for a CMR aircrew member. The SQ/CC could regress Captain Smith to N-CMR, but instead elected to put him on probation, still carrying him as CMR.

4.11.2. The SQ/CC carried Captain Smith on one month's probation. On 1 April, Captain Smith's 1-month lookback (March) was zero sorties. The SQ/CC must now regress Captain Smith to N-CMR. When Captain Smith returns on 6 April, the SQ/CC must place him in a re-certification program. Upon completing this program, Captain Smith must then re-establish a 1-month lookback by 1 May. Failing to re-establish a 1-month lookback by 1 May forces the unit to report Captain Smith N-CMR one more month until the next lookback process on 1 June.

4.11.3. If Captain Smith had returned on 22 March and had last landed 48 days ago, he could fly a RAP sortie with an instructor to regain sortie currency. For CMR purposes, Captain Smith must fly 4 RAP sorties to recapture a 1-month lookback and achieve removal from probation.

4.11.4. At the end of the training cycle on 30 June, the SQ/CC prorated two months of Captain Smith's total requirements. In spite of this proration, Captain Smith was deficient in one RAP sortie category. The SQ/CC could regress Captain Smith to N-CMR, if deemed significant. After he accomplished the tailored re-certification program (the deficient sorties), the SQ/CC re-certified Captain Smith to CMR. This training counts for the new training cycle.

Figure 4.1. Regression Flow Chart.



## Chapter 5

### WEAPONS EMPLOYMENT QUALIFICATION

**5.1. General.** This chapter outlines requirements for attaining initial weapons qualification and maintaining qualification in the employment of Air-to-Surface (A/S) weapons. Refer to "Glossary of Events" in **Attachment 2** for further guidance in weapons events.

**5.2. Initial Weapons Qualification.** Aircrew must accomplish initial weapons qualification in any weapons event requiring qualification at CMR or BMC. Initial qualification achieved in IQT/MQT satisfies requirements for CT qualification, but not for CT event requirements. If not otherwise specified, initial qualification in a weapons event is satisfied when the aircrew member has achieved a minimum of three hits out of six consecutive record deliveries.

**5.3. CT Qualification/Maintaining Weapons Qualification.** These criteria establish the minimum standards for a pilot to maintain weapons qualification in the appropriate event and do not necessarily determine evaluation criteria established by other regulations or agencies (e.g., inspection or evaluation teams). These qualifications are valid throughout the following training period.

5.3.1. CT weapons deliveries (to include simulated deliveries) will be tactical deliveries simulating realistic employment of weapons; considering such factors as arming, safe separation, recovery, safe escape maneuver, egress, etc., using USAF Technical Order (TO) 1-1M-34, *Aircrew Weapons Delivery Manual (Nonnuclear)* as a reference. To maintain a combat perspective in a peacetime environment, weapons deliveries should simulate realistic employment of live munitions. Maximize the use of air-to-surface tactical range opportunities for weapons event requirements.

5.3.2. Weapons qualification will be maintained by completing the minimum number of record hits, record deliveries, and also by achieving appropriate qualification percentage during the training period. Periodic qualification hit rate will be no less than 50 percent. See the specific MAJCOM guidance for specific qualification criteria.

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

**5.4. Failure to Qualify.** Failure to qualify in one weapon series does not invalidate qualification in others. SQ/CCs may declare an aircrew member unqualified in any weapon, and invalidate all previous record deliveries for that weapon, at any time during a training cycle without affecting other weapons qualifications. If qualification is required at CMR, failure to qualify will result in regression to N-CMR and entry into a re-certification program until re-qualification is accomplished, unless waived by OG/CC.

**5.5. Weapons Delivery.** A weapons delivery event includes target acquisition, laser designation (actual or simulated), missile launch (actual or simulated), and missile impact (real or simulated), followed by a tactical escape maneuver for the ordnance being delivered (or simulated). Pattern descriptions, procedures, training rules, and foul criteria are contained in AFTTP 3-1.Predator , AFTTP 3-3.Predator, *Combat Aircraft Fundamentals—MQ-1*, AFI 11-2MQ-1 Volume 3, *MQ-1 Operations Procedures* and AFI 11-214, *Air Operations Rules and Procedures*. Launch range

minima, maxima, height above target (HAT), and missile time of flight (TOF) are contained in TO 1Q-34(M)B-34-1-1CL-1, *Aircrew Weapons Delivery Manual (Nonnuclear)*.

5.5.1. **AGM-114 Hit Criteria:** Simulated and actual munitions employment will be graded IAW AFTTP 3-1.General Planning.

**5.6. Live Ordnance.** Live ordnance training is essential to aircrew combat capability. Every attempt should be made to give each crew the opportunity to employ as many types of weapons as are approved for squadron use.

## Chapter 6

### SPECIALIZED TRAINING

**6.1. General.** This chapter outlines pilot and sensor operator 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 individuals based on previous experience, qualifications, and documented performance. These capabilities and qualifications are in addition to core missions for the unit and may not apply to every aircrew member assigned or attached to the unit.

**6.2. Instructor Pilot Upgrade Training (IPUG) and Instructor Sensor Operator Upgrade Training (ISUG).** These programs establish the minimum guidelines for those pilots and sensor operators identified by the SQ/CC for IPUG and ISUG training. Upgrade candidates should be selected based on a continued display of excellent airmanship and sound judgment and must meet the criteria listed below. OG/CCs may waive hourly requirements, selected missions and events based on previous experience of the upgrading pilot (UIP) or sensor operator (UIS). UIPs and UISs designated for FTU instructor duties must complete the formal syllabus upgrade course Predator Formal Training Unit Instructor Upgrade Training Course--(FIUT).

6.2.1. Individuals selected for instructor upgrade must be experienced in the MQ-1.

6.2.2. **Academic Training.** UIPs and UISs must satisfactorily complete the following blocks of instruction prior to certification. Additionally, AFSOC initial instructor upgrade candidates are required to complete the Flight Instructor Preparatory (FIP) (or equivalent) course prior to upgrade. Units will add considerations and techniques for specialized training to all applicable areas. At a minimum, ground training will consist of locally developed instruction in the following areas:

6.2.2.1. Principles of Instruction: Learning objectives, instructor responsibilities, instructor-student relationship, training facilities, publications, and Predator specific training considerations.

6.2.2.2. Techniques of Flight Instruction: Training objectives and environment, recognition and analysis of common operator errors, maneuver demonstration, task performance and review, and instructional limitations.

6.2.2.3. Conduct of Flight Briefing: Use of briefing guides and audiovisual aids, briefing, debriefing, and questioning techniques, and use of recorded media for flight review.

6.2.2.4. Systems Refresher Training: Subject knowledge evaluation and practical demonstration. Instructor candidates must demonstrate an advanced knowledge of GCS and aircraft systems and associated operational equipment to include: power-up, power-down, and reboot procedures, emergency shutdown procedures, expanded checklist procedures, pilot-sensor operator (PSO) rack displays, controls and procedures, internal and external communication procedures, aircraft operations and limitations, and airborne handover procedures.

6.2.2.5. Student Evaluations: Grading systems, squadron specific procedures, and preparation and use of required forms.

6.2.2.6. Instructor CRM training will be accomplished IAW AFI 11-290, and MAJCOM supplements, prior to assuming duties as an instructor. Instructor CRM training may be accomplished prior to entering instructor upgrade training.

