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**Flying Operations**

**MQ-9—CREW 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 personnel who operate United States Air Force (USAF) MQ-9 aircraft and applies to all MQ-9 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 AF/A3Y through Air Combat Command (ACC)/A3Y 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 AF/A3Y, 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.

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: PL. 92-204, Appropriations Act for 1973, Section 715; PL 93-570, Appropriations Act for 1974); PL. 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 Inter-agency Air Force Information Collections*.

Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 37-123 (will convert to AFMAN 33-363), *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at <https://afrims.amc.af.mil/>.

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## Chapter 1

### GENERAL GUIDANCE

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

#### 1.2. Responsibilities:

1.2.1. ACC/A3 is designated the responsible agency for this volume IAW AFPD 11-2, and AFI 11-202V1. ACC/A3 will:

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

1.2.1.2. Process all change requests.

1.2.2. All applicable MAJCOMs will:

1.2.2.1. Determine additional training requirements to meet expected unit tasking (e.g., Ready Aircrew Program [RAP] Tasking Message [RTM]).

1.2.2.2. Submit MAJCOM supplements to AF/A3Y for approval before publication. Provide AF/A3Y, and all applicable MAJCOM OPRs a copy of approved supplements.

1.2.2.3. MAJCOMs, other than ACC, will forward a copy of their RTM to ACC/A3Y.

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

1.2.3. 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 Air National Guard (ANG) unit training programs as requested IAW the applicable unit advisory support program.

1.2.4.2. Attach wing- and group-level crewmembers assigned in Aircrew Position Indicator (API) 6 positions to a flying squadron.

1.2.4.3. Except when otherwise mandated, designate the training level to which each API-6/8 (ANG: all flyers) will train. Upon request, provide MAJCOM/A3 (ANG: ACC/A3G) 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 (ANG: ACC/A3G). Review supplements annually.

1.2.4.5. Identify training shortfalls that adversely impact combat capability. Operational (CC-coded) units are required to submit, through appropriate channels, anticipated shortfall reports to MAJCOM OPR (ANG: ACC/A3G). Prior to submitting the end of cycle report, units are reminded to prorate incomplete training, as applicable.

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

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

1.2.5.2. Review training and evaluation records of newly assigned crewmembers 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 Ready Aircrew Program (RAP) missions to develop basic combat skills and practice tactics that simulate conditions anticipated in the unit mission.

1.2.5.4. Provide guidance to ensure logging of only effective RAP missions as RAP sorties.

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

1.2.5.6. Determine utilization of BMC crewmembers.

1.2.5.7. Determine which BMC/CMR crewmembers will carry special capabilities/qualifications.

1.2.5.8. Identify supervision level required to accomplish training, unless otherwise directed.

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 crewmembers.

1.2.5.12. Ensure crewmembers are qualified, current, and prepared to participate in missions, sorties, and events.

1.2.5.13. Ensure crewmembers accurately record missions, sorties, and events IAW this instruction and MAJCOM RAP guidance.

1.2.6. Training Reports. Designed operational capability (DOC) tasked squadrons will submit a training report to HHQ IAW MAJCOM/A3 directives. Squadrons may submit out-of-cycle reports if HHQ assistance is required to prepare for UTC or AEF 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 within the current training cycle.

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 (ANG: ACC/A3). This includes requirements waived by Operations Group Commander (OG/CC). Email training reports to appropriate MAJCOM RAP program manager.

1.2.6.3. ACC RAP training reports will be submitted every 4 months (31 May, 30 Sep, 31 Jan) and will cover the periods: Jan-Apr, May-Aug, Sep-Dec. In lieu of RAP reports, ACC Formal Training (TF-coded) Units (FTU) will submit Status of Formal Training reports. Reporting will be IAW guidance and examples at the ACC/A3 RAP website at [https://totn.acc.af.mil/xoya/DOY\\_RAP/](https://totn.acc.af.mil/xoya/DOY_RAP/). RAP/FTU briefings should be submitted via e-mail to ACC/A3Y ([acc.a3y@langley.af.mil](mailto:acc.a3y@langley.af.mil)).

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

**1.3. Processing Changes.** Forward recommended changes to this volume to ACC/A3Y on AF Form 847, *Recommendation for Change of Publication*. ACC/A3T will coordinate changes to this instruction with MAJCOM OPRs, consolidate recommended changes and forward proposed interim changes to AF/A3Y. AF/A3O is the approval authority for changes to this volume. Handle time-sensitive changes by immediate-action message.

**1.4. Training.** Training is designed to progress crewmembers from Initial Qualification Training (IQT), to Mission Qualification Training (MQT), and finally to Continuation Training (CT).

1.4.1. **IQT.** IQT provides the training necessary to initially qualify crewmembers in a basic aircraft position and flying duties without regard to a unit's mission. IQT is usually accomplished at a Formal Training Unit (FTU). There are provisions within this instruction to accomplish IQT in non-FTUs, if the situation necessitates.

**NOTE:** After successful completion of the qualification flight evaluation (an element of the IQT program) crewmembers are considered in Basic Aircraft Qualification (BAQ) status. BAQ is a temporary qualification and is not specifically (or necessarily) documented, as such. Crewmembers are usually documented as in IQT or MQT status while BAQ status. BAQ is not a long-term qualification status. Waiver authority for any crewmember, other than general officers above the wing level, to remain BAQ is MAJCOM/A3 (ANG: ACC/A3G).

1.4.2. **MQT.** MQT provides the training necessary to initially qualify or re-qualify crewmembers in a specific position and duties to perform the missions assigned to a specific unit. Crewmembers maintain BAQ status until they complete MQT. Following completion of IQT and MQT (or formal instructor upgrade program), crewmembers will have received training in all the basic missions of a specific unit, unless otherwise stated in **Chapter 3**. Crewmembers will then be assigned to either a Combat Mission Ready (CMR) or Basic Mission Capable position. Note: progression from MQT to CMR/BMC status requires a mission (MSN) evaluation IAW AFI 11-2MQ-9V2, *MQ -9 Crew Evaluation Criteria*.

1.4.3. **Continuation Training.** CT is the training program for CMR/BMC-designated crewmembers. CT is designed to maintain a minimum level of proficiency or to increase the capability of individual crewmembers. There are two aspects of CT: Ready Aircrew Program (RAP) and non-RAP training requirements.

1.4.3.1. Ready Aircrew Program (RAP). RAP is the 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 RAP Tasking Message (TM) which is released, at a minimum, every 20 months and is to be filed at the back of this instruction.

1.4.3.2. Non-RAP Training Requirements. These requirements ensure skills are maintained to safely and proficiently operate unit aircraft and associated equipment. They apply to all MQ-9 units and generally do not change. Non-RAP sorties and events are contained in [Table 4.2](#).

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

1.4.4.1. **Combat Mission Ready.**

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 API-1 inexperienced crewmembers and at least 50% of the front line positions will be filled with inexperienced crewmembers, if available (ANG: any crewmember may be designated CMR or BMC at OG/CC discretion).

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

1.4.4.1.4. Non-CMR (N-CMR). Failure to complete CMR training or maintain these 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. Crewmembers that regress to N-CMR status will accomplish the requirements in accordance with paragraph [4.7](#).

1.4.4.2. **Basic Mission Capable.**

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 crewmember positions that are not designated CMR positions, are BMC positions. BMC designations are assigned to crewmembers that have a primary job performing wing supervision or staff functions that directly support the flying operation. FTU instructors and operational test crewmembers are also assigned BMC status.



1.4.4.2.3. BMC crewmembers 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 crewmembers must be able to attain proficiency and qualification in 30 days or less. BMC crewmembers must accomplish all mission-related ground training designated by their assigned SQ/CC.

1.4.4.2.4. BMC crewmembers 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 N-BMC status. While N-BMC, SQ/CC will determine missions the crewmembers may perform and supervision required. Crewmembers that regress to N-BMC status will accomplish the requirements in accordance with paragraph 4.7.

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

## 1.5. Training Concepts and Policies:

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

1.5.2. ACC Training Support Squadron (TRSS) will develop and validate training programs when tasked by ACC/A3. Other MAJCOMS may submit requests for training program support to the ACC/A3. If validated, these requests will be prioritized and tasked to TRSS. Designated test units (CB-coded) may develop syllabi to upgrade operation test crewmembers in support of specific test plans. These syllabi will be approved by the TEG/CC and submitted to 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 required training. If the mission objectives include introduction to new tasks, or instruction to correct previous discrepancies, an instructor is generally required.

1.5.5. Crewmembers will not be required to accomplish ground or ancillary training except as required by this instruction or AFI 36-2201V1, *Training Development, Delivery, and Evaluation*.

## 1.6. RAP Policy and Management:

1.6.1. MQ-9 units are considered Low-Density/High-Demand (LDHD) and are not aligned against a specific AEF pair; therefore, the RAP training period is aligned with the entire 20-month AEF cycle.

Units will reference their MAJCOM RAP tasking message for specified training cycle and reporting procedures.

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/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 crewmembers to CMR.

1.6.6. CMR status requires:

1.6.6.1. A 1-month lookback 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 crewmember 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.

1.6.6.5. Squadron CC certification.

1.6.7. Special Capabilities or Qualifications. SQ/CCs will determine and assign crewmembers that 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) crewmembers 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 crewmembers 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 crewmembers in CMR positions at the BMC rate until one month prior to the operationally ready date if CMR mission rates cannot be supported. CMR crewmembers should be flown at a CMR rate for the month prior to IOC. Active duty wings converting to new MDS are authorized one SQ-equivalent 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:

1.7.1. RAP sortie and event requirements (see [Attachment 2](#) for definitions) apply to CMR and BMC crewmembers 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 an updated sortie requirement or missions, events, and currencies not incorporated in [Table 1.1.](#), [Table 1.2.](#), [Table 4.1.](#), [Table 4.2.](#), and [Table 4.3.](#), or in [Attachment 2.](#)

1.7.2. Non-RAP requirements, missions, and events designed to ensure maintenance of basic crewmember skills are in addition to RAP requirements. Crewmembers may log non-RAP events on RAP sorties provided there is no effect on RAP sortie effectiveness. Unit flying programs contain sorties for crewmembers to accomplish their minimum non-RAP 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. For the 20 month AEF training cycle, the MAJCOM allocates units a block of sorties, adjusted for local conditions and circumstances, for these purposes.

