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SECRETARY OF THE AIR FORCE**

**AIR FORCE MANUAL 11-2MQ-9,
VOLUME 1**



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Flying Operations

MQ-9—AIRCREW TRAINING

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This manual implements Air Force Policy Directive (AFPD) 11-2, *Aircrew Operations*, and Air Force Manual (AFMAN) 11-202, Volume 1, *Aircrew Training* and is consistent with AFPD 11-4, *Aviation Service*. This manual establishes minimum United States Air Force (USAF) standards for training and qualifying personnel who operate USAF MQ-9 aircraft and applies to civilian employees and uniformed members of the Regular Air Force, Air Force Reserve (AFR), and Air National Guard (ANG). This publication is not applicable (N/A) to the United States Space Force. Ensure all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with (IAW) the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. Refer recommended changes and questions about this publication to Air Force Total Force Aircrew Management Directorate (AF/A3TF) through Air Combat Command Persistent Attack and Reconnaissance Division (ACC/A3M) using the Department of the Air Force (DAF) Form 847, *Recommendation for Change of Publication*; route DAF Forms 847 from the field through the appropriate functional chain of command. Major commands (MAJCOMs), Direct Reporting Units (DRUs), and Field Operating Agencies (FOAs) will forward proposed supplements to this manual to AF/A3TF through ACC/A3M for approval prior to publication. Copies of MAJCOM, DRU, and FOA-level supplements, after approved and published, will be provided by the issuing activity to ACC/A3M, and the user MAJCOM, DRU, or FOA and National Guard Bureau (NGB) (the NGB is considered a MAJCOM for the purposes of this manual) offices of primary responsibility (OPR). Field units below MAJCOM, DRU, and FOA-level will forward copies of their supplements to this manual to their parent organization OPR for post-publication review. The authorities to waive wing/unit

level requirements in this manual are identified with a Tier (“T-0, T-1, T-2, T-3”) number following the compliance statement. See Department of the Air Force Manual (DAFMAN) 90-161, *Publishing Processes and Procedures*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver authority, or alternately, to the requestor’s commander for non-tiered compliance items. See [paragraph 1.2](#) for further guidance concerning waivers.

SUMMARY OF CHANGES

This manual has been substantially revised and must be completely reviewed. Major changes include multiple administrative changes (e.g., AFI to AFMAN, etc.), reinserted aircrew roles/responsibilities, updated experiencing definition, returned data erroneously put in the Ready Aircrew Program (RAP) Tasking Memorandum (RTM), reinserted training folder information, updated debrief items, addition of automatic takeoff and landing data throughout (paragraphs [1.9.3](#), [3.4.2.1](#), [4.2.3.1](#), [4.2.4.1.3](#), [4.2.6.3](#), [4.2.7](#), [Table 4.1](#), [Table 4.2](#), [Table 4.3](#), paragraphs [6.2.5.1.8](#), [6.2.5.1.9](#), [6.2.5.3](#), [6.10](#)), updated local initial/requalification guidance, updated instrument/qualification evaluation standards for Initial Qualification Training (IQT) completion, reinserted local requalification guidance contained in current waiver, added senior leaders qualification course information, updated unit specific Mission Qualification Training (MQT) language, updated ground training requirements, added verification requirements, added Contested, Degraded, Operational Limited (CDO) requirements, added Integrated Air Defense System (IADS) requirements, added guidance for test/training coded units, updated language for general continuation training tracking, updated language for weapons and tactics training, aligned crew resource management requirements with AFMAN 11-290, *Cockpit/Crew Resource Management And Threat & Error Management Program*, updated Air Reserve Component (ARC) responsibilities for API-8 fliers, aligned currency, recurrency, and requalification guidance with AFMAN 11-202 Volume 1, *Aircrew Training*; updated currency events (live versus sim), removed tiering labels from [Table 4.1](#) to [4.3](#), added Aircrew Training Device (ATD) and DOWN/Duty Not Involving Flying (DNIF), requirements to [Table 4.1](#) through [4.3](#), reinserted regression data previously deleted, eliminated the prohibition on commanders pro-rating training for contingency operations, reinserted elements of weapons qualification requirements, updated language for instructor upgrades, aligned “Launch and Recovery (L/R)” vs “Line-of-Sight L/R (LOS L/R)” with new syntax per AFMAN11-2MQ-9 Volume 3, *MQ-9 Operations Procedures*, eliminated “L/R Restriction” language, added flight lead upgrade requirements, added mission commander upgrade requirements, updated references and acronyms, updated logging/tracking terminology in [Attachment 1](#) and linked with currency/RTM requirements ([Table 4.1](#), [4.2](#), and [4.3](#) and [Attachment 2](#)), added sample verification guide, and updated Air Force Special Operations Command (AFSOC) exemptions.

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Chapter 1

ROLES

1.1. Roles and Responsibilities. This manual establishes the minimum Air Force standards for training, qualifying, and certifying personnel performing aircrew duties in the MQ-9. **Note:** For the purposes of this manual, certification denotes a commander's action, whereas qualification denotes a formal evaluation. Reference AFMAN 11-202 Volume 2, *Aircrew Standardization and Evaluation Program*, for an explanation of qualifications versus certifications. Air Combat Command Directorate of Operations (ACC/A3) is designated the responsible agency for this manual in accordance with (IAW) AFD 11-2.

1.1.1. Air Combat Command Director of Operations (ACC/A3) will:

1.1.1.1. Chair annual Combat Air Forces (CAF) Realistic Training Review Board to review ground and flying training requirements/programs. Board participants include active and reserve component units/organizations. MAJCOM Directorates of Air Operations (MAJCOM/A3s) with major weapons systems for which ACC is lead command will be invited to send representatives and/or inputs.

1.1.1.2. Process all change requests to this manual.

1.1.1.3. Coordinate, publish and distribute the RTM, which describes annual training requirements for designated combat-coded units.

1.1.2. MAJCOM/A3s (NGB is considered a MAJCOM for the purposes of this manual) may elect to develop their own training requirements to fulfill Designed Operational Capability (DOC) statement missions via supplement or in their own MAJCOM-specific guidance.

1.1.3. Direct Reporting Units (DRUs) will:

1.1.3.1. Provide standard instructional texts to support operational weapons/tactics training. Forward copies to appropriate MAJCOM/A3 and Numbered Air Force Directorates of Air and Space Operations. (NAF/A3). **(T-2)**

1.1.3.2. Review, update, and distribute changes to instructional texts. **(T-2)**

1.1.3.3. Review subordinate unit training programs. **(T-2)**

1.1.4. Wings/groups will:

1.1.4.1. Develop/approve/implement programs to ensure training objectives are met and assist subordinate units in management of training programs. **(T-2)**

1.1.4.2. Attach Aircrew Position Indicator (API) 5/6/8/B/D positions to a flying squadron and designate the Continuation Training (CT) status for each, except when otherwise mandated. All API 5/6/8/B/D Air Reserve Component (ARC) crews will have CT status designated. **(T-2)**

1.1.4.3. Review programs and manning position designations annually. **(T-2)**

1.1.4.4. Review training programs and syllabi annually. Forward supplements to this manual to the MAJCOM OPR for coordination prior to certification and approval to the National Guard Bureau Intelligence, Surveillance, Reconnaissance Operations Division (NGB/A3/10), Air Force Reserve Command Operations Division (AFRC/A3D). **(T-2)**

1.1.5. Squadrons/units will:

1.1.5.1. Follow MAJCOM guidance for documenting aircrew certification. **(T-2)** Combat-Coded units will publish a letter of aircrew qualifications/certifications monthly Letter of Xs (LoX). **(T-2)** The letter provides a list of pilots and sensor operators that have special capabilities or qualifications for that month. The letter also provides utilization of Basic Mission Capable (BMC) and Combat Mission Ready (CMR)/Mission Ready (MR) pilots and sensor operators (annotate missions/events that maintain qualification/certification). **(T-3)**