### 6.2.3. Device Training.

6.2.3.1. GCS Demonstration. UIPs/UISSs must satisfactorily demonstrate and instruct GCS system power considerations, communication interfaces, Ku interfaces, scenario development, call-up procedures (if applicable), environmental control configurations, and ATD instructional procedures.

6.2.3.2. Sensor operator workstation familiarization training. UIPs will accomplish a familiarization session of the SO station. This is usually accomplished with an IP or ISO instructing all aspects/responsibilities of the SO position.

6.2.4. **Flying Training.** Specific training events do not have to be accomplished on specified sorties. However, all events must be accomplished within the construct of the upgrade program. Ku link and Handover (gaining/losing) procedures may be instructed on any sortie. Inability to complete specific training events need not delay certification. In such cases, SQ/CC will certify instructors with appropriate limitations to preclude performance of duties in which training is incomplete. Unit programs should specify which tasks the upgrade candidate will practice demonstrating, which tasks they will practice evaluating a performance, and which tasks they will do both.

6.2.4.1. Basic Instruction Sortie. Practice instructing basic flight procedures. Specific Tasks: In-flight instruction, CRM and crew coordination, aircraft launch and recovery procedures, aircraft handling, patterns and landings, approaches (instrument and visual), SFOs (LOS and Ku), night nose camera low approaches, in-flight checks and checklist procedures, navigation procedures, mission briefing and debriefing, operational mission and emergency mission management, right seat procedures, weather and aircraft checks. Note: Elements of this sortie may be included in the other sorties if upgrade is not going to be LRE instructor qualified.

6.2.4.2. RSTA Sortie. Practice instructing a basic Intelligence, Surveillance and Reconnaissance (ISR) mission in support of tactical objectives. Specific tasks: in-flight instruction, CRM and crew coordination, in-flight checks and checklist procedures, sensor (EO and IR) capabilities and limitations, target acquisition procedures, sensor cross-cueing, time management (mission and target prosecution), threat avoidance, navigation procedures, mission briefing and debriefing, operational and emergency mission planning and airspace management.

6.2.4.3. SAT/Counterland Sortie. Practice instructing a low- to medium-threat tactics mission, and/or strike profile in support of tactical objectives. Specific tasks: In-flight instruction, CRM and crew coordination, in-flight checks and checklist procedures, FENCE checks, weapons employment, airspace management, mission briefing and debriefing, threat avoidance, and navigation procedures in each of the following mission profiles:

6.2.4.3.1. SCAR Sortie. Practice instructing Air Interdiction (AI) procedures in support of a Counterland mission. Specific tasks: counterland mission profiles, SCAR coordination, deconfliction procedures, sensor utilization (EO and IR), target ID and

preparation, buddy lasing procedures, talk-on procedures, and post-strike/BDA procedures.

6.2.4.3.2. CAS Sortie. Practice instructing CAS procedures in support of a Counterland mission. Specific tasks: counterland mission profiles, CAS procedures, AGM-114 pre-launch procedures, laser boresight procedures, 9-line coordination, target ID, weapons preparation, and post-strike/BDA procedures. Include provisions for CAS with FAC (A) and/or JTAC.

6.2.4.4. Flight Evaluation. Complete an instructor flight evaluation IAW AFI 11-2MQ-1, Volume 2, MAJCOM, and unit requirements.

**6.3. Contingency and Exercise Pre-Deployment Training.** Conduct this training prior to deploying in support of contingency operations locations or combat exercises. The objective of this training is to ensure the aircrew member's ability to conduct all missions in support of expected tasking.

6.3.1. **Exercises.** For exercises, units are responsible for referring to appropriate exercise plans (EXPLAN) and contacting appropriate exercise points of contact to determine expected mission tasking (COMACC EXPLANs include EXPLAN 80 for Red and Maple Flags, EXPLAN 323 for Green Flag West, and EXPLAN 163 for Green Flag East).

6.3.2. **Contingency Operations.** For contingency operations, units are responsible for contacting appropriate gaining command or organizations to determine expected mission tasking. Prior coordination ensures unit preparation for the appropriate tasking and allows the responding OG/CC to tailor spin-up training for the theater, threat, and tactics for the assigned task. The SQ/CC is responsible for implementing spin-up training, prosecuting the required missions, and determining the specific requirements necessary to reach the desired level of proficiency. Units will place emphasis on training needed for missions not accomplished in daily operations. Conduct spin-up training IAW all applicable instructions. When tasked to deploy into a CBRNE HTA or MTA IAW AFI 10-2501, aircrew must have completed applicable CBRNE defense training courses, ATD mission, and other required pre-deployment requirements IAW applicable directives.

6.3.3. **Attached and Supporting Aircrew.** Aircrew not assigned to the supported squadron must receive spin-up training as determined by the supported SQ/CC. This requirement applies to all attached aircrew (OG, WG, HQ staffs, etc.) and all aircrew supporting from any other squadron (operational, test or FTU). The objective of this spin-up training is to ensure attached and supporting aircrew are proficient to conduct all expected missions. The supported SQ/CC determines the amount of spin-up training required for each attached and supporting aircrew based on the individual's level of proficiency, currency, qualification, experience, etc. The supported and supporting squadron commanders (or equivalent) will jointly agree on the administration, documentation, and evaluation of required spin-up training.

6.3.4. **Ground Training.** Aircrew may be required to complete academic training prior to contingency operations or exercises. Units will brief contingency (or exercise) Special Instructions (SPINS), ROE, and Command and Control (C2) procedures. Programs will emphasize deployment airfield capabilities, limitations, approach procedures, and hazards. In addition, air defenses, area terrain and weather and unique operating procedures will be

addressed. The local Weather Flight can assist with weather-unique training. Local intelligence organizations may assist the unit's intelligence functions in the development of threat assessments, training materials, and expected collection tasking.

6.3.5. **Flying Training.** Tailor spin-up training to ensure all supporting aircrew are proficient, current, and qualified in expected mission tasking.

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

#### 6.4. Difference Training.

6.4.1. Difference training (DT) for initial cadre is usually conducted under the supervision of the engineering specialists (usually coordinated through program office officials) responsible for improving the MQ-1 system (e.g. new engines, baseline upgrades, major software changes, etc.). These personnel usually will provide training for an initial cadre whenever possible. In some instances, it will be necessary for units to form an initial cadre of personnel for whom certain training requirements will be waived. Instructors completing DT will provide upgrade training to other unit aircrew. 703d Aeronautical Systems Group (AESG), Detachment 3 will be considered the primary unit for DT when new systems come online which represent major changes from current configurations; 53 TEG/556 TES is the alternate unit.

6.4.2. The following conditions apply to management of initial cadre qualification:

6.4.2.1. Form a nucleus of instructor and flight examiner personnel (initial cadre) to begin aircrew upgrades. Initial cadre will not be designated in a crew position higher than currently held unless previously qualified. The host unit providing training will document all DT and maintain the training folder until successful completion of the upgrade program. Initial cadre aircrew are responsible for completing recommended training on any equipment, systems, or crew procedures which differ from that in the MDS they are currently qualified.

6.4.2.2. The OG/CC (or equivalent) will determine which training events are applicable after examining the training and evaluation records of initial cadre and determine if a certification is applicable or whether a qualification evaluation (check ride) is required. OG/CC may require aircrew to complete a written examination prior to unsupervised flight when emergency procedures have changed; even if an AF Form 8, *Certificate of Aircrew Qualification*, flight evaluation is not required. Forward a copy of proposed training qualification plan to MAJCOM OPR when training requires a flight evaluation.