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 non-RAP 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-9 Total Sortie Requirements**

PILOTS AND SENSOR OPERATORS			
MAJCOM	CYCLE	<u>BMC</u> INEXP/EXP	<u>CMR</u> INEXP/EXP
ACC	20 Mo. AEF Cycle Total	80/70	100/80
	1-Mo. Lookback	4/3	5/4
	3-Mo. Lookback	12/9	15/9
ANG	20 Mo. AEF Cycle Total	80/60	90/80
	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 crewmember records for individual training and evaluations IAW:

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

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

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

1.8.1.4. AFMAN 37-123, *Management of Records*

1.8.1.5. Air Force Records Disposition Schedule (RDS), located at <https://afrims.amc.af.mil>.

1.8.1.6. Applicable MAJCOM directives.

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

1.8.2.1. Ground training.

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

1.8.2.3. Look-back: RAP mission requirements and accomplishment 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 in 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. Crewmembers should use and assess all available training documentation, such as eight-millimeter tape recorders or digital recording devices, on all missions. Individual crewmembers 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. Crewmember Utilization Policy:**

1.10.1. Commanders will ensure wing/group crewmembers (API-1/6s) fill authorized positions IAW unit manning documents and the crewmember status is properly designated. The overall objective is that crewmembers perform combat-related duties. Supervisors may assign crewmembers to valid, short-term tasks (escort officer, FEB/mishap board member, etc.), but must continually weigh the factors involved, such as level of 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 assigned duties are commensurate with their level of assignment. Units may assign the following duties required by various publications to CAF squadron-level crewmembers: tactics officer, scheduler, flying safety officer, supervisor of flying, mobility/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-9 crewmembers to wing/group staffs or man wing/group staff positions with squadron-assigned MQ-9 crewmembers unless total wing, group, and squadron MQ-9 crew manning is at least 100 percent. In some instances, such as squadron-assigned flying safety officers, units may attach squadron-assigned MQ-9 crewmembers to the wing. Commanders (CCs) will ensure wing-and-above staff crewmembers perform duties justified in MAJCOM manpower standards documents and fill positions authorized in UMDs.

1.10.3. Crewmembers 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:**

1.11.1. In general, inexperienced crewmembers should receive sortie allocation priority over experienced crewmembers. Crewmember experience level definitions are in [Attachment 1](#). 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 Standardization/Evaluation Flight Examiner (SEFE) duties.

1.11.1.2. Operational Units. Squadron-assigned CMR, squadron-assigned MQT, wing-assigned CMR, wing-assigned MQT, and wing assigned BMC.

1.11.1.3. Test Units (CB-coded). 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 crewmembers will maintain formal instructor status: WG/CC, WG/CV, OG/CC, and OG/CD. For FTU-only wings, all API-6 crewmembers will maintain instructor status (optional for WG/CC, OG/CC and FCF crews). FTU-only wings will fly API-1/6 crewmembers 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 crewmembers will fly the BMC rate; however, are not required to complete BMC-specific missions and events or meet monthly lookback requirements. They will accomplish non-RAP requirements within their BMC number of sorties. Units should provide assigned crewmembers 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 non-RAP requirements with allotted BMC sorties. If units cannot meet attached crewmember requirements, they must request relief IAW AFI 11-401, MAJCOM Supplement. Units requiring flying hour adjustments for attached crewmembers must request program changes IAW MAJCOM instructions.

1.11.5. There is no maximum sortie count for CMR crewmembers. [Table 1.2](#). defines the minimum and maximum sortie requirements for other crewmembers. On occasion, unique operations may require crewmembers to fly more than the maximum number of sorties authorized, however, this may impact training of other crewmembers. Crewmembers 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-9 Sortie Requirements for Other-Than-Squadron-Level Crews.**

<b>Crew Position</b>	<b>CT Status (Minimum Sortie Requirement)</b>	<b>Unit's Aircraft Code</b>	<b>Organization Level</b>	<b>Maximum Sortie Allowance (INEXP/EXP)</b>
Pilot/Sensor Operator (SO)	CMR	CC	Wing and above	As required by qualifications
Pilot/SO	BMC	CC	Wing	120/100 (per AEF cycle)
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 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 (ANG: ACC/A3G), 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 the Approving official cancels in writing or revises the publication.

## Chapter 2

### INITIAL QUALIFICATION TRAINING

**2.1. General.** This chapter outlines Initial Qualification Training (IQT) of crewmembers into the MQ-9. IQT includes Basic Training (B-Course), Re-qualification Training (TX-course), and Launch and Recovery (L/R) Training.

2.1.1. IQT will normally be conducted during formal syllabus courses at an FTU. When FTU training is not available within a reasonable time period IQT may be conducted at the local unit IAW the provisions of this chapter. The following guidance applies to unit administered IQT.

2.1.2. IQT programs will be based upon the syllabus tracks, flow programs, sorties, and events required in ACC Syllabus Course MQ9PSOBTX (Basic, Requalification, and Senior Pilot/Sensor Operator Training Courses) or MQ9PSOLRC (Remote Pilot and Sensor Operator Launch/Recovery (L/R) Course).

2.1.3. Successful completion of IQT requires the upgrading crewmember to complete an evaluation IAW AFI 11-202V2 and AFI 11-2MQ-9, Volume 2.

2.1.3.1. Crewmembers will not be evaluated on events in which they were not specifically trained or qualified.

2.1.3.2. Completion of L/R qualification training will conclude with at least a SPOT evaluation.

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

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

2.2.2. OG/CC is approval authority to administer local L/R training for individuals previously qualified in L/R operations.

2.2.2.1. L/R qualification expires after 211 days from last landing (unit CCs may place additional requirements upon L/R qualification).

2.2.2.2. When developing unit-level L/R IQT programs, commanders will base the program on provisions in paragraph 6.5. Forward copy of unit re-qualification program to MAJCOM POC (ANG: ACC/A3G) and ACC/A3TR.

2.2.3. Gaining MAJCOM/CC (ANG: ACC/CG) 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.

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

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

2.2.4.2. Summary of individual's flying experience.

2.2.4.3. Date training will begin and expected completion date.

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



**2.3. Prerequisites.** Course prerequisites are IAW AFI 11-202V1, this instruction, the appropriate formal course syllabus and Air Force Education and Training Course Announcements (ACC Syllabus Course MQ9PSOBTX or MQ9PSOLRC). Individuals arriving at the FTU 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 (TTP), instructor guides, and audiovisual programs as supporting materials to the maximum extent possible. Accomplish simulator missions in an MQ-9 Aircrew Training Device (ATD). Use an approved Operational Flight Trainer (OFT) to the maximum extent possible; however, a Cockpit Familiarization Trainer, Part-Task Trainer, Cockpit Procedures Trainer (CPT), or Ground Control Station (GCS) may be used if an OFT 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 (ANG: ACC/A3G) with crewmember's name, rank, reason for delay, planned actions, and estimated completion date.

2.5.3. Crewmembers will fly under instructor supervision until completing the initial qualification (QUAL) checkride.

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.

2.5.5. Students in IQT may fly in FLAG, Weapon School support deployments, Weapon Systems Evaluation Programs, or equivalent type exercises under direct supervision of an instructor qualified in that crew position.

**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.** The course MQ9PSOBTX is considered a combined IQT/MQT formal training course and is normally accomplished in the FTU (the course concludes with a combined qualification/mission flight evaluation). Unit-developed and administered training programs to certify a crewmember CMR/BMC are considered MQT. Guidance in this chapter is provided to assist unit CCs in developing an MQT program.

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

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

3.1.3. Sorties and events for a unit administered MQT program will be based on the unaccomplished portion of ACC Syllabus Course MQ9PSOBTX and additional events or sorties needed to qualify a crewmember in the unit-specific mission and TTPs.

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

3.1.5. Prior to CMR certification, crewmembers must initially qualify in all CMR required weapons delivery events.

### 3.2. Ground Training:

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

3.2.2. **Mission Verification.** CMR crewmembers 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, and a senior instructor. Suggested verification briefing guides are at [Attachment 3](#).

3.2.2.1. CMR crewmembers 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 or participate in CT verifications to facilitate future upgrade to CMR status.

### 3.2.3. Initial Nuclear, Biological, and Chemical (NBC) Defensive Training (NBCDT).

3.2.3.1. Applicable crewmembers will complete training IAW AFI 10-2501, *Full Spectrum Threat Response (FSTR) Planning and Operations* and MAJCOM supplements. Initial NBCDT is designed to ensure crewmember proficiency in the overall use of NBC individual protective equipment (IPE) and to familiarize crewmembers with combat capabilities while wearing IPE. NBCDT is applicable to all CMR and BMC crewmembers assigned to mobility units, or tasked in direct support of MQ-9 operations, and deployable to chemical high threat areas (HTA) and medium threat areas (MTA) IAW AFI 10-2602, *Nuclear, Biological, Chemical, and Conventional (NBCC) Defense Operations and Standards*.

3.2.3.2. Ground Training. The following training will be accomplished prior to the OFT training:

3.2.3.2.1. Physiological effects/first aid of NBC agents.

3.2.3.2.2. Equipment orientation/fitting of full IPE.

3.2.3.2.3. GCS entry/exit procedures.

3.2.3.3. NBCDT OFT. Mission will be conducted in IPE and consist of correctly donning and checking IPE, simulated emergency procedures, basic tactical mission profile, crew coordination procedures, and doffing of simulated contaminated equipment.

3.2.3.3.1. Crewmembers will be NBC certified when initial ground and OFT training is completed.

3.2.3.3.2. The initial NBC Defensive OFT mission may be credited towards NBC CT requirements for the training cycle in which it was accomplished.

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

3.3.1. OFTs will be used, if available. If an OFT is unavailable, MQT simulator requirements may be combined into one or more CPT missions to accomplish appropriate switchology and emergency procedures (EP) training. MQT crewmembers should fly mission profiles that replicate wartime tasking. Each OFT mission will include selected critical action emergency procedures, channelized attention, and unusual attitude/inadvertent weather entry procedures.

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

3.3.2.1. Instruments and Emergency Procedures. Personal and mission preparation, normal ground operations, flight operations, navigation, published penetration and approach to any specified alternate and home base, post-flight ground operations, Critical Action Procedures (CAP), and selected non-CAP EPs.

3.3.2.2. Tactical and Weapons Anomalies. Heavyweight takeoff, jettison procedures, 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.

3.3.2.3. Tactical Mission/Emergency Procedures Evaluation. This mission will be administered by a SEFE IAW AFI 11-202V2, AFI 11-2MQ-9V2, and MAJCOM and local directives.

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

3.4.1. Supervision. An instructor 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 may be flown before continuing the program.