1.1.5.2. Ensure adequate continuity and supervision of individual training needs, experience, and proficiencies of assigned/attached aircrew. **(T-3)**

1.1.5.3. Monitor assigned/attached aircrew currencies and requirements. **(T-3)**

1.1.5.4. Review training and evaluation records of newly assigned aircrew and those completing formal training to determine the training required to achieve BMC or CMR(MR) and to ensure compliance with provisions of this manual. **(T-3)**

1.1.5.5. Develop unit training programs using RTM guidance and this manual **(T-2)** Consider attrition and collateral sorties (including associated training requirements) when developing unit training and Flying Hour Programs (FHP). **(T-2)**

1.1.5.6. Ensure individual aircrew members only participate in missions, events, and tasks for which they are current and qualified/certified (or being trained), and prepared for that purpose. **(T-3)**

1.1.5.7. Submit training reports as outlined in MAJCOM RTM guidance. **(T-3)**

1.1.6. Individual aircrew will:

1.1.6.1. Monitor currencies and requirements established by this instruction **(T-3)**

1.1.6.2. Only participate in ground and flying activities for which they are being trained or trained, current and prepared for that purpose. **(T-3)**

1.2. Waivers. Forward waiver requests through appropriate channels to the applicable MAJCOM/A3 or equivalent. The MAJCOM/A3 (or equivalent) will notify ACC/A3 and ACC/A3M of waivers within 72 hours of issuance. Wing commanders (WG/CCs) will notify the publication OPR within 72 hours of waiver approval. **(T-2)** Per DAFMAN 90-161, a copy of the approved waiver must follow within 30 days of issuance. **(T-2)** An email to the waived publication OPR that includes a completed DAF Form 679, *Department of the Air Force Publication Compliance Item Waiver Request/Approval* or equivalent will suffice. Waiver authority for supplemental guidance will be as specified in the supplement and approved through higher level coordination authority.

1.3. Training Programs, Concepts, and Policies.

1.3.1. Units will design training programs to achieve the highest degree of readiness consistent with flight safety and resource availability. **(T-2)** Training programs are designed to progress aircrews from Initial Qualification Training (IQT) (Basic Qualification [B]-course or Transition/Requalification Training [TX/RQ]), then to Mission Qualification Training (MQT), CT, and specialized training as required. Training must balance the need for realism against the expected threat, aircrew capabilities, and safety. This manual provides training guidelines

for use with operational procedures specified in applicable flying/operations publications listed in [Attachment 1](#).

1.3.2. Air Combat Command Training Support Squadron (ACC/TRSS) will assist operations group commanders (OG/CCs) in development of training programs when/where 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 the ACC/TRSS. Designated test units (CB-coded) may develop syllabi to upgrade operational test aircrew in support of specific test plans. These syllabi will be approved by the test group commander. **(T-2)**

1.3.3. In-flight Supervision: Unless specifically directed, the squadron commander should determine the level of supervision necessary to accomplish the required training. Should the mission objectives include introduction to new tasks, or instruction to correct previous discrepancies, an instructor pilot (IP) or instructor sensor operator (ISO) is required.

1.4. Aircrew Experience.

1.4.1. Aircrew require a minimum number of flight hours to be considered experienced (EXP) in the aircraft. Inexperienced (INEXP) aircrew train at a higher rate to maintain currency and proficiency. Refer to the training tables in the most current RTM (or MAJCOM-specific guidance) for requirements for both EXP and INEXP aircrew.

1.4.2. Experience Definition. Aircrew are considered experienced in the MQ-9 aircraft after meeting one of the following criteria:

1.4.2.1. Mission Control Element (MCE) Aircrew:

1.4.2.1.1. 550 hours Primary Aerospace Vehicle Inventory (PAI), or

1.4.2.1.2. Experienced in previous manned Mission Design Series (MDS) and 300 hours of PAI, or

1.4.2.1.3. Experienced in MQ-9 Line of Sight (LOS) Launch and Recovery Element (LRE) (LOS L/R) operations and 150 hours of MCE operations, or

1.4.2.1.4. 550 total Remotely Piloted Aircraft (RPA) hours of which 150 are PAI

1.4.2.2. LOS L/R Aircrew: 275 hours of PAI, of which 75 hours are LOS L/R.

1.4.3. Hours logged in an approved simulator/training device should be counted as hours towards MQ-9 aircraft experience and LOS L/R experience. Simulator hours will not exceed 50% of the total required to meet an experience threshold. **(T-2)**

1.5. Ready Aircrew Program (RAP) Guidance (Air Force Special Operations Command [AFSOC]: N/A).

1.5.1. The RAP training cycle is 12 months, aligned with the fiscal year and executed as outlined in the RTM (**Exception:** The Air Education and Training Command training cycle is 12 months, determined by the MAJCOM). RAP training is designed to focus on skills needed to accomplish DOC-tasked missions following completion of IQT and MQT. RAP mission and event requirements apply to CMR(MR) and BMC aircrew as well as those individuals carrying special capabilities or qualifications.

1.5.2. RAP defines the minimum training required to maintain the assigned training status.

1.5.3. MAJCOMs may augment unit FHPs with a number of attrition sorties that compensate for non-effective training missions. Aircrew may log any training mission as non-effective when a major portion of valid training for that type of mission cannot be accomplished due to poor weather, air aborts, or other unexpected circumstances. In order to allocate the number of attrition sorties accurately, it is essential that aircrew log non-effective sorties appropriately.

1.5.3.1. An effective RAP mission requires accomplishing a complete tactical mission scenario or a basic skills mission as defined by the squadron commander, informed by the RTM. In order to be effective, each mission must successfully complete a sufficient number of events applicable to that mission type, as determined by the squadron commander. Aircrew are expected to maximize all training opportunities. This does not require, nor are aircrew expected to log effective RAP missions when minimal RAP training occurs on a scheduled RAP sortie. Additionally:

1.5.3.1.1. No more than three RAP sorties/simulators may be logged per 24-hour period (T-3)

1.5.3.1.2. Individual RAP sorties must be delineated by a natural break in mission flow such as: break from cockpit of 1 hour or more, or completion and reset of a different tactical scenario, or an extended transition between operating locations/airspace. (T-3)

1.6. Operational Unit Reporting. Operational squadrons will submit periodic and End-of-Cycle (EOC) RAP training reports as outlined in the RTM. (T-2) Squadrons may submit an out of cycle report at any time if higher headquarters (HHQ) assistance is required to prepare for DOC or deployment tasking. Reference current RTM for detailed instructions and report templates.

1.7. Formal Training Unit (FTU) Reporting. FTUs will report on their training health as directed by owning MAJCOM. (T-2)

1.8. Training Records and Reports.

1.8.1. See AFMAN 11-202 Volume 1, *Aircrew Training*, and AFMAN 11-202 Volume 2, *Aircrew Standardization and Evaluation Program*, and DAFMAN 11-401, *Aviation Management* for guidance on maintaining aircrew records for individual aircrew training and evaluations.

1.8.2. Track the following information for all aircrew, as appropriate:

1.8.2.1. Ground training.

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

1.8.2.3. 1-month and 3-month RAP lookback as outlined in the RTM (AFSOC: N/A).

1.8.2.4. Requirements and accomplishment of individual currencies.

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

1.8.3. Units may update Aviation Resource Management System (ARMS) training tasks with "No Date" with either the date of the last FTU or USAF Weapons School (USAFWS) equivalent training accomplished, or the unit mission certification date.

1.8.4. Units will maintain a training folder (electronic folder is acceptable) for each assigned and attached aircrew. **(T-1)** Training folders include information on aircrew qualifications/certifications and current assignment training documentation (upgrades, regression, waivers, special qualifications, etc.).