**6.5. Launch and Recovery (L/R) Training.** Normally, L/R training is conducted at the FTU through formal course syllabus; however, special circumstances and availability of class slots may necessitate local or in-house upgrades. The goal of this training is to produce aircrew proficient in Predator launch, takeoff, pattern, handoff, transition, landing, and recovery operations. Because L/R training is considered a formal IQT program, also refer to **Chapter 2** for local upgrade guidelines.

6.5.1. Upgrade to L/R operations will be at the discretion of the SQ/CC based on standard squadron operations, taskings, and manning. Crews qualified in L/R operations will be qualified IAW AFI 11-2MQ-1 Volume 2 and certified by the SQ/CC (i.e., LoX).

6.5.2. For individuals never qualified in L/R operations, upgrade training will meet the course prerequisites and follow the course flow in the formal course syllabus (MQ-1B Launch/Recovery Training Course MQ1LR).

6.5.3. For individuals previously qualified in L/R operations, an abbreviated SQ/CC-approved course may be administered. Formal IQT is not required for aircrew who have been L/R qualified within the last three years.

6.5.4. For aircrew whose qualification has expired refer to paragraph [4.6.4](#)

6.5.5. If qualification has not expired and only a re-currency sortie is required, follow guidance in [Table 4.1](#) and paragraph [4.6.4](#)

6.5.6. Local Upgrade Program for Previously L/R Qualified Individual.

6.5.6.1. **Academics:** Upgrade candidates must satisfactorily complete the following instruction prior to certification. At a minimum ground training will consist of instruction in the following areas:

6.5.6.1.1. Launch Orientation: Upgradees will observe a crew chief ground operation launching a Predator.

6.5.6.1.2. Predator Landing ORM. Review of past Predator ORM and landing mishaps.

6.5.6.1.3. Line of Sight (LOS) Data-link: Instruction on Ground Data Terminal (GDT) and Air Data Terminal (ADT) interface, payload and frequency control interface, antennae procedures, GDT LOS tracking modes, aircraft lost link logic and procedures and data link malfunctions.

6.5.6.1.4. Aircraft Systems Refresher Training: Subject knowledge evaluation and practical demonstration. Instruction will include refresher on power-plant, electrical system, landing gear, flight data systems components, emergency procedures, and Ops limits.

6.5.6.1.5. GCS displays, menus, HUD, heads-down display, and GPS Landing System (GLS).

6.5.6.2. **Device Training:** Through repetitive practice of checklist procedures, a building block approach is used in an ATD to introduce in-flight procedures. The following area of instruction will be included in device training portion of the program.

6.5.6.2.1. Rack configuration through shutdown checklists, menu selection, pedestal control operation and display manipulation.

6.5.6.2.2. Takeoffs, departure, arrivals, and approaches and all applicable checklists.

6.5.6.2.3. Sensor operation—as required to complete checklists.

6.5.6.2.4. Aircraft handover procedures.

6.5.6.2.5. Instrument approaches, navigation procedures, and mission editing.

6.5.6.2.6. SFO procedures and VFR and IFR patterns.

6.5.6.2.7. Weapon system checks (including AGM-114 pre-takeoff and FENCE checks procedures).

6.5.6.2.8. All applicable emergency procedures.

6.5.6.3. **Flying Training.** Students must eventually demonstrate proficiency in all aspects of launch and recovery to include:

6.5.6.3.1. Ground and in-flight checks, taxi, departure and arrival procedures, basic aircraft control and handling, CRM, pattern operation--both VFR and instrument, landings--IR and nose camera (full-stop and touch and go), and SFO patterns.

6.5.6.3.2. Students will also demonstrate proficiency in the briefings/de-briefings.

6.5.6.3.3. Must proficiently accomplish aircraft handovers (gaining and losing), weapons system checks, and bore-sight checks.

6.5.6.3.4. Emergency procedures.

6.5.6.3.5. Flight evaluation IAW AFI 11-2MQ-1, Volume 2.

**6.6. Operations Supervisor (Ops Sup) Upgrade Training (Flying Operations Supervisor (FOS) for AFSOC).** The objective of Ops Sup/FOS training is to train and certify selected individuals to oversee Predator Operations Center (POC) operations.

6.6.1. SQ/CCs will:

6.6.1.1. Nominate rated officers of rank and experience commensurate with requirements of the position. OG/CCs will screen and review qualifications before entry into the program.

6.6.1.2. Upon completion of training, SQ/CCs will certify individuals for Ops Sup/FOS duties.

6.6.2. Individuals nominated for Ops Sup/FOS upgrade training will:

6.6.2.1. Be experienced rated officers who have proven maturity, judgment, and supervisory ability.

6.6.2.2. Be CMR/BMC in the MQ-1 or MQ-9 and medically qualified to perform Ops Sup/FOS duties. DNIF aircrew may perform Ops Sup/FOS duties when specifically cleared by a flight surgeon (clearance for Supervisor of Flying (SOF) duty is clearance for Ops Sup duty).

6.6.3. **Ops Sup/FOS Training Program.** The Ops Sup/FOS training program will consist of individual instruction/briefings, self study/review of applicable instructions, SPINS, ROE, and On-the-Job Training (OJT).

6.6.3.1. Individual instruction will be administered by a qualified Ops Sup/FOS. Squadron developed briefings will include, but are not limited to:

6.6.3.1.1. Role of the Ops Sup/FOS.

6.6.3.1.2. Managing and executing the POC flying schedule.

6.6.3.1.3. Air and Space Operations Center (AOC) (or equivalent mission specific command) structure and interaction.

6.6.3.1.4. Personnel and manning issues.

6.6.3.1.5. Weather support.

6.6.3.1.6. Communication structure and support.

6.6.3.2. ACC/ACC-gained upgrade candidates will review AFI 11-418, *Operations Supervision*. All upgrade candidates will also review AFI 11-202, Volume 3, *General Flight Rules* (and MAJCOM Sup); AFI 11-2MQ-1, Volume 3; and SPINS/ROE for any current AOR.

6.6.3.3. With a current and qualified Ops Sup/FOS, upgrade candidates will observe one and perform one complete supervised Ops Sup/FOS shift during flying operations.

**6.7. Forms Adopted.** The following Air Force forms are adopted for use in this instruction: AF Form 847, *Recommendation for Change of Publication*; AF Form 8, *Certificate of Aircrew Evaluation*; AF Form 1042, *Medical Recommendation for Flying or Special Operational Duty*.

PHILIP M. BREEDLOVE, Lt Gen, USAF  
DCS, Operations, Plans and Requirements

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

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- AFI 11-202, Volume 1, *Aircrew Training*; 17 May 2007
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- AFI 11-202, Volume 3, *General Flight Rules*; 05 April 2006
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- AFI 31-207, *Arming and Use of Force by Air Force Personnel*, 29 January 2009
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AFMAN 33-363, *Management of Records*; 1 March 2008

AFI 91-202, *The US Air Force Mishap Prevention Program*; 01 August 1998

AFTTP 3-1.General Planning, *General Planning and Employment Considerations*; 15 September 2008

AFTTP3-1.Predator, *Tactical Employment—Predator*; 29 December 2006

AFTTP 3-1.Threat Guide, *Threat Reference Guide and Countertactics*; 15 September 2008

AFTTP 3-3.Predator, *Combat Aircraft Fundamentals—MQ-1*; 29 December 2006

**NOTE:** List of reference publications is provided only as an initial guide. Publication information may change as requirements change and the list may not include all applicable directives.