3.4.3. Tactical Mission Evaluation. This mission will be administered by a SEFE IAW AFI 11-202V2, AFI 11-2MQ-9V2, 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 MQ-9 RTM, outlines ground and flying continuation training requirements for BAQ, BMC, and CMR crewmembers. Crewmembers must be qualified IAW this instruction, AFI 11-401, AFI 11-202V2, AFI 11-2MQ-9V2, and applicable MAJCOM and local instructions. Crewmembers 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, crewmembers will update all applicable ground and flying currencies IAW AFI 11-202V1, 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. General requirements for crewmembers in each category and special capability are as follows:

#### 4.1.1. Basic Aircraft Qualification (BAQ) :

- 4.1.1.1. Qualification flight evaluation IAW AFI 11-202V2 and AFI 11-2MQ-9V2.
- 4.1.1.2. Instrument flight evaluation IAW AFI 11-202V2 and AFI 11-2MQ-9V2.
- 4.1.1.3. Currencies IAW paragraph **4.3**. (as applicable).
- 4.1.1.4. BAQ crewmembers will fly a supervised (squadron supervisor/instructor) sortie every 60 days.
- 4.1.1.5. In addition, if the BAQ crewmember does not fly for 21 days (inexperienced) or 30 days (experienced) the next sortie must be flown with a squadron supervisor or instructor.
- 4.1.1.6. Unless currently enrolled in a program to achieve CMR/BMC, BAQ crewmembers that remain in BAQ status for more than six months will be grounded (except general officers). Waiver authority is the MAJCOM/A3 (ANG: ACC/A3G).

#### 4.1.2. Basic Mission Capable:

- 4.1.2.1. Qualification flight evaluation IAW AFI 11-202V2 and AFI 11-2MQ-9V2.
- 4.1.2.2. Instrument flight evaluation IAW AFI 11-202V2 and AFI 11-2MQ-9V2.
- 4.1.2.3. Mission flight evaluation IAW AFI 11-202V2 and AFI 11-2MQ-9V2.
- 4.1.2.4. Currencies IAW paragraph **4.3**. (as applicable).
- 4.1.2.5. Ground training requirements related to applicable RAP sorties and events and as designated by flying squadron commander.
- 4.1.2.6. Mission rate (lookback) IAW **Table 1.1**.
- 4.1.2.7. Currencies IAW **Table 4.3**. (as applicable), paragraph **4.7**. and as authorized by the SQ/CC based on experience, proficiency, and training (N/A for API-8 and ACC/IGS inspectors).
- 4.1.2.8. FTU instructors and test pilots IAW paragraph **4.1.5**.
- 4.1.2.9. RAP missions and events (amount and types) and weapons qualifications IAW the procedures in this volume and the RTM.

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

- 4.1.3.1. BMC requirements.
- 4.1.3.2. Performance satisfactory to the SQ/CC (certification).
- 4.1.3.3. Ground training IAW paragraph 4.2. and Table 4.1.
- 4.1.3.4. Verification IAW paragraph 3.2.2. and/or 4.2.5.

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

- 4.1.4.1. Specialized training IAW Chapter 6 and guiding syllabus.
- 4.1.4.2. Sortie and mission requirements IAW this volume and the RAP tasking message for special capes missions and other requirements established by the SQ/CC.
- 4.1.4.3. Certification by squadron commander (usually designated on letter of Xs).
- 4.1.4.4. Failure to accomplish the requirements will result in loss of certification/qualification (see paragraph 4.7. for recurrency/requalification).

#### 4.1.5. **Designated Training and Designated Test Unit Requirements:**

- 4.1.5.1. Crewmembers assigned or attached to TF or CB-coded units will fly, as a minimum, at the BMC rate and accomplish the non-RAP requirements in Table 4.2. (as noted). Formal training syllabus-directed missions and approved test plan missions apply to BMC rate requirements for TF and CB-coded units respectively.
- 4.1.5.2. For instructors, failure to accomplish requirements in Table 4.2. does not affect instructor status, but requires additional training as determined by the SQ/CC before resuming instructor duties in delinquent sortie types or event(s).
- 4.1.5.3. Instructors must be initially qualified in any weapons events they plan to instruct.
- 4.1.5.4. Ground training as directed by the SQ/CC:
  - 4.1.5.4.1. There is no requirement for crewmembers assigned or attached to TF-coded or CB-coded units to accomplish NBCDFT or verification.
  - 4.1.5.4.2. There is no requirement for CB-coded units to accomplish formal intelligence training or weapons and tactics academics. Crewmembers will be thoroughly familiar with all current intelligence and weapons and tactics issues affecting on-going test projects.
- 4.1.5.5. SQ/CC will direct the addition of sorties if programmed syllabus or test missions do not provide sufficient aircrew proficiency training.
- 4.1.5.6. Instrument/Qualification/Mission or Instructor flight evaluation, as applicable, IAW AFI 11-202V2 and AFI 11-2MQ-9V2. Crewmembers assigned/attached to CB-coded units need not maintain instructor status.

**4.2. Ground Training.** Ground training requirements are IAW Table 4.1. and the RTM. Waiver authority for the ground training specified is IAW the reference directive. Ground training accomplished during IQT/MQT may be credited toward CT requirements for the training cycle in which it was accomplished. Table 4.1. is a reference for crewmembers ground training only. This table does not include all Air Force ancillary training, which will also be tracked at unit level. Where discrepancies exist, the reference direc-

tive takes precedence. Waiver authority is IAW the specified reference directive. **Chapter 6** contains specialized programs with both flying and ground training requirements.

4.2.1. **Instrument Refresher Course.** IAW AFMAN 11-210, *Instrument Refresher Course Program*; AFI 11-202V2; and MAJCOM supplements.

4.2.2. **NBCDT.**

4.2.2.1. **Flight NBCDT:** Periodic NBCDT flights integrate operations training with other functional areas (maintenance, intelligence, security, etc.) required to conduct combat operations in compliance with AFI 10-2501. They are applicable to all CMR and BMC crewmembers assigned or deployable to chemical HTA and MTA IAW AFI 10-2602.

4.2.2.2. Units will develop plans and scenarios for NBCDT flights based upon anticipated war-time tasking. When possible, conduct NBCDT flights through exercise scenarios of sufficient duration to simulate ability to survive and operate in threats appropriate to the anticipated areas of operation. Only one actual MQ-9 NBCDT flight per tour is required. An NBCDT ATD mission will be accomplished within 30 days prior to actual flight. Pilots and sensor operators will fly a tactical profile in IPE in order to adapt themselves to MQ-9 operations while in MOPP Level (3 or 4), as appropriate to the simulated operational environment. MOPP level may be relaxed (minimum Level 1) after a crewmember has become familiar with CW environment operations. The following restrictions apply: Crewmembers must still complete NBC mobility training events. The IPE for MQ-9 flight operations is the standard groundcrew chemical ensemble. Mission-Oriented Protective Posture (MOPP) Levels should balance crew protection with ability to execute the mission. When a high-fidelity MQ-9 ATD is available and certified, an ATD mission may be substituted for all NBCDT flight requirements.

4.2.2.3. **Ground NBCDT.** Units will develop procedures for operating the MQ-9 in an NBC environment IAW AFI 10-2501. Develop the training program using the general and functional NBC defense TTPs as identified in AFMAN 10-2602.

4.2.2.3.1. NBCDT ATD. An ATD in IPE will be accomplished once each training cycle. Both crewmembers 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.

4.2.2.3.2. NBCDT ATD missions should complement existing ATD mission profiles and are not additive to ATD requirements. Units without access to an OFT may use a GCS for training.

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

4.2.2.4.1. **Table 4.2.** depicts minimum ATD training requirements. 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 non-RAP requirements. Note: Crewmembers are not expected to have or gain proficiency in EPs in phases of flight in which they are not qualified (e.g., abort for a MCE crewmember).

4.2.2.4.2. Units will develop scenarios that cover all CAP, EPs, 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 activ-

ities. Units will review scenarios annually and update as required. Unusual attitude and inadvertent weather entry procedures training and unusual attitude recovery training (including HUD limitations) will be accomplished during all instrument or emergency procedure ATD training.

4.2.2.4.3. EP OFT. 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, CAP, aircraft subsystem failure checklist procedures, and instrument procedures.

4.2.2.4.4. TAC OFT. Mission Objectives: Practice in-flight malfunctions and maintain proficiency in applying tactical knowledge to combat scenarios. Specific tasks: DOC-relevant simulated combat employment, threat recognition and counter tactics, weapons malfunctions, relevant CAP and aircraft subsystem failures, controllability and structural damage.

4.2.3. **Situational Emergency Procedures Training (SEPT).** This training is not an evaluation, but a review of abnormal/emergency procedures and aircraft systems operations/limitations during realistic scenarios. One crewmember should present a situation and another crewmember discusses actions necessary to cope with the malfunction and carry it to a logical conclusion. CAP and squadron special interest items should be emphasized. Incorporate the following elements into the SEPT training program:

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

4.2.3.2. Develop SEPT scenarios using MQ-9 mishaps/incidents as baseline cases.

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 allowed if all members participate fully and share equal time responding to emergency situations.

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

4.2.3.5. Accomplish two SEPTs each training period with an instructor or SQ supervisor.

4.2.3.6. Accomplish one SEPT each calendar month. Failure to accomplish by the end of the month will result in grounding until subsequently completed.

4.2.3.7. The intent of the program is to accomplish 12 SEPTs per calendar year.

4.2.3.8. Completion of an ATD EP profile satisfies the monthly SEPT requirement.

4.2.3.9. Instructors/supervisors administering an EP ATD meet their monthly SEPT requirement.

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 [Table 4.1](#). 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. Crewmembers 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 or have attended the applicable academic portion(s) of school, if possible.

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, pre-flight, tactics, normal and emergency procedures/techniques.

4.2.4.2.2. Capabilities, characteristics, and TTPs of other CAF assets that the MQ-9 may integrate with in theater-specific operations.

4.2.4.2.3. AFTTP 3-1 to include, as a minimum: Volume 1, *General Planning and Employment Considerations*; Volume 2, *Threat Reference Guide and Counter-tactics*; and Volume XX, *Tactical Employment – MQ-9*.

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

4.2.4.3.1. Counterland operations, to include Air Interdiction procedures, Close Air Support (CAS) procedures, Strike Coordination and Reconnaissance (SCAR) procedures, and Suppression/Destruction of Enemy Air Defenses.

4.2.4.3.2. Intelligence, Surveillance, Reconnaissance (ISR) procedures; including both traditional and non-traditional Reconnaissance Surveillance and Target Acquisition (RSTA) procedures.

4.2.4.3.3. On-Scene Commander (OSC) for 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.

4.2.5.1. CT verification updates crewmembers on their squadron's wartime mission. Each CMR crewmember will participate in a squadron initial or continuation training verification every training cycle as a briefer, board member, or seminar participant. Note: to facilitate future upgrades to CMR, SQ/CCs should encourage BMC crewmembers to accomplish an initial verification or participate in CT.