1.9. Mission and Armament Recording.

1.9.1. Aircrew should use and assess all available training documentation, such as Digital Video/Audio Recording devices, on all missions. Aircrew should review applicable portions of mission tapes to enhance training.

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

1.9.3. If conducting a launch and recovery (L/R) operation (manual or automatic), then the following items should be reviewed: airmanship/situational awareness, safety, flight discipline, crew coordination, pattern procedures, adherence to air traffic control clearance, simulated engine-out energy assessments, flare execution, aim point/touchdown point, and flight discipline.

1.10. Unit Manpower.

1.10.1. Commanders will ensure wing/group aircrew (API-1/6/A/B) fill authorized positions Unit Manning Document (UMD) and that aircrew member status is properly designated. **(T-2)** The overall objective is for aircrew to perform combat-related duties. Supervisors may assign aircrew to valid, short-term tasks (e.g., escort officer, flight evaluation board/mishap board member), but must continually weigh the factors involved, such as level of aircrew tasking, flying proficiency, currency, and experience.

1.10.2. While API-1/A-assigned wing aircrew may perform additional duties outside of their flying squadron for a temporary basis, their primary responsibility is with the squadron to fill DOC statement tasked missions. Wing leadership should not prioritize workload unrelated to squadron mission requirements for the employment of squadron API-1/A aircrew.

1.10.3. Commanders will ensure API-6/B pilots on the wing staff perform duties justified in MAJCOM manpower standards documents and authorized in UMDs. **(T-2) (Note: AFRC: OG/CC may designate API positions as required to meet unit requirements).**

Chapter 2

INITIAL QUALIFICATION TRAINING

2.1. General. This chapter outlines IQT requirements for MQ-9 aircrews. IQT provides the training necessary to qualify aircrew members in a basic position and flying duties without regard to the unit's mission. Upon completion of IQT, aircrews attain basic aircraft qualification (BAQ) status. Refer to the specific MQ-9 training syllabi for details regarding the IQT courses (Basic Qualification, Requalification, and Transition), the Launch and Recovery Qualification/Requalification Course (LRQT), the Formal Training Unit Instructor Upgrade Training Course (FIUT), the Senior Leader Qualification Training Course (SLQT), and the Senior Leader Familiarization Training (SLFT) Course. These syllabi take precedence when there are discrepancies with this chapter.

2.2. Formal Training. IQT, Requalification/Transition, and Senior Officer training will be conducted during formal syllabus courses at the FTU. Formal course graduates will be proficient in mission tasks as indicated by the Course Training Standards (CTS) and Required Proficiency Levels (RPL) of the FTU syllabi. Graduates of IQT and Transition (TX) are BAQ until completion of MQT. Waiver authorities are defined in the appropriate syllabus and situation.

2.3. Local Training. In exceptional circumstances when FTU training is not available within a reasonable time period, local IQT, Transition/Requalification, and Senior Officer training may be performed at the unit. When local training is authorized, the gaining MAJCOM assumes responsibility for the burden of providing this training. Once local training is authorized, the OG/CC becomes the delegated approval authority for entry into local training. Local training programs will be conducted using the appropriate formal course syllabus track, program flow, requirement, and CTS/RPL. **(T-3)** Completion of formal training in residence or via secondary method training waiver results in personnel actions IAW AFMAN 36-2100, *Military Utilization and Classification*.

2.4. Approval and Waiver for Local IQT and Local Requalification Training.

2.4.1. B-Course, TX-1, and TX-2 (MCE). Unless specifically delegated, the gaining MAJCOM/A3 is the approval authority to conduct local IQT and is the waiver authority to change the requirements of the formal course syllabus.

2.4.2. TX-3 (MCE) / TX-2 (LRE) Requalification. IAW AFMAN 11-202V1, the squadron commander (SQ/CC) may direct local requalification training for aircrew unqualified up to 39 months at the end of a non-flying assignment, or up to 51 months at the end of any active flying assignment. Completion of the FTU TX-3 (MCE) or FTU TX-2 (LRE) course satisfies this requirement (see Education and Training Course Announcement website for details). SQ/CCs may deviate from the formal training syllabus to accommodate for unit specifics and aircrew experience, but at a minimum must include all delinquent items and a requalification evaluation IAW AFMAN 11-202V2. **(T-2)** Wings will inform ACC/A3M (or MAJCOM equivalent) when approving local requalification training. **(T-2)**

2.4.3. Requests to conduct local IQT (**paragraph 2.4.1**) or local requalification training in excess of 39 months at the end of a non-flying assignment [or 51 months for flying assignments] is per AFMAN 11-202V1, **paragraph 2.2.2** and will include the following:

2.4.3.1. Justification for the local training in lieu of formal course training. **(T-2)**

2.4.3.2. Summary of individual's flying experience. (T-2)

2.4.3.3. Date training will begin and expected completion date. (T-2)

2.4.3.4. Requested exceptions to formal course syllabus, if any, with rationale. (T-2)

2.5. Course Prerequisite. Should be IAW AFMAN 11-202V1, this manual, the appropriate formal course syllabus, and Air Force Education and Training Course Announcements (ETCA). Individuals without prerequisites met or waived may be denied entry into training. (T-2)

2.6. Ground Training. Ground training is accomplished IAW the syllabus. Use available and current reference materials such as Air Force Tactics, Techniques and Procedures (AFTTP), instructor guides, and audiovisual programs as supporting materials to the maximum extent possible. Accomplish simulator missions in an approved training device to the maximum extent possible.

2.7. Flying Training.

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

2.7.2. Aircrew fly under direct instructor supervision until successful completion of the qualification evaluation.

2.7.3. Successful completion of IQT requires the upgrading aircrew to complete at a minimum an aircraft Instrument (INSTM) Qualification (QUAL) evaluation (Pilots), or QUAL (Sensor Operators), IAW AFMAN 11-202V2 and AFMAN 11-2MQ-9 Volume 2, *MQ-9 Aircrew Evaluation Criteria*, as applicable.

2.8. Senior Leader Qualification Course.

2.8.1. All formal training courses for senior leaders (Colonel-selects and above/Chief Master Sergeants) will be conducted at FTUs unless waived IAW [paragraph 2.4](#).

2.8.2. Senior leaders must meet course entry prerequisites outlined in the ETCA website (<https://usaf.dps.mil/teams/app10-etca/SitePages/Course.aspx?ao=1&i=4232&isdlg=1>) and complete all requirements unless waived.

2.8.3. If a senior leader must be trained at the base to which assigned, the leader will be in formal training status. (T-2) Unit duties will be turned over to appropriate deputies or vice commanders until training is completed. (T-2) Exceptions to this policy must be approved by the gaining MAJCOM/CC (ANG: Air Combat Command Air National Guard Advisor to the Commander [ACC/CG]) submitted through MAJCOM/A3.

Chapter 3

MISSION QUALIFICATION TRAINING

3.1. General. MQT is an OG/CC-approved, unit-developed, training program that upgrades BAQ aircrew to accomplish the unit specific missions. The SQ/CC will develop and maintain responsibility for the local MQT programs. **(T-3)** Units are expected to further tailor programs based on an individual's current qualifications, experience, currency, documented performance, and formal training. Applicable portions of MQT may be used to create a requalification program for aircrew who have regressed from BMC/CMR(MR) to specifically address deficiencies which caused the regression.