### ***Abbreviations and Acronyms***

**A3**— Director of Aerospace Operations

**A/A**—Air-to-Air

**A/S**—Air-to-Surface

**AAR**—Air/Air Refueling

**AC**—Aircraft Commander

**ACC**—Air Combat Command

**(D)ACM**—(Dissimilar) Air Combat Maneuvering

**ADA**—Air Defense Alert, Air Defense Asset

**ADL**—Aircraft Data Link

**ADT**—Air Data Terminal

**AEF**—Air (or Aerospace) Expeditionary Force

**AF**—Air Force

**AFDD**—Air Force Doctrine Document

**AFRC**—Air Force Reserve Command

**AFSC**—Air Force Specialty Code

**AFSOC**—Air Force Special Operations Command

**AGL**—Above Ground Level

**AGM**—Air-to-Ground Missile

**AHC**—Aircraft Handling Characteristics  
**AI**—Air Intercept, Air Interdiction  
**ANG**—Air National Guard  
**AOA**—Angle of Attack  
**AOC**—Air and Space Operations Center  
**API**—Aircrew Position Indicator  
**ARA**—Airborne Radar Approach  
**ARC**—Air Reserve Components  
**ARM**—Anti-Radiation Missile  
**ARMS**—Aviation Resource Management System  
**ASD**—Average Sortie Duration  
**ATC**—Air Traffic Control  
**ATD**—Aircrew Training Device  
**AVTR**—Aircraft Video Tape Recorder  
**AWACS**—Airborne Warning and Control System  
**BAI**—Backup Aircraft Inventory  
**BAQ**—Basic Aircraft Qualification  
**BDA**—Battle Damage Assessment  
**D)BCM**—(Dissimilar) Basic Fighter Maneuvers/Maneuvering  
**BMC**—Basic Mission Capable  
**BPS**—Basic Proficiency Sortie  
**BSA**—Basic Surface Attack  
**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  
**CB**—**Coded**—Designated Test Aircraft  
**CBRNE**—Chemical, Biological, Radiological, Nuclear, and Explosive

**CC**—Commander  
**CC**—**Coded**—Designated Combat Aircraft  
**CCIP**—Continuously Computed Impact Point  
**CCRP**—Continuously Computed Release Point  
**CDIP**—Continuously Displayed Impact Point  
**CEP**—Circular Error Probable  
**CFETP**—Career Field Education and Training Plan  
**CFT**—Cockpit Familiarization Trainer  
**CFTR**—Composite Force Training  
**CHUM**—Chart Update Manual  
**CIPTP**—Command Intelligence Personnel Training Program  
**CIRVIS**—Communication Instructions Reporting Vital Intelligence Sighting  
**CM**—Countermeasures  
**CMR**—Combat Mission Ready  
**COMACC**—Commander, Air Combat Command  
**COMM JAM**—Communications Jamming  
**COMSEC**—Communications Security  
**CPT**—Cockpit Procedures Trainer  
**CRM**—Cockpit Resource Management  
**CSAR**—Combat Search and Rescue  
**CT**—Continuation Training  
**CV**—Vice Commander  
**DCA**—Defensive Counter Air  
**DL**—Data Link  
**DNIF**—Duty Not Involving Flying  
**DO**—Operations Officer  
**DOC**—Designed Operational Capability  
**DoD**—Department of Defense  
**DRU**—Direct Reporting Unit  
**DT**—Difference Training  
**DTV**—Day Television  
**EC**—Electronic Combat

**ECM**—Electronic Countermeasures  
**EI**—Essential Elements of Information  
**EP**—Emergency Procedure  
**EPE**—Emergency Procedures Evaluation  
**EW**—Electronic Warfare  
**EXP**—Experienced  
**EXPLAN**—Exercise Plan  
**FAC**—Forward Air Controller  
**FAC(A)**—Forward Air Controller (Airborne)  
**FAM**—Familiarization  
**FCF**—Functional Check Flight  
**FE**—Flight Examiner  
**FEB**—Flying Evaluation Board  
**FL**—Flight Lead  
**FOS**—Flying Operations Supervisor (AFSOC)  
**FSWD**—Full Scale Weapons Delivery  
**FTU**—Formal Training Unit  
**GCS**—Ground Control Station  
**GDT**—Ground Data Terminal  
**GLS**—GPS Landing System  
**HAT**—Height Above Target  
**HHQ**—Higher Headquarters  
**HUD**—Head Up Display  
**IAW**—In Accordance With  
**IFE**—In Flight Emergency  
**IFR**—Instrument Flight Rules  
**INEXP**—Inexperienced  
**INFLTREP**—Inflight Report  
**INTREP**—Intelligence Report  
**IOC**—Initial Operational Capability  
**IP**—Instructor Pilot or Initial Point  
**IPE**—Individual Protective Equipment

**IPUG**—Instructor Pilot Upgrade  
**IQT**—Initial Qualification Training  
**IR**—Infrared  
**IRC**—Instrument Refresher Course  
**IRCM**—Infrared Counter Measures  
**ISO**—Instructor Sensor Operator  
**ISUG**—Instructor Sensor Upgrade  
**IUT**—Instructor Upgrade Training  
**JAAT**—Joint Air Attack Team  
**JFT**—Joint Force Training  
**JTAC**—Joint Terminal Attack Controller  
**KCAS**—Knots Calibrated Airspeed  
**KIAS**—Knots Indicated Airspeed  
**KIO**—Knock It Off  
**KTAS**—Knots True Airspeed  
**LAO**—Local Area Orientation  
**LGB**—Laser Guided Bomb  
**LIMFACS**—Limiting Factors  
**LL**—Lost Link  
**LLA**—Lost Link Altitude  
**LOS**—Line of Sight  
**LOW A/A**—Low Altitude Air-to-Air  
**L/R**—Launch and Recovery  
**LRE**—Launch and Recovery Element  
**LTM**—Laser Target Marker  
**MAJCOM**—Major Command  
**MCE**—Mission Control Element  
**MDS**—Mission Design Series  
**MDI**—Multi Display Indicator  
**MDS**—Mission Design Series  
**MDT**—Mission Directed Training  
**METL**—Mission Essential Task Listing

**MISREP**—Mission Report  
**MQF**—Master Question File  
**MQT**—Mission Qualification Training  
**MTS**—Multi-Spectral System  
**N/A**—Not Applicable  
**NAF**—Numbered Air Force  
**NAV**—Navigation  
**BMC**—Non-Basic Mission Capable  
**NGB**—National Guard Bureau  
**CMR**—Non-Combat Mission Ready  
**NLT**—Not Later Than  
**NT**—Night  
**NTR**—Night Transition  
**OCA**—Offensive Counterair  
**OCA—A**—Offensive Counterair Air-to-Air  
**OCA—S**—Offensive Counterair Air-to-Surface  
**OFT**—Operational Flight Trainer  
**OG**—Operations Group  
**OG/CC**—Operations Group Commander  
**OPR**—Office of Primary Responsibility  
**OPS**—Operations  
**OPSEC**—Operations Security  
**Ops Sup**—Operations Supervisor  
**OSC**—On-scene Commander  
**OT&E**—Operational Test and Evaluation  
**PACAF**—Pacific Air Forces  
**PAI**—Primary Aircraft Inventory  
**PAR**—Precision Approach Radar  
**PCS**—Permanent Change of Station  
**PDAI**—Primary Development/Test Aircraft Inventory  
**PFT**—Programmed Flying Training  
**PGM**—Precision Guided Munitions