4.2.5.2. ACC crewmembers who participate in a unit deployment in a tasked theater of operations may receive credit for CT verification (participating in remote split operations for a period of 14 days fulfills the unit deployment requirement).

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 equipage. In addition to threat knowledge, crewmember training will include:

4.2.6.1. Visual Recognition. Crewmembers must be able to:

4.2.6.1.1. Identify aircraft (rotary/fixed-wing, including joint/allied assets) they are likely to encounter by name or numerical designator and determine whether the aircraft is a friend or foe.

4.2.6.1.2. Identify major combat ground vehicles/equipment, and determine friend or foe.

4.2.6.1.3. Identify major categories of naval vessels.



4.2.6.2. **Collection and Reporting.** Collection and Reporting training will enable crewmembers to initiate reports (In-Flight Report [INFLTREP], Communication Instructions Reporting Vital Intelligence Sighting, etc.) and will familiarize them with the information requirements of the intelligence-generated Mission Report and Intelligence Report.

4.2.6.3. Current Intelligence will 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 testing requirements.

4.2.7. **Air Force Anti-terrorism/Force Protection** : required IAW AFI 10-245, *Air Force Antiterrorism (AT) Standards*.

4.2.8. **Crew Resource Management (CRM).** CRM continuation training builds upon the basic cockpit management skills taught in Specialized Undergraduate Pilot Training and FTUs. Each crewmember will participate in one session every 24 months (ANG: Every other unit training cycle, not to exceed length of 2 x AEF cycle). 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 MAJCOM Supplements. The instructor CRM course satisfies the 24-month requirement.

4.2.9. **Semi-Annual Take-off/Landing/Go-around Training (L/R qualified crews only).** Semi-annually, L/R crews will review proper takeoff/landing techniques and procedures. Review will include crosswind landing, go-around (planned and un-planned), hard-landing, bounce and porpoise recovery. Training will include video review of bad techniques and procedures during mishap landings and normal landings that show good techniques and procedures. Crewmembers who lose landing currency will receive this training prior to re-currency training.

4.2.10. **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 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.

4.2.11. **Ground Training Requirements.** Ground training requirements, frequencies, references, and affects on CMR and grounding status are IAW [Table 4.1](#).



Table 4.1. Ground Training.

SUBJECT	FREQUENCY	REFERENCE DIRECTIVE	GROUNDING	AFFECT CMR
<b>MOBILITY TRAINING</b>				
These items required for mobility units <b>or units that generate in place</b>				
Self-Aid and Buddy Care Trng	Initial & 24 months Additional within 90 days prior to deployment	AFI 36-2238	No	No
CBRNE Defense Training Course	Initial & 20 months	AFI 10-2501	No	No
Firearms Training	Init and re-qual every 30 mos (ANG: Re-qual every other unit trng cycle, NTE length of 2 x AEF cycle)	AFI 36-2226; MAJCOM Sup	No	Yes If deploying
<b>CREWMEMBER TRAINING</b>				
Instrument Refresher (Pilots only)	Every fourth quarter	AFI 11-202V1/2, AFMAN 11-210	No	No
NBC Defense - Flight Training	Initial	Para <b>4.2.2.</b>	No	Yes (if deploying)
NBC Defense - ATD	20 months	Para <b>3.2.3.</b> and <b>4.2.2.</b>	No	Yes (if deploying)
Takeoff/Landing Training (L/R crews only)	6 months	Para <b>4.2.9.</b>	Yes (LRE ops only)	No
SEPT	Monthly	Para <b>4.2.4.</b> and 11-2MQ-9V2	Yes	No
Unit Intelligence Training	20 months	Para <b>4.2.7.</b> , AFI 14-105; MAJCOM Sup	No	Yes
Weapons and Tactics Training	20 months	Para <b>4.2.5.</b>	No	Yes
Verification/VPE SOPE (N/A for CB/ TF units)	Initial & 20 Months	Para 3.3.4 and <b>4.2.6.</b>	No	Yes
CRM	24 Months (ANG: Requal every other unit training cycle, not to exceed length of 2 x AEF cycle)	<b>4.2.11.</b>	Yes (Waiver by OG/CC)	No

SUBJECT	FREQUENCY	REFERENCE DIRECTIVE	GROUNDING	AFFECT CMR
Flying Safety Training	Quarterly	AFI 91-202; MAJCOM Sup	No	No
Marshaling Exam (LRE pilot only)	Initial	AFI 11-218	Yes (LRE ops only)	No
<b>AIR FORCE ANCILLARY TRAINING</b>				
Protection of the President and Others	Initial	AFI 71-101V2	No	No
Antiterrorism Training	12 Months	AFI 10-245	No	No
Conduct After Capture	36 Months	AFI 16-1301	No	No
Law of Armed Conflict	12 Months	AFI 51-401	No	No

**4.3. Flying Training.** All crewmembers (except API-8 and ACC/IGS crewmembers) will accomplish the requirements in [Table 4.2.](#) as applicable to their crew position and qualifications. Failure to accomplish the requirements in [Table 4.2.](#) will not affect BAQ, BMC or CMR status, but may require additional training as determined by the SQ/CC. Failure to accomplish the requirements specified in this paragraph or the RAP tasking message may require loss of certification or qualification (recertification or re-qualification is IAW paragraph [4.7.](#)). In addition, crewmembers must meet the following requirements (API-8 and ACC/IGS flyers will strive to accomplish the requirements as shown in [Table 4.2.](#)):

#### 4.3.1. Instrument Flying Training.

4.3.1.1. Units will develop and implement an instrument flying training program to ensure instrument proficiency. Programs will 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.

4.3.1.2. 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-9 limitations, capabilities, and avoidance in their theater-specific instrument academic training.

**4.3.2. Pattern Proficiency Sortie (PPS) (L/R-qualified crews only).** The challenging nature of MQ-9 launch and recovery operations mandates L/R crews maintain a high level of proficiency with 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 crewmember when sufficient training has been accomplished. A PPS should be briefed as a standard alternate mission whenever possible. As reference, a PPS should consist of the following:

4.3.2.1. Instrument and visual approaches.

- 4.3.2.2. IR touch and go/landing(s).
- 4.3.2.3. Nose camera touch and go/landing(s).
- 4.3.2.4. SFO(s).
- 4.3.2.5. Go-arounds.
- 4.3.2.6. Touch and go landings require IP supervision.

**4.4. Non-RAP Training Requirements.** MQ-9 pilots will accomplish non-RAP requirements during the unit training cycle IAW **Table 4.2.** and the RTM. Failure to accomplish requirements will not affect BAQ, BMC, or CMR status, but may require additional training as determined by the SQ/CC. If any sortie/event from **Table 4.2.** is subsequently converted to a RAP requirement in the RTM, failing to accomplish that requirement may affect CMR/BMC status, as designated.

**Table 4.2. Non-RAP AEF Cycle Requirements.**

REQUIREMENT	IN EX P	E X P	NOTES
<b>EVENTS</b>			
Pattern Proficiency Sortie (PPS)	15	10	1, 4
Emergency Mission Planning and Execution	4	2	2, 3
Gaining Handover Procedures	12	12	3
IR Nose Camera Low Approach	6	4	1
Nose Camera Landing	15	12	1, 4
Infrared (IR) TGP Landing	15	12	1, 4
GLS approach	30	20	1, 4
Simulated Flame-Out (SFO)	20	15	1, 4
Total EP ATD (total includes supervised EP ATD)	10	6	5
Supervised EP ATD	6	4	6
<b>NOTES:</b>			
1. Only applicable for L/R qualified crews.			
2. May be accomplished in the ATD.			
3. Instructors/supervisors may log this event while instructing.			
4. Instructor/supervisors may log up to 50% of this requirement while instructing.			
5. SEFEs, supervisors and instructors may log these events when administering an EP evaluation (EPE) or EP ATD.			
6. A supervised EP ATD fulfills the requirement an EP ATD.			

**4.5. Special Categories:**

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

4.5.2. **Above-Wing-Level Crewmembers** (ANG: Responsibilities for API-8 staff flyers are contained in AFI 11-401 as supplemented by the ANG):

4.5.2.1. 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. MAJ-COM Division Chiefs are the reviewing authorities for assigned personnel. They will:

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

4.5.2.1.2. Review assigned crewmember accomplishments and currencies prior to authorizing participation in MDT.

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

4.5.2.2. Above-Wing-Level crewmembers 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 crewmember qualifications to participate in squadron scenarios for MDT.

4.5.2.3. Crewmembers will:

4.5.2.3.1. Review accomplishments and currencies for accuracy.

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

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

4.5.2.4. With the concurrence of the OG/CC, instructor-qualified crewmembers may perform instructor duties provided they are qualified and current for the applicable missions and events.

#### 4.5.3. Active Duty pilots flying with ANG units:

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

4.5.3.2. Active duty crewmembers, other than assigned advisors, are authorized to fly with ANG units IAW AFI 11-401 as supplemented by the ANG.

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

4.5.3.4. HHQ staff crewmembers may participate in tactical training events. Each crewmember 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.

#### 4.6. Multiple Qualifications:

4.6.1. MAJCOM/A3 (ANG: NGB/A3 with A/2 coord) may authorize qualification in more than one MDS for crewmembers 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 crewmembers qualified in primary mission aircraft to maintain qualification in support aircraft. Individuals assigned to positions covered by paragraph 4.6.2. have prior ACC/A3 approval, and do not need to submit specific requests.

4.6.1.1. Submit multiple qualification requests with full justification through command channels to MAJCOM/A3 (ANG: NGB/A3 with A/2 coord). 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.

4.6.1.2. Multiple qualifications approvals remain valid as long as the individual remains assigned to the specific position and aircraft unless rescinded by MAJCOM/A3 (ANG: NGB/A3).

4.6.1.3. 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 MDS. Either the wing vice commander (WG/CV) or OG/CC should qualify in a different MDS.

4.6.2. Multiple qualification is authorized as follows and does not require a specific multiple qualification authorization. SQ/CC must designate in writing crewmembers that will maintain multiple qualification and designate a primary (CMR) aircraft:

4.6.2.1. Crewmembers assigned to CC-coded units whose Primary Aircraft Inventory (PAI) include both MQ-9 and MQ-1 MDS. May maintain BMC status in secondary aircraft.

4.6.2.2. Crewmembers assigned to TF-coded units responsible for IQT and conversion training for the MQ-9 and MQ-9 MDS.

4.6.2.3. Crewmembers assigned to CB-coded units responsible for providing Operational Test and Evaluation of the MQ-9 and MQ-9 MDS.