3.2. Unit-Specific Mission Qualification Training (MQT). The SQ/CC should ensure an aircrew member completes MQT within 90 calendar days (150 calendar days for ANG/AFRC/AFSOC) after signing in from completion of IQT/RQ (or graduation date for in-house IQT/RQ), initial sign-in for ops-to-ops assignments, or not later than (NLT) 90 calendar days post LRQT for new LR crewmembers. *If the individual elects to take authorized leave or permissive Temporary Duty (TDY) prior to entering MQT, the timing will begin after the termination of leave or permissive TDY, not to exceed 21 days after arriving on station. If the gaining unit is an LOS LRE, timing starts from the date the member is qualified to perform LOS L/R events on the aircrew member's AF Form 8, Certificate of Aircrew Qualification.* Training is complete upon SQ/CC certification to BMC/CMR(MR). MQT will start on the first training work day after completing base/unit in-processing and/or permissive TDY. In no case will this date be more than 21 days after arriving on station. If training exceeds the specified limit, units will notify MAJCOM Aircrew Training Functional (ACC/A3M, AFSOC/A3T, Air Force Reserve Command Combat Division AFRC/A3D, National Guard Bureau C2ISR Division NGB/A3/10CI) of the planned corrective action on a case-by-case basis. **(T-2)**

3.3. Ground Training. Units 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.

3.3.1. Newly assigned aircrew require theater indoctrination academics IAW AFMAN 11-202V1 prior to the first flight. **(T-2)** Theater indoctrination academics may be accomplished during MQT academics or as part of the MQT local area orientation briefing.

3.3.2. Verification. CMR aircrew 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 squadron operations officer (SQ/DO) (chairman), weapons officer, intelligence officer, ISO or squadron operations supervisor, and a plans representative. Suggested verification briefing guides are in [Attachment 3](#).

3.3.2.1. CMR aircrew will complete a verification within 180 days after completing MQT. Failure to comply will result in regression to Non-Combat Mission Ready (N-CMR) until the verification is complete. **(T-3)**

3.3.2.2. At the discretion of the SQ/CC, BMC aircrew may accomplish a verification to facilitate future upgrade to CMR status.

3.3.2.3. OG/CC may authorize SQ/CCs to count completion of unit-specific MQT programs or combat and combat support sorties flown during MQT as satisfying the Verification requirement.

3.4. Simulator Training.

3.4.1. MQT aircrew fly mission profiles that replicate primary unit mission tasking.

3.4.2. MQT Simulator Event Requirements:

3.4.2.1. Instrument and Emergency Procedures (EP) Events. Personal and mission preparation, normal ground operations, takeoff (if applicable), flight operations, navigation, EPs, landing (if applicable), post-flight ground operations, Critical Action Procedures (CAP), and selected non-CAP EPs.

3.4.2.2. Surface Attack Tactics and Weapons Anomalies Events. Tactical procedures, tactical navigation, weapons deliveries (normal and backup), weapons anomalies, emergency divert/recovery procedures, hung ordnance procedures, and selected EPs. These missions will be accomplished using a tactical scenario.

3.4.2.3. Contested, Degraded, Operationally Limited (CDO) Events. Tactical simulator training incorporates elements of CDO (per [Chapter 4](#)).

3.4.2.4. Integrated Air Defense System (IADS) Events. Tactical simulator training incorporates elements of IADS (per [Chapter 4](#)).

3.5. Flying Training. MQT programs use profiles typical of unit missions. MQT progression and performance are documented within unit developed gradebooks. The MQT program culminates with a SQ/CC certification or with an AF Form 8 evaluation per AFMAN11-2MQ-9 Volume 2, *MQ-9--Aircrew Evaluation Program*, certifying/qualifying the aircrew in the unit's mission. Maximum use of armament recording assets and actual deliveries are encouraged on all MQT missions.

3.5.1. Supervision. An IP and/or ISO, respective to student(s) of similar crew compliment, are required as a minimum unless specified otherwise.

3.5.2. Breaks in Training. If more than 14 calendar days elapse between sorties, an additional review sortie may be flown before continuing the program. The SQ/CC may substitute a simulator mission (with an IP/ISO) for a required review sortie.

Chapter 4

CONTINUATION TRAINING

4.1. General. This chapter, along with the RTM outlines ground and flying CT requirements for BAQ, BMC, and CMR(MR) aircrew. Aircrew must be qualified IAW this manual, DAFMAN11-401, AFMANs 11-202V1/2, AFMAN11-2MQ-9V2 and applicable MAJCOM and local publications. **(T-2)** Aircrew must complete IQT to fly in BAQ status; MQT to fly in BMC/CMR status. **(T-2)** For test/training-coded units, see [paragraph 4.3.3](#) Applicable training terms and sortie/event definitions are found in [Attachment 1](#) and [Attachment 2](#), respectively.

4.2. Ground Training. Accomplish ground training IAW the RTM or MAJCOM-specific guidance. **(T-2)** Ground training accomplished during IQT/MQT may be credited toward CT requirements for the training cycle in which it was accomplished. The RTM and/or MAJCOM-specific guidance may not include all AF ancillary training, which should be tracked at unit level.

4.2.1. Instrument Refresher Course (IRC). Training is required:

4.2.1.1. IAW AFMAN 11-210, *Instrument Refresher Program (IRP)*, AFMAN 11-202V2, and MAJCOM supplements. **(T-2)**

4.2.1.2. Units will ensure IRC programs include briefings on recognition and how to deal with spatial disorientation, unusual attitude recoveries, transition between visual and instrument conditions, weather avoidance, and navigation procedures. **(T-2)**

4.2.1.3. Units will develop theater-specific instrument academic programs for inclusion in their pre-deployment LOS LRE or pre-combat MCE spin-up training programs. **(T-2)** Units will include a course on flight operations in icing conditions with emphasis on the aircraft limitations, capabilities, and avoidance in their theater-specific instrument academic training. **(T-2)**

4.2.2. Simulators/Training Devices:

4.2.2.1. The minimum simulator training requirements are defined in the RTM and MAJCOM-specific guidance. The OG/CC (AFSOC/A3T for AFSOC) can substitute other approved training devices if a simulator is not available. Units will determine additional CT training device requirements based on expected employment tasking, training device capabilities, and mission training objectives. **(T-2)** Units will determine appropriate supervision levels for training device missions/tasks. **(T-3)** Units will track all aircrew device training used to satisfy RAP and basic skills requirements. **(T-3)** **Note:** Aircrew are not expected to have or gain proficiency in EPs in phases of flight in which they are not qualified/certified (e.g., LOS L/R or Satellite Communications (SATCOM) L/R ops).

4.2.2.2. Units develop scenarios that cover Mission Essential Tasks, EPs, instrument approach procedures, and other scenario requirements based on expected unit tasking and training device capabilities. Place emphasis on training not readily attainable during daily flying activities. Accomplish inadvertent weather entry procedures and unusual attitude recovery during instrument or EP training. Tactical and EP missions will be accomplished in a simulator, if available. **(T-3)** If required, a cockpit or other Aircrew Training Device (ATD) may be used to accomplish this training.