**PMAI**—Primary Mission Aircraft Inventory  
**PMATS**—Predator Mission Aircrew Training System  
**PPS**—Pattern Proficiency Sortie  
**PPSL**—Predator Primary SATCOM Link  
**PTAI**—Primary Training Aircraft Inventory  
**PTT**—Part Task Trainer  
**QUAL**—Qualification  
**RAP**—Ready Aircrew Program  
**RMATS**—Reaper Mission Aircrew Training System  
**ROE**—Rules of Engagement  
**ROVER**—Remote Operations Video Enhanced Receiver  
**RSTA**—Reconnaissance, Surveillance and Target Acquisition  
**RTM**—RAP Tasking Memorandum  
**RTRB**—Realistic Training Review Board  
**SA**—Situational Awareness, Strategic Attack  
**SAM**—Surface-to-Air Missile  
**SAT**—Surface Attack Tactics  
**SATCOM**—Satellite Communication  
**SCAR**—Strike Coordination and Reconnaissance  
**SEAD**—Suppression of Enemy Air Defenses  
**SEPT**—Situational Emergency Procedure Training  
**SFO**—Simulated Flameout  
**SI**—Simulator Instructor  
**SO**—Sensor Operator  
**SOF**—Supervisor of Flying  
**SOPE**—Special Operations Planning Exercise  
**SORTS**—Status of Resources and Training System  
**SPINS**—Special Instructions  
**SQ**—Squadron  
**SQ/CC**—Squadron Commander  
**SQ/DO**—Squadron Operations Officer  
**SUPT**—Specialized Undergraduate Pilot Training

**TAGS**—Theater Air-Ground System (previously TACS/AAGS)  
**TAI**—Total Active Inventory  
**TDY**—Temporary Duty  
**TF-Coded**—Designated Training Aircraft  
**T.O.**—Technical Order  
**TOD**—Time of Day  
**TOT**—Time Over Target  
**TR**—Training Rules  
**TRSS**—Training Support Squadron  
**TX**—Transition  
**UIP**—Upgrading Instructor Pilot  
**UMD**—Unit Manning Document  
**USAF**—United States Air Force  
**USAFE**—United States Air Forces in Europe  
**USAFWS**—USAF Weapons School  
**UTE**—Utilization Rate  
**VID**—Visual Identification  
**VFR**—Visual Flight Rules  
**VMC**—Visual Meteorological Conditions  
**VR**—Visual Recognition/Video Recorder  
**VTR**—Video Tape Recorder  
**WD**—Weapons Delivery  
**WDL**—Weapon Data Link  
**WG**—Wing  
**WG/CC**—Wing Commander  
**WG/CV**—Wing Vice Commander  
**WIC**—Weapons Instructor Course  
**WS**—Weapons School  
**WSEP**—Weapon Systems Evaluation Program  
**WVR**—Within Visual Range  
**WX**—Weather

### *Terms and Definitions*

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

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

**Air Reserve Component (ARC)**—ANG and AFRC units and aircrew members, both associate and unit-equipped.

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

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

**Basic Aircraft Qualification (BAQ)**—A status of an aircrew member who has satisfactorily completed training prescribed to maintain the basic skills necessary to fly the unit aircraft. The member must perform at the minimum frequency necessary to meet the most recent sortie and flight standards set for the weapons system. BAQ will only be carried by aircrew until completion of MQT. BAQ is not a permanent qualification except for General Officers above the wing level, and any other aircrew members specifically authorized by MAJCOM A3. Aircrew are not authorized to perform RAP-tasked combat event/sorties without instructor pilot or SQ supervisor supervision. Flight duties will be limited to those identified in paragraph [4.3.1](#)

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

**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 use, normal procedures, and emergency procedures (see Air Force Handbook (AFH) 36-2235, Volume 7, *Information for Designers of Instructional Systems, Design Guide for Device-based Aircrew Training*).

**Cockpit Procedures Trainer (CPT)**—A training device in which instruments and displays are activated to respond to trainee inputs. Used for safety of flight, instrument, normal, and emergency procedures (see AFH 36-2235V7).

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

**Composite Force Training (CFTR)**—Scenarios employing multiple flights of the same or different types of aircraft, each under the direction of its own flight leader, performing the same or different roles. (AFI 11-214).

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

**Conversion Training**—Training required when units (or individual aircrew) are converting between MDS (i.e. MQ-1 to MQ-9). Conversion training is normally done through formal training courses; however MAJCOMs may develop in-unit training when formal school courses are not available. In-unit training plans should maximize the use of highly experienced personnel as the initial cadre.

**Currency**—Minimum frequency required to perform an event or sortie safely.

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

**Difference Training**—Training required when new systems/hardware come online which represent significant changes from current configurations. Initial cadre instructors completing difference training may provide training to other unit aircrew members at home station.

**Emergency Procedures Evaluation**—An evaluation of aircrew knowledge and responsiveness to critical and non-critical EPs conducted by a FE in an ATD, or the GCS. An EPE may be administered orally if an appropriate training device is not available.

**Experienced Aircrew (EXP)**—500 hours MQ-1 or 250 hours MQ-1 and previously experienced in another MDS or 150 hours MQ-1 and previously experienced in MQ-9.

**Familiarization (FAM)**—Normally requires a minimum of six weapons deliveries for PGMs and bombing events in a twelve month cycle.

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

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

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

**Instructor Upgrade Training**—Training to qualify an aircrew to perform instructor duties.

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

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

**Launch and Recovery Element (LRE)**—Deployed personnel based at a forward location who are responsible for the launch, recovery and ground support of the MQ-1. Launch and recovery is accomplished using a standard deployable GCS, or a modified GCS equipped with the functionality of two PSO racks and associated systems, a communications interface and a GDT.

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

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

**Mission Control Element (MCE)**—A GCS (usually geographically separated from LRE) responsible for taking an MQ-1 from an LRE following takeoff, executing the mission, and then handing the MQ-1 back to the LRE for recovery and landing.

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

**Predator Mission Aircrew Training System (PMATS)**—The PMATS is a replica of the Ground Control Station (GCS) and provides training for pilots and sensor operators. PMATS trainers are capable of local area networked operations and are programmed for Distributed Mission Operations certification. The PMATS provides mission, normal, and emergency procedures training capability. **Note:** an alternate software program can reconfigure the PMATS to replicate the MQ-9 Reaper GCS.

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

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

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

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

**Squadron Supervisor**—Squadron Commander, Operations Officers (DO), Assistant Operations Officers (ADO), and others designated in writing by the SQ/CC. Except for SQ/CC, DO, and ADO, appointment must be endorsed by OG/CC, and qualification will be documented on unit letter of X's. (AFSOC: Squadron Supervisor must be a current certified instructor in the mission/training event for purposes of re-certifying flying currencies.)

**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 our interests or desires (see AFI 10-704, *Military Deception Program*).

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

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

**Training Cycle**— The RAP training cycle is aligned on an annual cycle from 1 October – 30 September. Units and individual aircrew will complete all training requirements within the training cycle unless specifically excepted by this instruction or HHQ guidance. AFSOC follows a semi-annual training cycle Oct-Mar and Apr-Sep.

**Verification**—Applies to procedure aimed at verifying and refreshing aircrew employment knowledge, emphasizing conventional operations and mobile targets. Verification is conducted in both initial and follow-on phases. Initial verification phase is a formal board proceeding convened to verify individual aircrew knowledge. Continuation training is to reinforce, refresh, and update aircrews on unit wartime mission/tasking, tactics, and procedures.