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

4.6.3.1. Crewmembers qualified in multiple MDS will fly at least once each 45/30 (EXP/INEXP) days in each aircraft; all other currencies/events are IAW paragraph 4.6.3., Table 4.2., and Table 4.3.

4.6.3.2. Crewmembers 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.

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

4.6.4. Crewmembers must complete MDS conversion/qualification training IAW an approved syllabus.

#### 4.7. Currency, Recurrency, and Requalification:

4.7.1. **Currency.** Table 4.3. defines currency requirements for MQ-9 crewmembers. If a crewmember loses a particular currency, the individual may not perform that sortie or event except for the purpose of regaining currency as noted.

#### 4.7.2. Recurrency.

4.7.2.1. Crewmembers 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.

4.7.2.2. Unless otherwise specified, the SQ/CC determines recurrency supervisory requirements.

- 4.7.3. **Sortie Recurrency.** Loss of sortie currency requires (timing starts from last sortie):
- 4.7.3.1. **31-90 (46-90 for Experienced) Days.** Regain sortie currency. Supervision level is an instructor qualified and current in the sortie or event.
  - 4.7.3.2. **91-135 Days.** Same as paragraph 4.7.3.1., plus instructor supervised ATD including:
    - 4.7.3.2.1. For CMR crewmembers: tactics, normal, instrument, and emergency procedures.
    - 4.7.3.2.2. For BMC crewmembers: normal, instrument, and emergency procedures.
  - 4.7.3.3. **136-210 Days.** Same as paragraph 4.7.3.2., plus qualification and tactical (if applicable) written examinations and EPE.
  - 4.7.3.4. **211 or More Days.** Sorties, events, and ATDs as directed by the SQ/CC, plus qualification and tactical written exams, EPE, and qualification or mission flight evaluation (as required).
- 4.7.4. **Landing (L/R Operations) Recurrency/Requalification.** The following actions are required to regain currency or qualification. Timing starts from last landing. (Note: crewmembers may continue to fly missions not requiring aircraft landing or L/R operations).
- 4.7.4.1. **31-90 Days (46-90 for Experienced).** Regain landing currency. Supervision level is a qualified and current instructor.
  - 4.7.4.2. **91 to 135 Days.** Same as paragraph 4.7.4.1. above, plus instructor supervised ATD including normal, instrument, and emergency procedures.
  - 4.7.4.3. **136-210 Days.** Same as above, plus L/R portion of written examinations and EPE.
  - 4.7.4.4. **More than 211 Days.** Complete L/R IQT (see para 2.2.2. and 6.5.1.).
- 4.7.5. **Loss of and Requalification to Instructor Status.** Decertify instructors if:
- 4.7.5.1. They fail a flight check. To regain instructor status, the instructor must successfully complete a flight evaluation IAW AFI 11-202V2 and AFI 11-2MQ-9V2.
  - 4.7.5.2. They fail a qualification, instrument, or tactical examination. To regain instructor status, the instructor must successfully accomplish the written exam.
  - 4.7.5.3. Instructor currency expires. To regain status, see [Table 4.3](#).
  - 4.7.5.4. 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. Instructors will not instruct in events or sorties in which they are not current.

**Table 4.3. MQ-9 Crewmember Currencies (days).**

EVENT	INEXP	EXP	Affects CMR	To Regain Currency	NOTE
Mission currency	30	45	No	Event	4
Start, taxi, and takeoff	30	45	No	Event	1, 2, 3, 4
Landing	30	45	No	Event	1, 5
Simulated flame-out (SFO)	30	45	No	Event	1, 4, 7

EVENT	INEXP	EXP	Affects CMR	To Regain Currency	NOTE
GPS landing system approach	30	45	No	Event	1, 8
Nose camera landing	30	45	No	Event	1, 5, 7
Infrared (IR) landing	30	45	No	Event	1, 5, 7
Gaining handover procedures	45	60	Yes	Event	3, 4, 6
IR nose camera low- approach/landing	180	180	No	Event	1, 4
Weapons delivery	60	90	Yes	Event	4, 9
Instructor event	N/A	60	No	Event	5
Notes					
<p>1. Only applicable to L/R qualified crews.</p> <p>2. Crewmembers may update currency or obtain recurrency in the ATD. Requires a pilot and SO crew to perform the event. Crewmembers and instructors may update this currency or obtain recurrency once in the ATD, then the next update must be an actual event.</p> <p>3. Instructors may log this event for currency when they instruct it.</p> <p>4. Supervision level for recurrency is a squadron supervisor current and qualified in the event.</p> <p>5. Supervision level for recurrency is an instructor, current and qualified in event.</p> <p>6. Non-currency for 91-180 days requires a recurrency flight with an instructor.</p> <p>7. Must be current in this event to fly unsupervised if mission requires launch, takeoff, or landing procedures.</p> <p>8. Approach weather category increases by one for each period overdue (i.e., an experienced pilot's approach category increases from Cat 2 to Cat 3 after 45 days and to Cat 4 after 91 days of not accomplishing a precision approach).</p> <p>9. ANG units: 90/120</p>					

#### 4.8. Regression:

4.8.1. **CMR and BMC Regression for Failure to Meet Lookback.** Use only RAP training, pattern proficiency sorties, and contingency operations sorties for lookback (for L/R-qualified crewmembers, a maximum of one PPS per month can be counted towards RAP lookback). If crewmembers 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.

4.8.1.1. Failure to meet 1-month RAP sortie lookback requires a review of the crewmember's 3-month sortie history. If the crewmember meets the 3-month lookback, the crewmember 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 crewmember in probation status for 1 month. If the SQ/CC chooses probation, the only way to remove a crewmember 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.](#))



4.8.1.2. Crewmembers regressed to N-CMR or N-BMC for lookback must complete a SQ/CC-approved re-certification program to return to CMR or BMC standards. Upon completion of the re-certification program, the crewmember 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.

4.8.1.3. Lookback computations begin following SQ/CC designation of the crewmember to BMC or CMR. The crewmember must maintain 1-month lookback until establishing a 3-month lookback. If a new CMR or BMC crewmember 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.

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

4.8.2.1. For events tasked as QUAL at CMR/BMC, regression to N-CMR/N-BMC unless waived by OG/CC. To regain CMR/BMC, the crewmember 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.

4.8.2.2. For events tasked as FAM at CMR/BMC, regression to N-CMR/N-BMC unless waived by OG/CC. To regain CMR/BMC, the crewmember 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 next training cycle.

**4.8.3. Unqualified Crewmember Evaluations.** Handle crewmembers who fail a qualification, instrument, or mission flight evaluation IAW AFI 11-202V2. Crewmembers will regress to N-CMR or N-BMC, as applicable and will remain so until successfully completing required corrective action, a reevaluation, and are re-certified by the SQ/CC.

**4.8.4. Failure to Maintain Flying Standards.** If a qualified crewmember 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 crewmembers 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.

**4.9. End of Cycle Requirements.** Crewmembers 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 4.10. for proration policy. In all cases report training shortfalls IAW paragraph 1.2.

4.9.1. Crewmembers failing to meet the total RAP sortie requirement may continue CT at CMR or BMC as determined by lookback. The SQ/CC will determine if additional training is required.

4.9.2. Crewmembers failing to meet non-RAP sortie or event requirements may continue CT at CMR or BMC as determined by lookback. The SQ/CC will determine if additional training is required.

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

4.9.3.1. 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 crewmember will complete all deficient sortie types. These sorties may count against the total requirements for the new training cycle.

4.9.3.2. Continuation at CMR or BMC if the crewmember maintains total RAP sorties and look-back and the SQ/CC deems the sortie type deficiencies insignificant.

4.9.4. 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.

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

**4.10. 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 (ANG: 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 crewmembers 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:

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

4.10.2. Proration is based on cumulative days of non-availability for flying (to include post-deployment comp time) during the training cycle. Use **Table 4.4.** to determine the number of months to be prorated based on cumulative calendar days of non-availability.

4.10.3. 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.

4.10.4. Consider newly assigned or converted crewmembers and crewmembers 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. Crewmembers will complete prorated RAP sorties/events in CT.

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

4.10.6. SQ/CCs may prorate a crewmember'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.

4.10.7. 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.

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

4.10.9. 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 RAP sorties. Events accomplished on these sorties may count toward RAP event requirements, and these sorties/events cannot be prorated upon return to home station.

4.10.10. 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 RAP sorties as authorized by the OG/CC. The result is the allowable sortie proration. Negative numbers equate to zero. Events will be prorated at SQ/CC discretion based on the events accomplished during valid RAP sorties.

**Table 4.4. Proration Allowance.**

Cumulative Days of Training Non- Availability	Months of Proration Allowed
0 - 15	0
16 - 45	1
46 - 75	2
76 - 105	3
106 - 135	4
136 - 165	5
166 - 195	6
195-210 (225 Exp)	7
211 (226 Exp) and over	See Para. <a href="#">4.7.5.</a>

4.10.11. 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).

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

4.11.1. If CMR/BMC status is lost due to failure to meet the end-of-cycle weapons qualifications requirements or end-of-cycle RAP event requirements, requalification is IAW paragraph [4.8.](#)

4.11.2. If a crewmember loses CMR or BMC status due to failure to meet sortie lookback IAW paragraph [4.8.](#), the following applies (timing starts from the date the crewmember came off CMR or BMC status):

4.11.2.1. **Up to 90 Days.** The crewmember must complete a SQ/CC directed re-certification program IAW paragraph 4.8.1.2. Additionally, the crewmember must regain RAP event currencies. The SQ/CC may direct other additional training prior to re-certification to CMR.

4.11.2.2. **91-180 Days.** Same as 4.11.2.1., plus OGV-generated qualification and tactical written examinations.

4.11.2.3. **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 or qualification flight evaluations must be re-accomplished only if overdue.

**4.12. Example of the Lookback, Regression, Proration, and Requalification Process.** Captain Smith is an experienced CMR crewmember 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?