4.2.3. Situational Emergency Procedures Training (SEPT).

4.2.3.1. This monthly training is not an evaluation, but a review of EPs and aircraft systems operations/limitations during realistic scenarios. One aircrew member presents a situation and other aircrew members discuss actions necessary to cope with the malfunction and carry it to a logical conclusion. Special interest items will be emphasized. **(T-2)** Incorporate the following elements into the SEPT program:

4.2.3.1.1. The SQ/CC or SQ/DO will be involved in the selection of monthly SEPT topics. **(T-2)**

4.2.3.1.2. Develop SEPT scenarios using historical aircraft mishaps/incidents as baseline cases. **(T-2)**

4.2.3.1.3. At a minimum, aircrew members will discuss all CAPs applicable to their qualifications, and at least two additional EPs. **(T-2)** Additionally, L/R aircrew members will discuss at least two EPs relevant to L/R operations. **(T-2)** Units will review all applicable EPs in Section 3 of the flight and munitions delivery manuals annually. **(T-2)**

4.2.3.2. Accomplish SEPTs IAW the current RTM and MAJCOM guidance. Currency expires at the end of the calendar month following the month in which the SEPT was credited, regardless of which date the SEPT was completed (e.g., if a SEPT is accomplished on 1 May, the currency is good through 30 June). Aircrew with expired SEPT are grounded until the SEPT is completed for that month. Aircrew will accomplish a minimum of one Supervised SEPT every 180 days with an IP or ISO. **(T-2)**

4.2.3.2.1. Emergency Procedures Evaluations (EPEs) can be used to fulfill monthly SEPT requirements. **(T-2)**

4.2.3.2.2. Completion of an EP simulator profile satisfies the aircrew member's monthly SEPT requirement, if not already accomplished. Instructors administering a supervised EP simulator profile or Flight Examiners (FE) administering EP Evaluations will satisfy their monthly SEPT requirement. **(T-2)**

4.2.3.2.3. Formal course student EP simulators can satisfy the monthly SEPT requirement for the IP/ISO who administers the training. **(T-2)**

4.2.4. CT Verification. CMR aircrew should participate in a verification as a briefer, board member, or seminar participant. Verification occurs upon changes to unit tasking, theater, or mission as directed by the SQ/CC. BMC aircrew should participate in a verification to facilitate future upgrade to CMR status; at the discretion of the SQ/CC. Aircrew who participate in a unit deployment to a tasked area of responsibility may receive credit for CT Verification.

4.2.5. Weapons and Tactics Academic Training. Establish a weapons/tactics academic training program to satisfy MQT and CT requirements. Accomplish training IAW the RTM or MAJCOM-specific guidance. **(T-2)** SQ/CCs provide guidance to the unit weapons shops on an annual CT weapons and tactics academics program that ensures aircrew are informed/reminded of new/current MQ-9 weapons, systems, and mission-specific tactics, techniques, and procedures. Audiovisual/computer based training programs may be used in place of academic instruction.

4.2.5.1. Academic instructors should be USAFWS graduates, tactics personnel, or experienced instructors, and determine training requirements based on unit and theater-specific mission requirements and unit statement.

4.2.5.2. Instruction and tests will include:

4.2.5.2.1. Air-to-surface weapons: description, operation, parameters, fusing, limitations, preflight, tactics, normal and EPs. **(T-3)**

4.2.5.2.2. Capabilities, characteristics, and tactics, techniques and procedures (TTPs) of other CAF assets that the aircraft may integrate with in theater-specific operations. **(T-3)**

4.2.5.2.3. AFTTP 3-1.IPE, *Tactical Employment IPE*; AFTTP 3-1.Threat Guide, *Threat Reference Guide*; and AFTTP 3-1.MQ-9, *Tactical Employment MQ-9*. **(T-3)**

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

4.2.5.3.1. Counterland procedures, to include Strike Coordination and Reconnaissance (SCAR) procedures, and Close Air Support (CAS) procedures with Forward Air Controller (FAC) and/or Joint Terminal Attack Controller (JTAC). **(T-3)**

4.2.5.3.2. Intelligence, Surveillance, Reconnaissance (ISR) procedures, to include Reconnaissance, Surveillance, and Target Acquisition (RSTA) procedures. **(T-3)**

4.2.5.3.3. On-Scene Commander (OSC) and Combat Search and Rescue (CSAR) procedures. **(T-3)**

4.2.5.3.4. Combat operations lessons learned. **(T-3)**

4.2.5.3.5. Theater specific threat reviews. **(T-3)**

4.2.5.3.6. Air Operations in Maritime Surface Warfare (AOMSW). **(T-3)**

4.2.5.3.7. Incorporate exposure to CDO operations and IADS where appropriate with unit's mission and expected operating environment. **(T-3)**

4.2.6. Take-off/Landing/Go-around Training for LOS L/R-qualified crews. Training is accomplished IAW the RTM or MAJCOM-specific guidance. **(T-2)**

4.2.6.1. LOS L/R aircrew receive Take-off/Landing/Go-around academic training during initial LOS L/R qualification, LOS L/R instructor upgrade, and LOS L/R requalification.

4.2.6.2. Training includes proper manual takeoff/landing techniques and procedures, approach procedures and techniques, GPS landing system (GLS) use, crosswind landings, go-arounds (e.g., decision making, planned, un-planned, IP-directed), manual hard landings, bounces and porpoise recovery, problems associated with limited visual cues, and Head-Up Display (HUD) symbology. Training should include video from previous mishaps to show relationship between the lack of visual/somatic-sensory cues, and the result of continuing a bad approach/manual landing.

4.2.6.3. Automatic Takeoff and Landing Capability (ATLC) Training includes (if applicable): Runway creation techniques and procedures, pattern profile selection,

descent/arrival/pattern entry, ATLC engagement/disengagement, ATLC lost link logic, ATC communications during lost-link, visual cues limitations, minimum sector altitude (MSA) considerations, checklist limitations, HUD symbology, terminal area environment, and system malfunction limitations/considerations. When applicable, training will also include ground operations items: starting, marshalling exam, taxi, e-taxi, after-landing, shutdown procedures.

4.2.7. Automatic Take-off/Landing/Go-around Training for SATCOM L/R certified MCE crews. Training is accomplished IAW the RTM or MAJCOM-specific guidance. **(T-2)**

4.2.7.1. SATCOM L/R certified MCE aircrew receive automatic take-off/landing/go-around academics training during IQT (when applicable) or unit-conducted top-off training.

4.2.7.2. Unit conducted top-off training will cover L/R items not incorporated in IQT (if applicable). Training includes: air traffic control airspace and radio calls, proper automatic takeoff/landing procedures, descent/approach procedures and techniques, go-arounds (e.g., decision making, planned, un-planned, IP-directed), problems associated with limited visual cues, and HUD symbology. **(T-2)**

4.2.7.3. Unit conducted top-off training will cover ATLC specific items: In addition to [paragraph 4.2.6.3](#), training includes divert-vs-RTB considerations, discerning checklist intent (until appropriate flight manual changes are made), and verification on final for runways created from imagery. **(T-2)**

4.2.8. Crew Resource Management (CRM). Aircrew members will participate in MAJCOM established CRM training every 24 months, or MAJCOM guidance, whichever is more restrictive. **(T-2)** The CRM/TEM Program Instructor course may be used to satisfy the requirement. Training will be tracked in ARMS. **(T-2)**

4.2.9. Intelligence Training. Units conduct this training as required by the RTM and MAJCOM-specific guidance. OG/CC determines the focus and extent of academic training. Align academic training with projected wartime tasking, threats, and unit equipment. Aircrew intelligence training will include current intelligence covering significant military and political developments (including threat updates) in the squadron's mission areas of interest. **(T-3)**

4.2.10. Law of War (Law of Armed Conflict). See AFI 51-401, *The Law of War* and MAJCOM-specific guidance.

4.2.11. Marshalling Exam. See the RTM and WG/CC guidance per AFI 11-418, *Operations Supervision* for marshalling exam requirements.

4.2.12. Laser Safety Training. See AFI 48-139, *Laser and Optical Radiation Protection Program*; MAJCOM-specific guidance; and the RTM.

4.2.13. Small Arms Training (Group B). See AFI 31-117, *Arming and Use of Force by Air Force Personnel*; AFI 36-2654, *Combat Arms Program*; MAJCOM-specific guidance; and the RTM for Small Arms Training (Group B) aircrew requirements.

4.2.14. Standardization/Evaluation Test. See AFMAN 11-202V2 and MAJCOM supplements, if applicable; and the RTM. This ground training item is periodic testing.

4.2.15. Flight Safety Training. See AFI 91-202, *The US Air Force Mishap Prevention Program*; MAJCOM-specific guidance; and the RTM.

4.2.16. Intelligence Oversight Program Training. Units will conduct this training annually. **(T-0)**. Training should be developed and managed IAW AFI 14-404, *Intelligence Oversight*; DoDD 5148.13, *Intelligence Oversight*; and applicable MAJCOM guidance.