**Visual Identification (VID)**—(DoD, NATO) In a flight control system, a control mode in which the aircraft follows a radar target and is automatically positioned to allow visual identification.

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

## Attachment 2

### GLOSSARY OF MISSION/SORTIE AND EVENT DEFINITIONS

#### A2.1. Sortie and Mission Definitions:

A2.1.1. Sortie: The operational nature of MQ-1 requires clarification of the term sortie within the scope of this AFI. An MQ-1 flight is defined as initial takeoff until the full stop landing. A sortie, for documenting events accomplished, is the portion of the flight in which an individual aircrew member is performing his or her assigned duties. For the purposes of this instruction the terms mission and sortie are synonymous.

A2.1.2. RAP Sortie. RAP training sorties are oriented to developing basic combat skills or practicing tactical employment simulating conditions anticipated in the unit mission. If training is accomplished, a RAP sortie may be logged. Due to the nature of MQ-1 L/R operations, pattern proficiency sorties (PPS) may be considered a RAP sortie. The PPS may also be included in sortie lookback.

A2.1.3. Basic Skills Sortie. A sortie where combat skills training is not accomplished. Unless specifically tasked, there is no requirement to log Basic Skills sorties.

A2.1.4. Logging Sorties. Normally, aircrew members will not log more than one type of sortie on a single flight, unless:

A2.1.4.1. Specifically allowed in the sortie description (i.e. instructor sortie).

A2.1.4.2. An aircrew member is relieved by another aircrew member for the purpose of accomplishing a sortie and then subsequently takes over the position again during the same flight.

#### A2.2. Specific Sortie definitions:

A2.2.1. Aircraft Handling Characteristics (AHC) [ME49] – Basic flying skills sortie. Training for proficiency in utilization and exploitation of the aircraft flight envelope, consistent with operational and safety constraints.

A2.2.2. Air Strike Control (ASC) Sortie [RC22] – Sortie designed to develop proficiency in airborne forward air control of armed attack aircraft in support of actual or simulated ground forces. Mission elements include:

A2.2.2.1. Intelligence scenario and combat mission planning.

A2.2.2.2. Actual or simulated interface with Theater Air-Ground System (TAGS).

A2.2.2.3. Target acquisition, identification and marking.

A2.2.2.4. Positive control of ground attack fighters employing simulated or actual ordnance against designated targets.

A2.2.2.5. FAC-to-fighter brief.

A2.2.2.6. Integration of ground and heliborne fire support elements (if available).

A2.2.2.7. Identification and neutralization of enemy air defenses.

A2.2.2.8. Battle Damage Assessment (BDA) and INFLTREP.

A2.2.3. Attrition Sortie [SC14] – A sortie planned and launched as a RAP training sortie, Basic Skills sortie, or collateral sortie, that, due to some circumstance (weather, IFE, maintenance, etc.), fails to accomplish the planned mission. It is imperative that units log these sorties properly. Improper accounting of these sorties will result in improper sortie allocation, stresses to the unit schedule, and negative impacts to the quality of unit training programs.

A2.2.4. Basic Surface Attack [SR26] – Building block sortie. Training designed to achieve proficiency in day [BSA-(Day)] or night [BSA-(NT)] air-to-surface weapons delivery events.

A2.2.5. Close Air Support (CAS) Sortie [SR27] – Counterland mission sortie flown in support of ground forces under the control of a FAC (A) or JTAC. Mission elements include:

A2.2.5.1. Intelligence scenario and combat mission planning.

A2.2.5.2. Mission execution against actual or simulated threats.

A2.2.5.3. Simulated or actual weapons delivery under positive control of JTAC or Forward Air Controller (Airborne) [FAC(A)].

A2.2.5.4. BDA and INFLTREP.

A2.2.6. Collateral Sorties [SC00]– These sorties do not directly relate to combat employment or basic skills training but are necessary for accomplishment of day-to-day unit operations. Functional check flights and air shows are in this category. These sorties are not required for RAP training purposes.

A2.2.7. Commander Option Sortie [SR99] – A sortie that may be used to provide individualized training based on proficiency and demonstrated performance. This sortie may be allocated above the guidelines in the RAP tasking message for all mission types. The intent is to use these missions as necessary throughout the training cycle, rather than allocating them at the beginning of the training cycle.

A2.2.8. Contingency Operations Sortie [SC13] – Sorties at a contingency location, or in support of real-world operations, which provide limited or no RAP training and do not count toward training cycle RAP requirements. Units may use Contingency Operations sorties for lookback purposes. RAP events accomplished during sorties logged as Contingency Operations do not count toward training cycle RAP requirements; however individual events can be used to update currencies.

A2.2.9. Forward Air Controller-Airborne (FAC-A) Sortie [SR07] – Sortie flown to provide airborne forward air control of strike aircraft in support of actual or simulated ground forces. Mission elements include:

A2.2.9.1. Intelligence scenario and combat mission planning.

A2.2.9.2. Actual or simulated interface with TAGS C2 network.

A2.2.9.3. Target acquisition, identification and marking.

A2.2.9.4. Positive control of ground attack fighters employing simulated or actual ordinance against designated targets.

A2.2.9.5. FAC-to-fighter brief.

A2.2.9.6. Integration of ground and heliborne fire support elements (if available).

A2.2.9.7. Identification and neutralization of enemy air defenses.

A2.2.9.8. BDA and INFLTREP.

A2.2.10. Instructor Sortie [SX16] – Special qualification sortie. Sortie where the IP/ISO acted in an instructional capacity and was not able to obtain valid combat training because of instructor duties. May be dual-logged with RAP sorties.

A2.2.11. Instrument Sortie [SX15] – Basic skills sortie. Training designed to ensure instrument proficiency. RAP events may be accomplished on an instrument sortie provided accomplishment does not interfere with the primary goal of instrument training. Units are allocated sorties for every aircrew to accomplish their minimum basic skill, non-RAP, requirements.

A2.2.12. Mission Currency Sortie [ST00] – Operate the MQ-1 aircraft controls (pilots) or the MTS controls (sensor operators) in flight. Aircrew members may dual credit a mission currency sortie in conjunction with any type of sortie flown. Log mission currency sorties on training or operational missions. Instructors/Evaluators may receive credit when observing, instructing, or performing evaluator duties.

A2.2.13. Night Sortie [RC16] – Sortie on which either takeoff or landing and at least 50 percent of flight duration or 1 hour, whichever is less, occur between the period of official sunset to official sunrise. Night sorties may be dual-logged with RAP sorties.

A2.2.14. Pattern Proficiency Sortie (PPS) (only required for L/R-qualified crews) [UV04] – Due to the challenging nature of MQ-1 transition operations, it is mandatory L/R crews maintain a high level of proficiency with basic aircraft flight procedures. A PPS is a mission to practice instrument, transition, traffic patterns, and emergency procedures. A PPS can be logged at the discretion of the aircrew when sufficient training has been accomplished. Recommend a minimum of 45 minutes in the pattern be scheduled for this event. A PPS should be briefed as a standard alternate mission whenever possible. As reference, a PPS should consist of the following:

A2.2.14.1. Review of Critical Action Emergency Procedures

A2.2.14.2. Instrument and visual approaches.

A2.2.14.3. IR touch and go/landing(s).

A2.2.14.4. Nose camera touch and go/landing(s).

A2.2.14.4.1. SFO(s).

A2.2.14.5. Go-arounds.

A2.2.15. Reconnaissance, Surveillance, and Target Acquisition (RSTA) Sortie [SR77] – Sortie flown to develop proficiency in acquiring a tactical target (in any of the following categories) and satisfy applicable essential elements of information (EEI). Mission elements include:

A2.2.15.1. Intelligence scenario and combat mission planning.