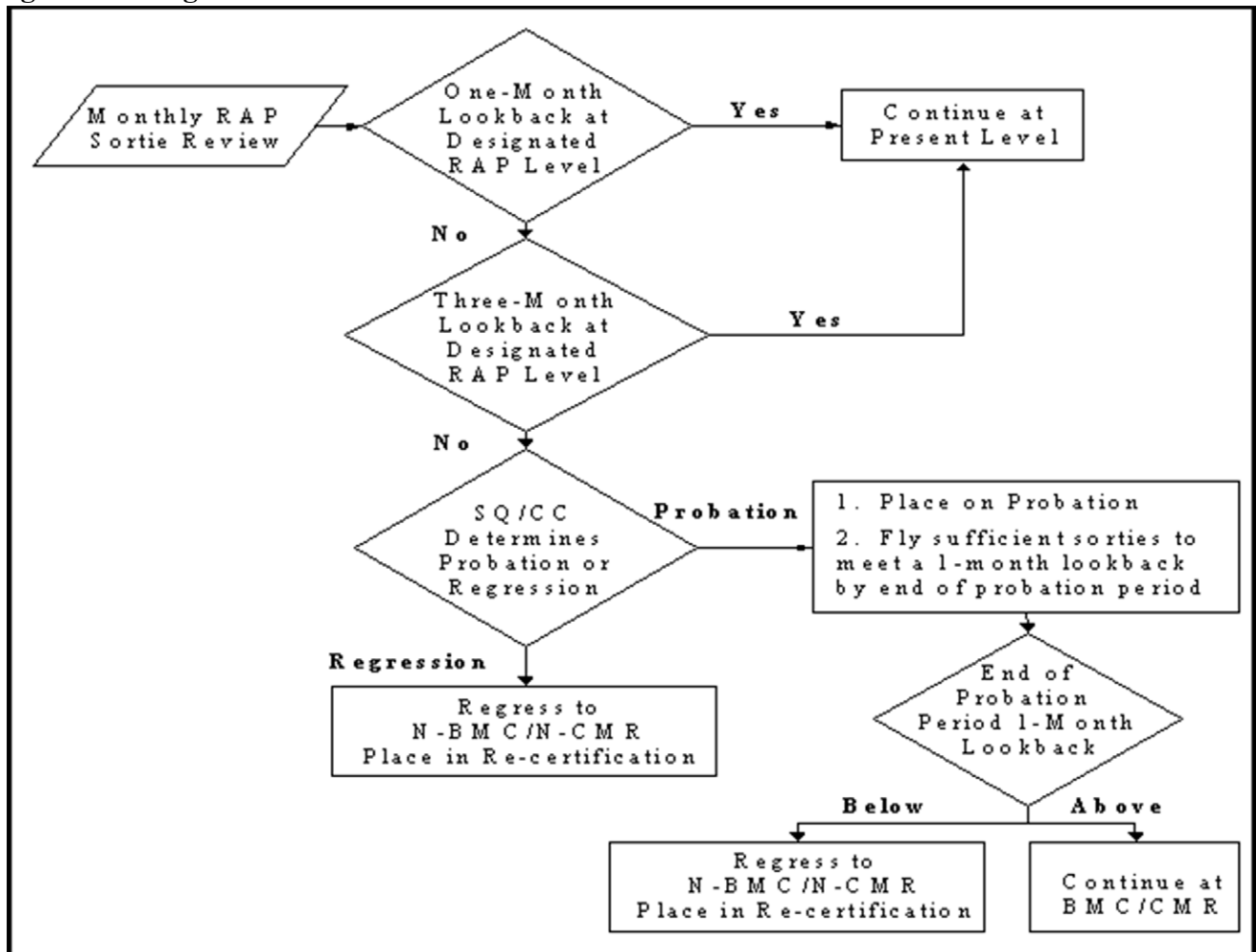
4.12.1. The SQ/CC wanted to list Captain Smith as a countable CMR crewmember for reporting purposes throughout the TDY. Therefore, on 1 March, Captain Smith's Flight Commander (FLT/CC) performed the mandatory 1-month lookback (February). Captain Smith only flew one RAP sortie, failing the 1-month lookback. 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 crewmember. The SQ/CC could regress Captain Smith to N-CMR, but instead elected to put him on probation, still carrying him as CMR.

4.12.2. 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.

4.12.3. 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.

4.12.4. 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 weapons. Refer to "Glossary of Events" in **Attachment 2** for further guidance in weapons events.

**5.2. Initial Weapons Qualification.** Crewmembers 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 crewmember 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 crewmember 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). 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. CT weapons deliveries should simulate realistic employment of munitions. Maximize the use of air-to-surface tactical ranges 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 RTM for specific qualification criteria.

5.3.3. At the end of the training cycle, crewmember's weapons delivery scores will be reviewed to assess weapons qualification.

**5.4. Failure to Qualify.** Failure to qualify in one weapon series does not invalidate qualification in others. SQ/CCs may declare a crewmember 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), weapons release (actual or simulated), and weapon 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 3-1V(TBD), *Tactical Employment—MQ-9*, AFTTP 3-3.1, *Combat Aircraft Fundamentals*, AFI 11-2MQ-9V3, *MQ-9 Operations Procedures*, AFI 11-214, *Air Operations Rules and Procedures*, and TO 1Q9(M)A-34-1-1 & TO 1Q9(M)A-34-1-1 CL-1.

5.5.1. Weapons Employment Parameters. The event requirements and parameters listed below form the basic framework for weapons employment training. All weapons employment will conform to the

limits established for each specific event. Pattern descriptions, procedures, training rules, and foul criteria are contained in AFI 11-2MQ-9V3 and AFI 11-214.

5.5.1.1. Guided Munitions Events:

5.5.1.1.1. Hellfire. A delivery initiated from a maneuver to achieve and maintain line-of-sight to the target(s). Acquisition, track, laser designation, and launch, or 2 seconds stable lock-on in "No launch" conditions, followed by a tactical escape maneuver is required. Hit criteria: Either actual target impact or valid, recorded simulated weapon release within launch parameters with stabilized target tracking. May be accomplished in a simulator.

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

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

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

**5.6. Full Scale Inert/Live Ordnance.** Full Scale Inert/Live ordnance training is essential to combat capability. Every attempt should be made to give crewmembers the opportunity to employ as many types of weapons on the Unit Committed Munitions List as possible.

## Chapter 6

### SPECIALIZED TRAINING

**6.1. General.** This chapter outlines upgrade training programs for special capabilities and qualifications. Units will develop 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 crewmember 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 highly proficient airmanship, communication skills, sound judgment and must meet the criteria listed below. OG/CCs may waive selected missions and events based on previous experience of the upgrading pilot (UIP) or sensor operator (UISO). FTU instructors must complete the formal syllabus instructor upgrade training course.

6.2.1. Individuals selected for instructor upgrade must have:

6.2.1.1. **Pilots :**

6.2.1.1.1. 200 MQ-9 hours, or

6.2.1.1.2. Prior flight lead (FL) or aircraft commander and 100 MQ-9 hours or previous experienced MQ-1 crew plus 50 MQ-9 hours.

6.2.1.2. **Sensor Operators:**

6.2.1.2.1. 500 hrs total flying time and 100 MQ-9 hours,

6.2.1.2.2. 200 MQ-9 hours or previous experienced MQ-1 crew plus 50 hours.

6.2.2. **Training.** The OG/CC is the approval authority for non-syllabus unit instructor training requirements. UIPs and UISOs must satisfactorily complete academic, training device, CRM and flight training covering all elements of instruction required in the formal training syllabus and demonstrate instructor proficiency in those areas during an instructor flight evaluation IAW AFI 11-2MQ-9V2, MAJCOM, and unit requirements.

**6.3. Contingency and Exercise Pre-Deployment Training.** Conduct this training prior to deploying in support of contingency operations or combat exercises. The objective of this training is to ensure crewmembers' 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 then 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. If deploying to a HTA or MTA (IAW AFI 10-2602) must have completed NBCDT ATD and mobility training.

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

**6.3.4. Ground Training.** Crewmembers 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 Combat 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 crewmembers are proficient, current, and qualified in expected mission tasking.

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

**6.4. Conversion/Difference Training.** Conversion qualification is normally associated with training between MDSs. Difference qualification is normally conducted when training in a different series aircraft in the same MDS. However, when the differences between series are great enough, the training is considered conversion training that requires completion of the formal school initial qualification course.

6.4.1. Initial Cadre. Wing commanders will designate appropriately experienced personnel as the initial cadre.

6.4.2. 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 crewmembers 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 class availability may necessitate local upgrades.

6.5.1. For individuals not previously qualified in L/R operations, upgrade training will follow the formal course syllabus (MQ9PSOLRC). For individuals with previous L/R operations experience, an abbreviated SQ/CC-approved course may be administered.

6.5.2. Upgrade to L/R operations will be at the discretion of the SQ/CC based on standard squadron operations, taskings, and manning. L/R qualifications will be certified by the SQ/CC.

#### **6.6. L/R Recurrency Training.**

6.6.1. Crewmembers whose qualification has expired IAW paragraph 4.7.4. (unit CCs may set more stringent expiration standards based off of other critical last accomplished dates) are required to complete the initial qualification course.

6.6.2. If qualification has not expired and only a re-currency sortie is required, follow guidance in [Table 4.3.](#) and para 4.7.4.

**6.7. Operations Supervisor (OPS SUP) Training Program.** The OPS SUP training program will consist of instruction/ briefings, self study/review of applicable instructions, SPINS, ROE, and On-the-Job Training.

6.7.1. Individual instruction will be administered by a qualified OPS SUP. Squadron developed briefings will include, but are not limited to:

6.7.1.1. Role of the OPS SUP.

6.7.1.2. Managing and executing the flying schedule.

6.7.1.3. Air (and Space) Operations Center (AOC) (or equivalent) structure and interaction.

6.7.1.4. Personnel and manning issues.

6.7.1.5. Weather support.

6.7.1.6. Communication structure and support.

6.7.2. Upgrade candidate will review the following: AFI 11-418, *Operations Supervision*; AFI 11-202V3, *General Flight Rules* (and MAJCOM Sup); AFI 11-2MQ-9V3; and SPINS/ROE for all current AORs.

6.7.3. Upgrade candidates will observe a current and qualified OPS SUP for one shift and perform one complete supervised OPS SUP shift during flying operations..

#### **6.8. Information Collection, Records, and Forms.**

6.8.1. Information Collections. No information collections are created by this publication.

6.8.1.1. Records. The program records created as a result of the processes prescribed in this publication are maintained in accordance with AFMAN 37-123 (will convert to AFMAN 33-363) and disposed of in accordance with the AFRIMS RDS located at [https://afrims.amc.af.mil/rds\\_series.cfm](https://afrims.amc.af.mil/rds_series.cfm).

6.8.1.2. Forms (Adopted and Prescribed).

6.8.1.2.1. Adopted Forms. AF Form 8, *Certificate of Aircrew Evaluation*; AF Form 847, *Recommendation for Change of Publication*; and AF Form 1042, *Medical Recommendation for Flying or Special Operational Duty*.