4.2.17. RPA Aircrew Aerospace Physiology Training. See AFMAN 11-403, *Aerospace Physiological Training*; AFMAN 11-202V1; MAJCOM-specific guidance, and the RTM.

4.3. Flying Training. All aircrew will accomplish the flight mission/sortie requirements listed in the most current RTM and MAJCOM-specific guidance as applicable to their crew position and qualifications. **(T-2)**

4.3.1. BAQ Requirements. To maintain BAQ, aircrew must:

4.3.1.1. Complete a Qualification (QUAL) flight evaluation IAW AFMAN 11-202V2 & AFMAN 11-2 MQ-9V2. **(T-2)**

4.3.1.2. Complete an Instrument (INSTM) flight evaluation IAW AFMAN 11-202V2 & AFMAN 11-2 MQ-9V2. **(T-2)**

4.3.1.3. Fly a supervised sortie with an instructor of the same crew position every 60 days (may be accomplished in approved training device). **(T-3)**

4.3.1.4. Fly a sortie rate as required to maintain directed currencies. If a BAQ aircrew member does not fly for 21 days (INEXP) or 30 days (EXP) the next sortie must be flown with an instructor of the same crew position. **(T-3)**

4.3.1.5. Unless currently enrolled in a program to achieve CMR(MR)/BMC, BAQ aircrew remaining in BAQ status for more than 6 months after graduating IQT will be grounded (except general officers). **(T-2)**.

4.3.2. BMC and CMR(MR) Requirements. BMC and CMR(MR) Flight Mission/Sortie Requirements and currencies are specified in the RTM or MAJCOM-specific guidance. **(T-2)**

4.3.3. Designated Training (TF-coded) and Designated Test (CB-coded) Unit Requirements.

4.3.3.1. Aircrew assigned or attached to TF or CB-coded units should fly, as a minimum, at the BMC rate. **(T-3)** Formal training syllabus-directed missions and approved test plan missions apply to BMC rate requirements for TF and CB-coded units respectively. **Exception:** Pilots in TF/CB-coded units will fly the Aircraft Handling Characteristics (AHC), Pattern Proficiency Sortie (PPS) and EP Simulator listed in the RTM or MAJCOM-specific guidance. **(T-2)**

4.3.3.2. FTU Instructors (TF-Coded units) must be current and qualified in events they instruct **(T-3)**

4.3.3.3. Test Instructors (CB-coded units), SQ/CCs may designate instructors as initial cadre to instruct new events under an approved test plan.

4.3.3.4. Ground training as directed by the SQ/CC.

4.3.3.4.1. There is no requirement for aircrew assigned or attached to TF-coded or CB-coded units to accomplish verification.

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

4.3.3.5. SQ/CC will direct additional sorties if programmed syllabus or test missions do not provide aircrew proficiency training. **(T-3)**

4.3.3.6. INSTM/QUAL mission or instructor flight evaluation, if applicable, IAW AFMAN 11-202V2, and AFMAN 11-2MQ-9V2. Aircrew assigned/attached to CB-coded units need not maintain instructor status.

4.4. Special Categories.

4.4.1. Flight Surgeon. Flight surgeons may participate in CT missions as observers. Units will develop appropriate CT mission programs for assigned flight surgeons. **(T-3)**

4.4.2. Above-Wing-Level Aircrew.

4.4.2.1. Additional ARC responsibilities for API-8 staff flyers are contained in DAFMAN 11-401 as supplemented by the ANG and AFRC.

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

4.4.2.2.1. Coordinate with the supporting agency to ensure maintenance of appropriate ARMS data and provide that data IAW DAFMAN 11-401. **(T-3)**

4.4.2.2.2. Review assigned aircrew accomplishments and currencies prior to authorizing participation in MDT. **(T-3)**

4.4.2.2.3. Provide each aircrew with written documentation specifying the authorized mission types and events the aircrew may fly. Above-Wing-Level aircrew who fly with only one unit may receive this from their attached unit commander. **(T-3)**

4.4.2.3. Above-Wing-Level aircrew maintaining BMC status are exempt from academic ground training and special training programs within authorized mission areas. Specific currencies will be provided to the host squadron and squadron supervisors will determine aircrew qualifications to participate in squadron scenarios for MDT. **(T-3)**

4.4.3. Active Duty aircrew flying with ANG and AFR units:

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

4.4.3.2. Active duty aircrew other than assigned advisors may with ARC units IAW DAFMAN 11-401 as supplemented by ANG and AFRC.

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

4.4.3.4. Headquarters Air Force staff aircrew may participate in tactical training events. Each member will present DD Form 2992, *Medical Recommendation for Flying or Special Operational Duty*, currencies, flight qualifications, any other documentation required for flight as determined by unit Aviation Resource Management (ARM) office to the unit where flying is performed. (T-2)

4.5. Currency, Recurrency, and Requalification.

4.5.1. Currency. **Table 4.1** through **Table 4.3** as supplemented by the most current MAJCOM specific RTM or MAJCOM specific guidance, defines currency requirements for MQ-9 aircrew. If a pilot or sensor loses a particular currency, the individual may not perform that sortie or event except for the purpose of regaining currency as noted. Unless otherwise noted in **Table 4.1** through **Table 4.3**, instructors must actually perform the event to update currency. (T-2)

4.5.2. Noncurrent Versus Unqualified.

4.5.2.1. Noncurrent. An aircrew becomes noncurrent in a particular currency if they exceed the specified timeframe listed in **Table 4.1** through **4.3** (e.g., an INEXP pilot becomes noncurrent for landing after 30 days from last landing). Non-current aircrew must demonstrate proficiency in non-current event(s) to an instructor in the same crew position current and qualified in the event(s). (T-2) Events performed under the supervision of an instructor may be credited toward the applicable currency period.

4.5.2.2. Unqualified. For criteria specified in **paragraph 4.5.3**, an aircrew can become unqualified for LOS L/R landing and MCE currencies per **Tables 4.1, 4.2** and **4.3**. Aircrew can be decertified for SATCOM L/R landing currencies per **Table 4.1, 4.2**, and **4.3**.

4.5.3. Recurrency/Requalification. Aircrew accomplish overdue training requirements as specified by the SQ/CC before they are considered recertified to perform the task. Aircrew overdue on training annotated in **Table 4.1** as affecting CMR/BMC status requires regression to N-CMR/Non-Basic Mission Capable (N-BMC).

4.5.3.1. MCE Recurrency/Requalification. Aircrew require additional training if a currency requirement is not met.

4.5.3.1.1. Loss of Mission Sortie or weapons qualifications in **Table 4.1** equal to or greater than 180 days results in loss of qualification.

4.5.3.1.2. Requalify IAW AFMAN 11-202V1, AFMAN 11-202V2, this publication, and AFMAN 11-2MQ-9V2.

4.5.4. L/R Operations Recurrency/Requalification. Aircrew require additional training if a currency requirement in **Table 4.2** and **4.3** is not met. The following actions are required to regain currency or QUAL. Timing starts from date of loss of currency. (**Note:** aircrew may continue to fly missions not requiring aircraft landing or L/R operations).

4.5.4.1. Loss of currency up to/including 90 days. Regain landing (manual or automatic, as applicable) currency. Supervision level is an instructor in the same crew position current and qualified in the event.

4.5.4.2. Loss of currency 91 to 179 days. Complete the requirements of [paragraph 4.5.4.1](#) above preceded by an instructor supervised simulator including normal, instrument, and EPs.

4.5.4.3. For LOS L/R: Loss of currency equal to or greater than 180 days. Aircrew member is unqualified in LOS L/R. Requalify with the LOS L/R syllabus and flight evaluation IAW AFMAN 11-202V2 and AFMAN 11-2MQ-9V2 at the FTU, or local training/modified syllabus IAW [paragraph 6.6.3](#).