A2.2.15.2. Area search pattern (minimum 5 NM<sup>2</sup>).

A2.2.15.3. Line of communications search pattern (minimum 10 NM).

A2.2.15.4. Fixed (point) target acquisition (wide and narrow focus).

A2.2.15.5. Mobile target tracking (minimum 3 minutes).

A2.2.15.6. Actual or simulated interface to C2 element.

A2.2.16. Strike Coordination and Reconnaissance (SCAR) Sortie [RC26] – During a counterland mission/sortie act as primary killbox controller, reconnaissance, or attack platform utilizing an airspace control plan., deconfliction coordination, positive identification (PID) of target, collateral damage estimate determination, BDA, and in-flight report. Simulated attacks may be conducted against realistic targets IAW local restrictions. Mission elements include:

A2.2.16.1. Intelligence scenario and combat mission planning.

A2.2.16.2. Target acquisition, positive identification and marking.

A2.2.16.3. Positive control of attack elements employing simulated or actual ordnance against designated targets.

A2.2.16.4. Controller-to-striker brief (e.g. 9-line).

A2.2.16.5. Collateral damage estimate (CDE) determination, BDA, and INFLTREP.

A2.2.17. Surface Attack Tactics (SAT) Sortie [VT39] – Mission sortie designed to develop proficiency in Surface Attack Tactics, IAW unit taskings, simulating standard conventional loads (SCL). Mission types include: Strategic Attack (SA), Air Interdiction (AI), Offensive Counterair Air-to-Surface (OCA-S), and Suppression of Enemy Air Defenses (SEAD). Simulated attacks may be conducted against realistic targets IAW local restrictions. Mission elements include:

A2.2.17.1. Combat mission planning.

A2.2.17.2. Mission execution with actual or simulated threats.

A2.2.17.3. Target identification and marking.

A2.2.17.4. Simulated weapons delivery against a tactical target during the day or night.

**A2.3. Events.** An event is defined as a specific type of target acquisition or weapons employment performed during a sortie or the accomplishment of a specific training element, function, or task (i.e., buddy lasing, handover procedures, SAT, etc.). Unless otherwise specified in the event descriptions, units will determine the necessary parameters for fulfilling and logging tasked events. Accomplishing a specific training event is independent of the type of sortie logged. In the absence of guidance, units determine the frequency and number of events.

A2.3.1. **Weapons Event Definitions.** The following is a listing of event definitions for use in fulfilling tasked requirements. Not all events may be applicable to MQ-1 operations.

A2.3.1.1. Weapons Delivery [WE22]. A delivery event is defined as a pass at a target on which ordnance is expended or simulated and meets the criteria defining a specific weapon delivery. These delivery events will be used to update weapons qualifications and currencies. Weapon events are defined in [Chapter 5](#). All deliveries will be recorded, but not necessarily as a "record" delivery.

A2.3.1.2. Categories. A delivery constitutes a weapons delivery event based on two categories: by record keeping (Record or Non-Record), and by RAP tasking (FAM and QUAL):

A2.3.1.2.1. Non-Record. Basic or Tactical weapons delivery accomplishments not credited toward weapons qualification provided the aircrew declares non-record prior to beginning event.

A2.3.1.2.2. Record. Conventional or nuclear delivery scored for individual weapons qualification. Scoring shall be accomplished by ground, air or AVTR scoring, as appropriate. A maximum of two record deliveries may be accomplished during a sortie from a single run-in heading. Additional record deliveries may be accomplished from headings differing by at least 90 degrees or on different targets/ranges and may not be preceded by non-record deliveries in the event on the same sortie. The first two deliveries will be considered record unless otherwise declared prior to the roll-in to final. Scores will be documented by CEP and clock position. Additional guidelines are:

A2.3.1.2.3. FAM. Weapons events tasked at FAM may be basic/tactical record deliveries. Each single pass counts as one delivery. Unless otherwise specified in the RAP tasking message or formal course syllabi, FAM tasking requires six weapons deliveries annually.

A2.3.1.2.4. QUAL. Weapons tasked at QUAL must be tactical, record deliveries. QUAL tasking demonstrates the aircrew's capability to put appropriate ordnance on target. Unless otherwise specified in the RAP tasking message or formal course syllabi, QUAL criteria is established for each event in [Chapter 5](#).

#### A2.3.2. Miscellaneous Weapons Delivery Definitions and Descriptions:

A2.3.2.1. Dry Pass. Weapons delivery pass during which no ordnance is expended. Such dry passes prior to completion of record deliveries in an event are charged to the aircrew as gross error unless pass was dry because of safety interests, system malfunctions, basic delivery requirements, or directed for flight integrity purposes.

A2.3.2.2. Foul. A penalty directed to a specific aircraft and crew for actions inconsistent with established procedures or safety considerations. A foul will result in a gross error for that delivery. Verbal warnings will not be substituted for fouls. A second foul or any dangerous pass will result in mandatory expulsion from any further deliveries during that mission and a gross error score for the event. A foul will be charged IAW flying directive publications.

A2.3.2.3. Full Scale Weapons Delivery. Delivery of live or inert ordnance in a combat configuration. Also known as live-fire.

A2.3.2.4. Gross Error. A penalty score or miss assigned to an aircrew's records when a weapons delivery attempt results in: munitions impact outside the range scoring capability; a chargeable dry pass; a foul; an unintentional release, or exceeding tactical delivery time on final requirements.

A2.3.2.5. Hit. Any munitions impact within the weapons criteria established for that event.

A2.3.2.6. Multiple Release. More than one weapon released against the same target on a single pass.

A2.3.2.6.1. Intentional. The aircrew must advise the range officer prior to delivery and designate which impact to be scored.

A2.3.2.6.2. Inadvertent. Ordnance which has released without command by the aircrew. Impact will not be scored.

A2.3.2.6.3. System Malfunction. An undeclared multiple release caused by a verified system malfunction. Score is void after system malfunction verification, otherwise, unintentional rules apply.

A2.3.2.6.4. Unintentional. Ordnance released due to aircrew error. Will be scored as gross error regardless of impact point.

A2.3.2.7. No Spot. A weapons release during which no impact was observed. No score or error will be assigned.

A2.3.2.8. Void Delivery. Weapons delivery not successfully completed due to: a documented and verified weapons system malfunction; a pass aborted for safety; no spot; or circumstances beyond the control of the aircrew.

**A2.3.3. Tactical Events.** The following is an alphabetical listing of events to be used for fulfilling tasked requirements. In the absence of guidance, units will determine the content of tasked events and how often they may be logged. Alphanumerics in brackets identify the ARMS code associated with the event.

A2.3.3.1. Buddy Lase Procedures [UV25]. Practice tactical target lock-ons for laser guided munition equipped strike assets using laser operational terminology and procedures to include: striker rendezvous and briefing, establishment of safe observation position, target plotting, identification, and marking (firing laser), and fire coordination.

A2.3.3.2. Comm Jam Event [EC12]. In-flight operations without use of active anti-jam radios in a communications jamming environment that provide realistic intervals and duration (completion of one attack profile desired) to counter jamming and/or effective chattermark procedures. Limited to logging of one event per sortie.

A2.3.3.3. Composite Force Training (CFTR) [RA40]. Scenarios employing multiple flights of the same or different types of aircraft, each under the direction of its own flight leader, performing the same or different roles. Only one event may be logged per sortie.