6.8.1.2.2. Prescribed Forms. No forms are prescribed by this publication.

DANIEL J. DARNELL, Lt Gen, USAF  
DCS, Operations, Plans & Requirements

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

AFDD 2-1.3, *Counterland Operations*; 11 September 2006

AFI 10-245, *Air Force Antiterrorism (AT) Standards*; 21 June 2002

AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations*; 24 January 2007

AFMAN 10-2602, *Nuclear, Biological, Chemical, and Conventional (NBCC) Defense Operations and Standards*; 29 May 2003

AFPD 11-2, *Aircraft Rules and Procedures*; 14 January 2005

AFI 11-2MQ-9V2, *MQ-9--Crew Evaluation Criteria*; TBD

AFI 11-2MQ-9V3, *MQ-9--Operations Procedures*; TBD

AFI 11-202V1, *Aircrew Training*; 17 May 2007

AFI 11-202V2, *Aircrew Standardization/Evaluation Program*; 08 December 2006

AFI 11-202V3, *General Flight Rules*; 05 April 2006

AFI11-202V3\_ACC, *General Flight Rules*, 27 Feb 07

AFMAN 11-210, *Instrument Refresher Course (IRC) Program*; 03 February 2005

AFI 11-214, *Air Operations Rules and Procedures*; 22 December 2005

AFMAN 11-217V1, *Instrument Flight Procedures*; 03 January 2005

AFMAN 11-217V2, *Instrument Flight Procedures*; 06 August 1998

AFI 11-218, *Aircraft Operations and Movement on the Ground*; 11 May 2005

AFI 11-290, *Cockpit/Crew Resource Management Training Program*; 11 April 2001

AFPD 11-4, *Aviation Service*; 01 September 2004

AFI 11-401, *Aviation Management*; 7 March 2007

AFI 11-402, *Aviation and Parachutist Service, Aeronautical Ratings and Badges*, 25 September 2007

AFI 11-418, *Operations Supervision*; 21 October 2005

AFI 14-104, *Oversight of Intelligence Activities*; 14 April 2005

AFI 14-105, *Unit Intelligence Mission and Responsibilities*; 03 June 2002

AFI 16-1301, *Survival, Evasion, Resistance, And Escape (SERE) Program*; 06 Sep 2006

AFPD 32-40, *Disaster Preparedness*; 01 May 1997

AFI 33-360, *Publications and Forms Management*; 18 May 2006

AFI 36-2201, V4, *Training Development, Delivery, and Evaluation*; 1 October 2002

AFPAM 36-2211, *Guide for Management of Air Force Training Systems*; 01 November 1994

AFI 36-2226, *Combat Arms Program*; 26 February 2003

AFH 36-2235V7, *Information for Designers of Instructional Systems, Design Guide for Device-based Aircrew Training*; 01 November 2002

AFI 36-2238, *Self-Aid and Buddy Care Training*; 19 January 2006

AFMAN 37-123, *Management of Records*; 31 August 1994

AFI 51-401, *Training and Reporting to Ensure Compliance with the Law of Armed Conflict*; 19 July 1994

AFI 71-101V2, *Protective Service Matters*; 18 November 2002

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

AFTTP 3-1, *Mission Employment Tactics* (various dates)

AFTTP 3-3, *Combat Aircraft Fundamentals* (various dates)

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

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

**A3**—Director of Air and Space Operations

**ACC**—Air Combat Command

**AEF**—Air and Space Expeditionary Force

**AF**—Air Force

**AFDD**—Air Force Doctrine Document

**AFSC**—Air Force Specialty Code

**AGM**—Air-to-Ground Missile

**AHC**—Aircraft Handling Characteristics

**AI**—Air Intercept, Air Interdiction

**ANG**—Air National Guard

**AOC**—Air and Space Operations Center

**API**—Aircrew Position Indicator

**ARC**—Air Reserve Components

**ARMS**—Aviation Resource Management System

**ATD**—Aircrew Training Device

**AWACS**—Airborne Warning and Control System

**BAQ**—Basic Aircraft Qualification

**BDA**—Battle Damage Assessment

**BMC**—Basic Mission Capable

**BPS**—Basic Proficiency Sortie  
**BSA**—Basic Surface Attack  
**CAF**—Combat Air Forces  
**CAP**—Critical Action Procedures  
**CAS**—Close Air Support  
**CC**—Commander  
**CEP**—Circular Error Probable  
**CFTR**—Composite Force Training  
**CMR**—Combat Mission Ready  
**COMACC**—Commander, Air Combat Command  
**CPT**—Cockpit Procedures Trainer  
**CRM**—Cockpit Resource Management  
**CSAR**—Combat Search and Rescue  
**CT**—Continuation Training  
**CV**—Vice Commander  
**DNIF**—Duty Not Involving Flying  
**DO**—Operations Officer  
**DOC**—Designed Operational Capability  
**DoD**—Department of Defense  
**DRU**—Direct Reporting Unit  
**EC**—Electronic Combat  
**EI**—Essential Elements of Information  
**EO**—Electro-Optical  
**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

**FEB**—Flying Evaluation Board  
**FL**—Flight Lead  
**FTU**—Formal Training Unit  
**GCS**—Ground Control Station  
**GDT**—Ground Data Terminal  
**GLS**—GPS Landing System  
**HHQ**—Higher Headquarters  
**HUD**—Head Up Display  
**IAW**—In Accordance With  
**IFE**—In Flight Emergency  
**IFR**—Instrument Flight Rules  
**INEXP**—Inexperienced  
**INFLTREP**—Inflight Report  
**IOC**—Initial Operational Capability  
**IP**—Instructor Pilot  
**IPUG**—Instructor Pilot Upgrade  
**IQT**—Initial Qualification Training  
**IR**—Infrared  
**IRC**—Instrument Refresher Course  
**ISO**—Instructor Sensor Operator  
**IUT**—Instructor Upgrade Training  
**JAAT**—Joint Air Attack Team  
**JFT**—Joint Force Training  
**JTAC**—Joint Terminal Attack Controller  
**LIMFACS**—Limiting Factors  
**LOS**—Line of Sight  
**LRE**—Launch and Recovery Element  
**MAJCOM**—Major Command  
**MCE**—Mission Control Element  
**MCC**—Mission Commander  
**MDS**—Mission Design Series  
**MDT**—Mission Directed Training



**MQT**—Mission Qualification Training  
**MTS**—Multi-Spectral Targeting System  
**N/A**—Not Applicable  
**NAF**—Numbered Air Force  
**NBC**—Nuclear, Biological, and Chemical  
**NBCDT**—NBC Defense Training  
**N-BMC**—Non-Basic Mission Capable  
**NGB**—National Guard Bureau  
**N-CMR**—Non-Combat Mission Ready  
**OFT**—Operational Flight Trainer  
**OG**—Operations Group  
**PAI**—Primary Aircraft Inventory  
**PCS**—Permanent Change of Station  
**PFT**—Programmed Flying Training  
**PPSL**—Predator Primary SATCOM Link  
**MQ9PSOBTX**—Reaper pilot and Sensor Operator Basic Course  
**MQ9PSOLRC**—Reaper Pilot and Sensor Operator Launch/Recovery Training Course  
**QUAL**—Qualification  
**RAP**—Ready Aircrew Program  
**ROE**—Rules of Engagement  
**RSTA**—Reconnaissance, Surveillance and Target Acquisition  
**RTRB**—Realistic Training Review Board  
**SA**—Strategic Attack  
**SAT**—Surface Attack Tactics  
**SATCOM**—Satellite Communication  
**SCAR**—Strike Coordination and Reconnaissance  
**SEFE**—Stan/Eval Flight Examiner  
**SEPT**—Situational Emergency Procedure Training  
**SFO**—Simulated Flameout  
**SMC**—Senior Mission Coordinator  
**SO**—Sensor Operator  
**SOCC**—Sector Operations Control Center

**SPINS**—Special Instructions

**SQ**—Squadron

**TAGS**—Theater Air-Ground System (previously TACS/AAGS)

**TDY**—Temporary Duty

**TF**—Coded—Designated Training Aircraft

**T.O.**—Technical Order

**TOD**—Time of Day

**TRSS**—Training Support Squadron

**UIP**—Upgrading Instructor Pilot

**UMD**—Unit Manning Document

**USAFWS**—USAF Weapons School

**VID**—Visual Identification

**VFR**—Visual Flight Rules

**WG**—Wing

### *Terms*

**Air Reserve Component**—Air Force Reserve and ANG units/aircrew members, including total force, associate and unit-equipped.

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

**Basic Aircraft Qualification**—A status of a crewmember who has satisfactorily completed training prescribed to maintain the skills necessary to fly the unit aircraft. The member must perform at the minimum frequency necessary to meet the most recent sortie and flight standards set for the weapons system. BAQ will only be carried by pilots until completion of MQT. BAQ is not a permanent qualification except for General Officers above the wing level, and any other pilots specifically authorized by MAJCOM A3/XO. Pilots are not authorized to perform RAP-tasked combat event/sorties without instructor pilot or SQ supervisor supervision.

**Basic Mission Capable**—The status of a crewmember 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. Crewmember accomplishes training required to maintain familiarity in all, and may be qualified and proficient in some, of the units primary missions. BMC crewmember members may also maintain special capabilities.

**Circular Error**—Weapon impact miss distance expressed in radial distance from target center.

**Combat Mission Ready**—A status of a crewmember who has satisfactorily completed training (MQT) prescribed to be fully qualified to perform the basic unit operational missions, and maintains qualification

and proficiency in these missions. All active duty API-1/2's, Squadron Commander, Operations Officers, and OG/CC designated API-6 manning positions are required to maintain this qualification level. EXCEPTION: If a unit is over-manned, they may elect to train the front line of their UMD to CMR with the overage designated as BMC.

**Composite Force Training**—Multiple flights of the same or different MDS aircraft, each under the direction of its own flight leader performing the same or different roles.

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

**Conversion Training**—Training required when units are converting between MDS (i.e. MQ-1 to MQ-9). Conversion training is normally done in formal training courses; however MAJCOMs may develop in-unit training when formal school courses are not available. In-unit training 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.

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

**Experienced Crewmember**—For pilots: 200 hrs PAI, or previously experienced (as 11XX AFSC) and 100 hrs PAI. For sensor operators: 200 hrs PAI and six months CMR as an SO, or previously experienced (any MDS, any AFSC) and 100 hrs PAI.

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

**Initial Qualification Training**—Training to qualify the crewmember 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 a crewmember to perform instructor duties.

**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-9. 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.

**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.

**Mission Control Element (MCE)**—A GCS (usually geographically separated from LRE) responsible for taking an MQ-9 from an LRE following takeoff, executing the mission, and then handing the MQ-9 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. It is a prerequisite for CMR or BMC status.

**Operational Flight Trainer (OFT)**—A training device which dynamically simulates flight characteristics. Used for normal, emergency, and instrument procedures, to include safety of flight, warfighting tasks, and skill integration training (see AFH 36-2235V7)

**Primary Aircraft Inventory**—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 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, etc. This training may be conducted in MQT or CT.