4.5.4.4. For ATLC Certification: Loss of currency equal to or greater than 180 days. Aircrew member is uncertified in automatic operations. Recertify with a local training/modified syllabus IAW [paragraph 6.10](#) and flight certification (if applicable) IAW AFMAN 11-202V2.

4.5.5. Loss of and Regaining of Instructor Status:

4.5.5.1. Failed flight check results in loss of qualification. To regain instructor status, the instructor must successfully complete a QUAL/Mission (MSN) flight evaluation IAW AFMAN 11-202V2 and AFMAN 11-2MQ-9V2. **(T-3)**

4.5.5.2. Failed qualification, instrument, or tactical examination results in loss of qualification. To regain instructor status, the instructor successfully accomplishes the written exam they previously failed. Instructor currency must be regained with an instructor of the same crew position current and qualified in the event. **(T-3)**

4.5.5.3. Instructor Pilots (IPs)/Instructor Sensor Operators (ISOs) become unqualified after loss of instructor currency (Tables [4.1](#) and [4.3](#)) plus 180 days (e.g., an IP who has not instructed for 241 days). Timing begins from loss of instructor currency, and requires the following action:

4.5.5.3.1. Loss of currency up to/including 120 days. Regain instructor currency with an IP/ISO.

4.5.5.3.2. Loss of currency 121 to/including 179 days. Regain IP/ISO currency IAW SQ/CC directed program that may result in a flight evaluation.

4.5.5.3.3. Equal to or greater than 180 days. Accomplish an AF Form 8 requalification evaluation IAW AFMAN 11-202V2 and AFMAN 11-2MQ-9V2.

4.5.5.4. IPs/ISOs instruct events in which they are current and qualified. With SQ/CC approval, IPs/ISOs who become N-CMR/N-BMC may still instruct in events for which they are current and qualified.

Table 4.1. Pilot/Sensor Operator Currencies, MCE (Note: Currencies based on MCE experience level).

EVENT	INEXP	EXP	Affects CMR	To Regain Currency	NOTE
PILOT/SENSOR OPERATOR CURRENCIES, ALL					
Mission Currency	30	45	No	Sortie/ATD	6
Mission Sortie	30	45	Yes	Sortie	4, 5

Air-to-Ground Missile (AGM) Weapons Delivery	45	60	Yes	Event/ATD	1, 4
Guided Bomb Unit (GBU) Weapons Delivery	45	60	Yes	Event/ATD	1, 4
Gaining Handover Procedures	45	60	No	Event/ATD	1
Losing Handover Procedures	45	60	No	Event/ATD	1
Takeoff (Automatic)	45	60	No	Event/ATD	3
Landing (Automatic)	45	60	No	Event/ATD	3
Buddy Lase Procedures	45	60	No	Event/ATD	1
Moving Target Track	45	60	No	Event/ATD	1
Moving Target Attack	45	60	No	Event/ATD	
Instructor Event (AFSOC: N/A)	N/A	60	No	Event/ATD	1, 2
Notes: 1. Instructors may log this event for currency when they instruct it. 2. WIC student will log this event when executing syllabus directed sorties. 3. Applicable for SATCOM L/R certified crews only. 4. Member goes Non-CMR/unqualified after non-current IAW paragraph 4.5 . 5. SQ/CC may authorize ATD (Sim Mission Sortie) for currency, but a minimum of one live sortie (Mission Sortie) per 60 (INEXP)/90 (EXP) days is required (AFSOC follows MAJCOM RTM Guidance). (Exception: Aircrew on DOWN/DNIF status may maintain currency in the ATD IAW DAFMAN 11-401 and AFMAN11-402, <i>Aviation and Parachute Service</i> .) 6. See Mission Currency definition in Attachment 1.					

Table 4.2. Pilot Currencies, LOS L/R (Note: Currencies based on LOS L/R experience level).

EVENT	INEXP	EXP	Affects CMR	To Regain Currency	NOTE
PILOT CURRENCIES, LOS L/R Only					
Manual Landing	30	45	Yes	Event	2, 4, 5
Manual Takeoff	30	45	No	Event	5
Automatic Landing	30	45	No	Event/ATD	6
Automatic Takeoff	30	45	No	Event/ATD	6
Simulated Flame-out (SFO)	30	45	No	Event/ATD	2
GLS-aided Visual Approach	30	45	No	Event	5
Nose Camera Landing	45	60	No	Event	3, 5
Multispectral Targeting System (MTS) Landing	45	60	No	Event	3, 5

Notes:

1. Deleted
2. If non-current in this event, crewmember may not perform any L/R events unless supervised.
3. Fulfills requirement for Manual Landing Currency.
4. Member goes Non-CMR/unqualified after non-current IAW **paragraph 4.5**.
5. Aircrew on DOWN/DNIF status may maintain currency in the ATD IAW DAFMAN 11-401 and AFMAN 11-402.
6. Applicable only to LOS L/R crews certified to perform automatic L/R events.

Table 4.3. Sensor Operator Currencies, LOS L/R (Note: Currencies based on LOS L/R experience level).

EVENT	INEXP	EXP	Affects CMR	To Regain Currency	NOTE
SENSOR OPERATOR CURRENCIES, LOS L/R Only					
Manual Landing	30	45	Yes	Event	2, 3
Manual Takeoff	30	45	No	Event	3
Automatic Takeoff	30	45	No	Event/ATD	4
Automatic Landing	30	45	No	Event/ATD	4
Simulated Flame-out (SFO)	30	45	No	Event/ATD	2
Notes: <ol style="list-style-type: none"> 1. Deleted 2. If non-current in this event, crewmember may not perform any L/R events unless supervised. 3. Aircrew on DOWN/DNIF status may maintain currency in the ATD IAW DAFMAN 11-401 and AFMAN 11-402. 4. Applicable only to LOS L/R crews certified to perform automatic L/R events. 					