A2.3.3.4. Electronic Combat (EC) Event Situational Awareness (S/A) [EC09]. The aircrew detects a surface threat via electronic means and reacts with appropriate maneuvers, pod/internal electronic countermeasures (ECM) switchology and/or expendables. Only one event may be logged per sortie.

A2.3.3.5. Emergency Mission Planning and Execution [UV10]. Demonstrate procedures to build Emergency missions, check for proper default values, perform in-flight updates (to include inserting, changing, and deleting waypoints), and identify procedures to send emergency mission to the aircraft. Demonstrate actual initial LOS Lost Link procedures to the aircraft in a controlled setting. Track the aircraft through initial turn and climb. May be accomplished in the ATD. If accomplished in-flight, event requires direct

supervision of an IP. IPs may accomplish event in-flight without additional IP supervision.

A2.3.3.6. Handover Procedures. Accomplish all checklist and procedures involved with the transfer of aircraft from one control station to another. May be accomplished in ATD; requires one crew to act as MCE and second crew to act as LRE.

A2.3.3.6.1. Gaining Handover [UV40]. Accomplishes all applicable gaining handover checklists and successfully takes control of an airborne or parked aircraft from another control station. This can be accomplished as an MCE crew or as an LRE crew and link type (Ku or LOS) does not matter.

A2.3.3.6.2. Losing Handover [UV41]. Accomplishes all applicable losing handover checklists and successfully transfers control of an airborne or parked aircraft to another control station. This can be accomplished as an MCE crew or as an LRE crew and link type (Ku or LOS) does not matter.

A2.3.3.7. HAVE QUICK Event [RA87].). Requires proper radio configuration for HAVE QUICK operation and successful utilization during tactical mission accomplishment. Should include the practice of loading the combat or MAJCOM HAVE QUICK training net Word-of-Day (WOD) and world-wide Time-of-Day (TOD). During extended missions, update the TOD from a world-wide master clock if available. Only one event may be logged per sortie.

A2.3.3.8. Instructor Event [SX16]. An event logged by an instructor when performing instructor duties during a sortie, or any portion thereof. The instructor qualification is required for the mission itself or any mission element. Examples include upgrade sorties, updating lost currencies, difference training, etc. Evaluators will log this event on evaluation sorties. Logging this event updates instructor currency.

A2.3.3.9. Infrared (or LowLight) Landing [LD41]. A landing accomplished using the IR, or an approved Low Light sensor, as the primary sensor (i.e. without use of the nose camera). Pilots may accomplish this requirement during the day or night.

A2.3.3.10. Infrared Nose Camera Landing [LD42]. A landing using the IR nose camera.

A2.3.3.11. Joint Force Training [TE06]. Scenarios employing integrated ground, aerospace, land, and/or naval forces from other services.

A2.3.3.12. Ku Target Tracking/Imaging [UV11]. Using Ku in-flight as the sensor datalink, acquire and track mobile or fixed targets applying proper search and acquisition techniques. Provide major target area analysis and acquire and hold the tasked target in the field of view long enough to perform initial target evaluation using optimum magnification. Maximum of one events per sortie.

A2.3.3.13. Landing Procedures [LD00]. Accomplish the Arrival and Before Landing checklists and accomplish (SO: observe) a full-stop or touch-and-go landing..

A2.3.3.14. Launch Procedures [UV20]. Accomplish normal procedures checklists from Rack Configuration through Pre-Takeoff. Event may be credited without aircraft entering the active runway.

A2.3.3.15. Laser Target Marking [UV30]. Acquire and track mobile or fixed targets. Illuminate and hold tasked target in support of real or simulated tactical weapon delivery or tactical operations. Maximum of one event per sortie.

A2.3.3.16. Moving Target Tracking/Marking [UV31]. Acquire and track a mobile target. Hold target in the optimum field of view for a minimum of 30 seconds. Maximum of one event per sortie.

A2.3.3.17. Night Nose Camera Low Approach [AP81]. A low approach flown at night using only the nose camera.

A2.3.3.18. Non-precision Approach [AP02]. Log a non-precision approach when an airport surveillance radar (ASR) or other approved non-precision approach is briefed and flown. Refer to AFMAN 11-217 Volume 1, *Instrument Flight Procedures*.

A2.3.3.19. Nose Camera Landing [LD40]. A landing accomplished using the nose camera. If IR equipped, SQ/CC may direct separate currency for Nose Camera IR landings, not to exceed Nose Camera DTV landing.

A2.3.3.20. Precision Approach [AP01]. Log a precision approach when a precision approach radar or other approved approach is briefed and flown. Refer to AFMAN 11-217, Volume 1.

A2.3.3.21. Secure Voice [RB67]. Requires proper radio configuration for secure voice operation and successful utilization during tactical mission accomplishment. Only one event may be logged per sortie.

A2.3.3.22. Simulated Flame-out (SFO) [AP14]. An emergency pattern accomplished in response to simulated engine failure either down range or in the traffic pattern as described in the flight manual. Practice approaches are flown at idle with the landing gear down and are restricted to low approach only.

A2.3.3.23. Takeoff [UV21]. Accomplish actual takeoff to include after takeoff and initial climb procedures and associated checklists.

A2.3.3.24 Target Talk-on [UV32]. Convey validated target information to an attacking aircraft and confirm positive target ID. Talk-on will include visual identification/confirmation of the target from attacking aircraft crew.

A2.3.3.25. Time Sensitive Target (TST) Event [UV33]. An event performing a tactical weapons delivery (actual or simulated) against an unplanned, highly lucrative target or target of opportunity requiring immediate response. The attacking aircraft should receive target data/description and clearance from an appropriate command and control (C2) asset. Use of CRCs, AWACS, JSTARS, AOC, UAS, TACP, FAC or a simulation thereof is required. Scenarios should include standard fire support control measures utilizing standard J-FIRE terminology for clearance of fires. Data/description can be via datalink or normal radio communications. Although the target is unplanned, the event and procedures must be thoroughly briefed.

### Attachment 3

#### SAMPLE VERIFICATION GUIDE BRIEFING OUTLINE

##### **A3.1. Overview:**

- A3.1.1. Introduction (participants and briefing classification).
- A3.1.2. Mission overview.
- A3.1.3. Status of friendly forces (ground, air and support).

##### **A3.2. Area of Operations:**

- A3.2.1. Geography (topography, population centers, lines of communications, chokepoints and natural obstacles, major visual identification points).
- A3.2.2. Climatology (effects on unit operations, ground troop movements, and in-flight operations).
- A3.2.3. Operating base (location, facilities, procedural constraints, strengths, and limitations).

##### **A3.3. Status of Enemy Forces:**

- A3.3.1. Ground forces and accompanying air defense threats such as surface-to-air missiles; antiaircraft artillery; electronic combat; and, interference, jamming, and intrusion capabilities, strengths and weaknesses.
- A3.3.2. Airborne forces (numbers, locations, capabilities and tactics).

##### **A3.4. Mission Employment Briefing:**

- A3.4.1. Ground operations.
- A3.4.2. Departure (weather contingencies, options).
- A3.4.3. Route of flight (threat analysis, alternatives, fuel requirements, decision points).
- A3.4.4. Target descriptions and EEIs (mission data card and tactics).
- A3.4.5. Weapons employment (target data, attack parameters, load, fusing, suitability, delivery modes, and backups).
- A3.4.6. Egress plan.
- A3.4.7. Lost Link procedures and emergency airfield plan.
- A3.4.8. Airspace coordination plan