**Squadron Supervisor**—Squadron Commander, Operations Officer (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 be documented on unit letter of X's.

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

**Training Cycle**—The RAP training cycle is aligned with a unit's 20-month AEF cycle. The MQ-9 crewmember training cycle is aligned with the current AEF cycle (AEF Cycle 6: 1 May 06 – 31 Dec 07; AEF Cycle 7: 1 Jan 08 – 31 Aug 09). Units and individual crewmembers will complete all training requirements within the appropriate training cycle unless specifically excepted by this instruction or HHQ guidance.

**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-9 requires clarification of the term sortie within the scope of this AFI. An MQ-9 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 crewmember 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. A sortie 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-9 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. Non-RAP Sortie. A sortie where combat skills training is not accomplished. Unless specifically tasked, there is no requirement to log non-RAP sorties.

A2.1.4. Logging Sorties. Normally, crew 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. A crewmember is relieved by another crewmember 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) – 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 – 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 – A sortie planned and launched as a RAP training sortie, Non-RAP sortie, or collateral sortie, that, due to some circumstance (weather, IFE, maintenance, etc.), fails to accomplish the planned mission. It is imperative that units log these sorties properly. Improper accounting of these sorties will result in improper sortie allocation, stresses to the unit schedule, and negative impacts to the quality of unit training programs.

A2.2.4. Basic Surface Attack – Building block sortie. Training designed to achieve proficiency in day or night air-to-surface weapons delivery events.

A2.2.5. Close Air Support (CAS) Sortie – 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 – These sorties do not directly relate to combat employment or basic skills training but are necessary for accomplishment of day-to-day unit operations such as functional check flights and air shows. These sorties are not required for RAP training purposes.

A2.2.7. Commander Option Sortie – 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 – 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. Demanding Sortie – Sorties that task the aircrew to the extent that flying frequency and continuity are most critical. Authorized sorties/events requiring demanding mission currency are: CAS, SCAR, ASC, CSAR, CFTR, JFT, instructor duties, etc. SQ/CCs may add sorties/events to the demanding sortie list depending on unit tasking and the individual's capabilities. Also see Non-demanding Sortie.

A2.2.10. Forward Air Controller-Airborne (FAC-A) Sortie – Sortie flown to provide airborne forward air control of strike aircraft in support of actual or simulated ground forces. Mission elements include:

A2.2.10.1. Intelligence scenario and combat mission planning

A2.2.10.2. Actual or simulated interface with TAGS C2 network

A2.2.10.3. Target acquisition, identification and marking

A2.2.10.4. Positive control of ground attack fighters employing simulated or actual ordinance against designated targets

A2.2.10.5. FAC-to-fighter brief

A2.2.10.6. Integration of ground and heliborne fire support elements (if available)

A2.2.10.7. Identification and neutralization of enemy air defenses

A2.2.10.8. BDA and INFLTREP.

A2.2.11. Instructor Sortie – 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.

A2.2.12. Instrument Sortie – Basic skills sortie. Training designed to ensure instrument proficiency. RAP events may be accomplished on an instrument sortie provided accomplishment does not interfere with the primary goal of instrument training. Units are allocated sorties for every aircrew to accomplish their minimum basic skill, non-RAP, requirements.

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

A2.2.14. Non-demanding Sortie – A sortie that provides the aircrew with the opportunity to regain basic flying proficiency without excessively tasking those skills that have been under used during the non-flying period. Authorized sorties/events flown on a non-demanding sortie are: Instruments, AHC, RSTA, basic weapons delivery, etc. SQ/CCs may delete sorties/events from this non-demanding sortie list, depending on unit tasking and the individual's capabilities.

A2.2.15. Pilot Proficiency Sortie (PPS) – A basic proficiency sortie for practicing instrument, transition, and emergency procedures. A minimum of 45 minutes in the pattern should be scheduled for this event. Sortie should include the following events:

A2.2.15.1. Review of Critical Action Emergency Procedures.

A2.2.15.2. Instrument and visual approach(es).

A2.2.15.3. IR landing(s).

A2.2.15.4. Nose camera landing(s).

A2.2.15.5. SFO(s).

A2.2.15.6. Go-around(s).

A2.2.16. Reconnaissance, Surveillance, and Target Acquisition (RSTA) Sortie – 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:

A2.2.16.1. Intelligence scenario and combat mission planning

A2.2.16.2. Area search pattern (minimum 5 NM<sup>2</sup>).

A2.2.16.3. Line of communications search pattern (minimum 10 NM).

A2.2.16.4. Fixed (point) target acquisition (wide and narrow focus).

A2.2.16.5. Mobile target tracking (minimum 3 minutes).

A2.2.16.6. Actual or simulated interface to C2 element.



A2.2.17. Strike Coordination and Reconnaissance (SCAR) Sortie – 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:

A2.2.17.1. Intelligence scenario and combat mission planning

A2.2.17.2. Target acquisition, positive identification and marking

A2.2.17.3. Positive control of attack elements employing simulated or actual ordinance against designated targets

A2.2.17.4. Controller-to-striker brief (e.g. 9-line)

A2.2.17.5. Collateral damage estimate (CDE) determination, BDA, and INFLTREP

A2.2.18. Surface Attack Tactics (SAT) Sortie [SAT1] – 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:

A2.2.18.1. Combat mission planning.

A2.2.18.2. Mission execution with actual or simulated threats.

A2.2.18.3. Target identification and marking.

A2.2.18.4. 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-9 operations.

A2.3.1.1. Weapons Delivery. 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. There are two types of deliveries:

A2.3.1.1.1. Basic Delivery. A delivery using a conventional box pattern. It may be used as a record event only for initial qualification. There is no restriction on the number of dry passes made before or during basic deliveries in a record event for initial qualification; however, only the first two deliveries per event may be made for record.

A2.3.1.1.2. Tactical Delivery. A delivery using patterns and techniques that minimize final flight path predictability, yet allow sufficient time for accurate weapons delivery. Dry passes in

the event are not permitted before or during a record event. Tactical deliveries will normally include recovery to egress parameters.

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 Aircraft Video Tape Recorder 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.

A2.3.2.4. Gross Error. A penalty score or miss assigned 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 a 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. If a system malfunction is not verified, 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 Lasing Procedures. 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. In-flight operations without use of active anti-jam radios in a comm jamming environment that provide realistic intervals and duration (completion of one attack profile desired) to counter jamming or effective chattermark procedures. Limited to logging of one event per sortie.

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

A2.3.3.4. Emergency Mission Planning and Execution. 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 by turning off uplink 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.

A2.3.3.5. 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.

A2.3.3.5.1. Gaining Handover. 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.

A2.3.3.5.2. Losing Handover. 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.

A2.3.3.6. Instructor Event. 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.

A2.3.3.7. Infrared (or LowLight) Landing. 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.

A2.3.3.8. Joint Force Training. Scenarios employing integrated ground, aerospace, land, and/or naval forces from other services.

A2.3.3.9. Ku Procedures. Accomplish Ku Power Up and Power Down checklist procedures either in-flight or on the ground. Use Ku in-flight as the aircraft datalink.

A2.3.3.10. Ku Target Tracking/Imaging. Using Ku 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.

A2.3.3.11. Landing Procedures. Accomplish the Arrival and Before Landing checklists and accomplish (SO: observe) a full-stop or touch-and-go landing, or a low approach.

A2.3.3.12. Launch Procedures. Accomplish normal procedures checklists from Rack Configuration through Pre-Takeoff. Event may end prior to aircraft entering the active runway.

A2.3.3.13. Laser Target Marking. 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.

A2.3.3.14. Moving Target Tracking/Marking. 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.

A2.3.3.15. Night Nose Camera Low Approach [AP80]. A low approach flown at night using only the nose camera.

A2.3.3.16. Non-precision Approach. 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 V1 & V2, Instrument Flight Procedures.

A2.3.3.17. Nose Camera Landing. 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 DAY TV landing.

A2.3.3.18. Secure Voice. Requires proper radio configuration for secure voice operation and successful utilization during a tactical mission. One event may be logged per sortie.

A2.3.3.19. Simulated Flame-out (SFO). An emergency pattern accomplished in response to simulated engine failure as described in the flight manual. Practice approaches are flown at idle with the landing gear down and are restricted to low approach only.

A2.3.3.20. Surface Attack Tactics (SAT). Perform SAT techniques and procedures in a simulated combat flight environment. Correctly and efficiently identify, engage, and/or employ simulated (or actual) ordnance against real or simulated targets and accomplish INFLTREP. Safely conduct all MQ-9 flying tasks. Maximum of two events per sortie.

A2.3.3.21. Takeoff. Accomplish actual takeoff to include after takeoff and initial climb procedures and associated checklists.

A2.3.3.22. Target Talk-on. Convey validated target information to an attacking aircraft and confirm positive target identification. Talk-on will include visual identification/confirmation of the target from attacking aircraft crew.

A2.3.3.23. Time Sensitive Target (TST) Event. An event performing a tactical weapons delivery (actual or simulated) against an unplanned, highly lucrative target or target of opportunity requiring immediate response. The attacking aircraft should receive target data/description and clearance from an appropriate command and control (C2) asset. Use of CRCs, AWACS, JSTARS, AOC, 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

## VERIFICATION GUIDE

### 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

**Attachment 4****SAMPLE VERIFICATION GUIDE BRIEFING OUTLINE****A4.1. Overview:**

- A4.1.1. Introduction (participants and briefing classification).
- A4.1.2. Mission overview.
- A4.1.3. Status of friendly forces (ground, air and support).

**A4.2. Area of Operations:**

- A4.2.1. Geography (topography, population centers, lines of communications, chokepoints and natural obstacles, major visual identification points).
- A4.2.2. Climatology (effects on unit operations, ground troop movements, and in-flight operations).
- A4.2.3. Operating base (location, facilities, procedural constraints, strengths, and limitations).

**A4.3. Status of Enemy Forces:**

- A4.3.1. 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.
- A4.3.2. Airborne forces (numbers, locations, capabilities and tactics).

**A4.4. Mission Employment Briefing:**

- A4.4.1. Ground operations.
- A4.4.2. Departure (weather contingencies, options).
- A4.4.3. Route of flight (threat analysis, alternatives, fuel requirements, decision points).
- A4.4.4. Target descriptions and EEIs (mission data card and tactics).
- A4.4.5. Weapons employment (target data, attack parameters, load, fusing, suitability, delivery modes, and backups).
- A4.4.6. Egress plan.
- A4.4.7. Lost Link procedures and emergency airfield plan.
- A4.4.8. Airspace coordination plan