4.6. Regression.

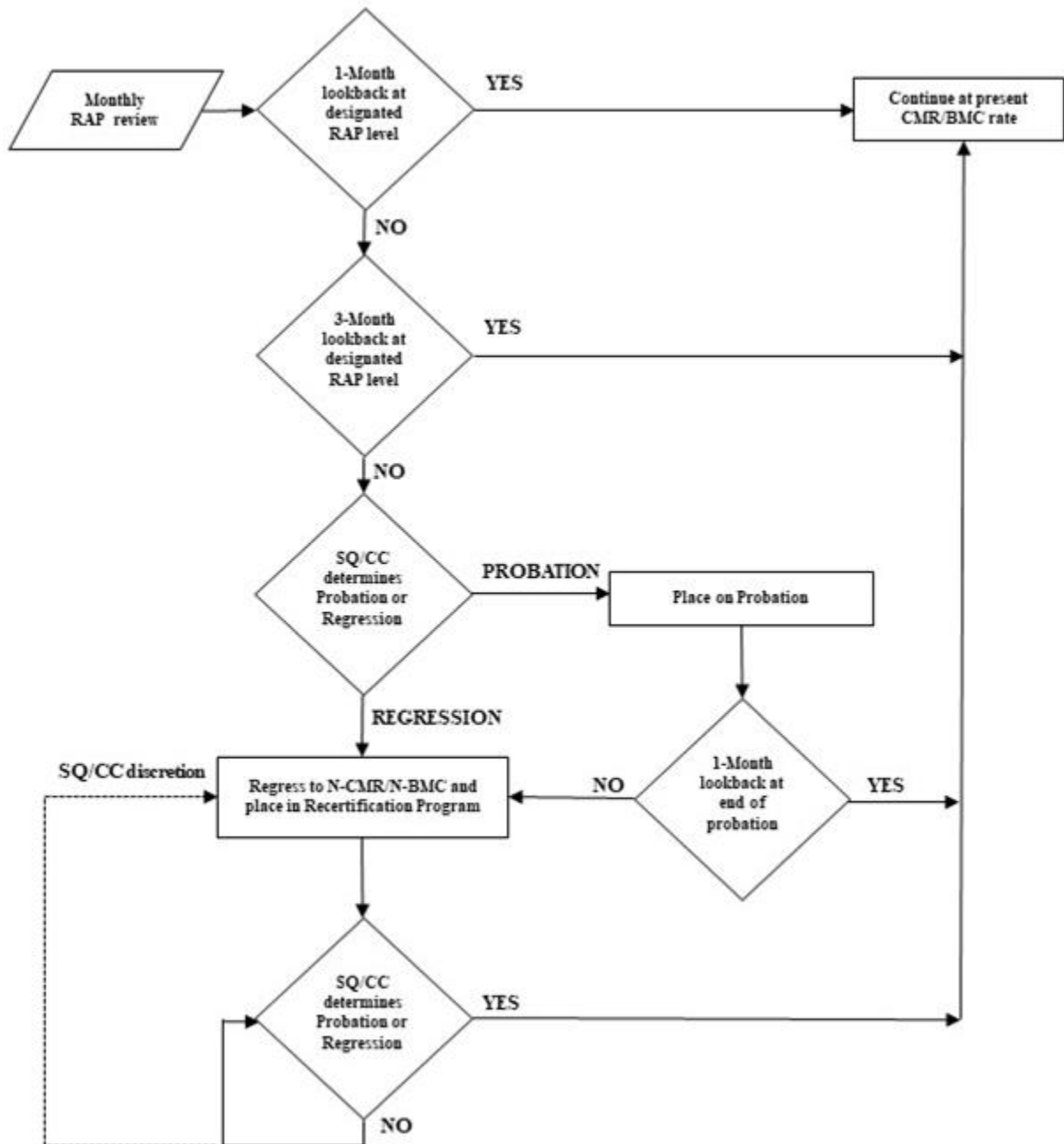
4.6.1. CMR and BMC Regression for Failure to Meet Lookback (AFSOC: N/A). Reference the RTM for live fly and simulator lookback requirements and reference [Figure 4.1](#) for necessary decisions/actions to maintain/regain CMR/BMC status. If aircrew do not meet lookback requirements throughout the training cycle, SQ/CCs may regress them to N-CMR or N-BMC status (as applicable), or initiate action to remove them from active flying status.

4.6.2. Regression for Failed Evaluations. In addition to the requirements of AFMAN 11-202V2 and applicable MDS Volume 2, aircrew who fail a periodic evaluation will regress to N-CMR/N-BMC as applicable. **(T-2)** Aircrew will remain N-CMR/N-BMC until accomplishing AFMAN 11-202V2 requalification requirements and are re-certified by the SQ/CC. **(T-2)**

4.6.3. Failure to Maintain Flying Standards. If a qualified aircrew member demonstrates lack of proficiency or knowledge during CT (not related to a flight evaluation) the SQ/CC may elect to regress the individual to N-CMR or N-BMC as applicable. These aircrew will remain N-

CMR or N-BMC until successfully completing corrective action as determined by the SQ/CC, an evaluation (if required), and are re-certified by the SQ/CC. (T-2)

Figure 4.1. Regression Flow Chart.



4.7. End-of-Cycle Proration. At the end of the training cycle, SQ/CCs may prorate training requirements when any of the following events preclude training for a portion of the training period: DOWN/DNIF, emergency leave, permanent change of station (PCS) availability, and non-

flying TDY/exercises (ANG/AFR: mandatory training required by civilian employment). Loss of training due to ordinary annual leave will not result in proration. SQ/CCs may consider proration due to extended poor weather or other environmental factors that preclude the unit from flying for more than one half of the monthly scheduled flying days (ANG/AFR: End-of-cycle proration is permitted for documented attrition, such as HHQ or weather cancels, maintenance non-deliveries, ground or air aborts, in monthly increments when the total number of occurrences ranges from one half to one times the aircrew's normal monthly rate of flying).

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

4.7.2. Proration is based on cumulative days of non-availability for flying (to include post-deployment compensation time) during the training cycle. Use the most current RTM or MAJCOM-specific guidance to determine the number of months to be prorated based on cumulative calendar days of non-availability.

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

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

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

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

4.8. Example of the Lookback, Regression, Proration, and Requalification Process. Captain Smith is an EXP CMR aircrew member with a 1- and 3-month lookback requirement of 4 and 10 RAP sorties respectively. On 3 February, Captain Smith flew a 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?

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

4.8.2. 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.

4.8.3. 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 four RAP sorties to recapture a 1-month lookback and be removed from probation.

4.8.4. At the end of the training cycle on 30 June, the SQ/CC prorated 2 months of Captain Smith's total requirements. Despite the 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.

4.9. Contested, Degraded, Operationally Limited (CDO). CDO scenario development will be included in daily training (aircraft, academics and Full Mission Trainer [FMT]), and also be incorporated into MSN evaluations and EP evaluations. **(T-3)** Daily CT flights and simulator missions should discuss the following CDO areas in relationship to the mission's profile:

4.9.1. Contested: Electromagnetic spectrum degradation caused by enemy action (jamming).

4.9.2. Degraded: Electromagnetic spectrum and battlespace degradation caused by failed systems (global positioning system [GPS] degradation/denial, datalink, simple failure).

4.9.3. Operationally limited: Reduced mission effectiveness caused by the physical or operational environment (system, force structure, ROE/special instructions [SPINS], etc.).

4.10. Integrated Air Defense System (IADS). MQ-9 units' training programs and syllabi will include tactical scenarios that includes exposure to IADS commensurate with the unit's DOC-tasked missions. **(T-3)**

4.10.1. Exposure should include opportunities sufficient to practice integrated planning techniques per AFTTP 3-3.IPE., *Integrated Planning and Employment Considerations*.

4.10.2. Exposure should provide crews the opportunity to gain familiarity to MQ-9 integration in force packaging for IADS detection, avoidance, penetration, and destruction.

Chapter 5

WEAPONS EMPLOYMENT QUALIFICATION

5.1. General. Weapons qualification and familiarization requirements are specified in the RTM or MAJCOM-specific guidance. Weapons delivery and employment parameters are covered in AFTTP 3-1/3-3.MQ-9. See [Attachment 2](#) for additional guidance.

5.2. Initial Weapons Qualification. Aircrew members must accomplish initial weapons qualification in any weapons event requiring qualification at CMR or BMC. **(T-2)** Initial qualification per AFMAN 11-2MQ-9V2 achieved in IQT/MQT satisfies requirements for qualification.

5.3. 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 for CMR(MR) failure to qualify will result in regression to N-CMR(N-MR) and entry into a re-certification program until re-qualification is accomplished, unless waived by the OG/CC. **(T-2)**

5.4. CT/Maintaining Weapons Qualification. The following criteria apply as the minimum standard to maintain weapons qualifications. Qualifications are valid throughout the following training period.

5.4.1. Familiarization (FAM). Weapons events tasked at FAM may be basic or tactical deliveries. Each single pass counts as one delivery. FAM ensures basic familiarity of applicable weapons. Unless otherwise specified in the RTM, MAJCOM specific guidance, or formal course syllabi, FAM tasking requires six weapons deliveries annually. FAM for weapons does not require a hit rate when compared to total employment attempts.

5.4.2. QUAL. Weapons tasked at QUAL must be a tactical, scenario driven delivery. QUAL tasking ensures aircrew's proficiency to put appropriate ordnance on target in a tactical environment. Reference the current RTM, MAJCOM specific guidance, or formal course syllabi for minimum QUAL requirements.

5.5. 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 [Attachment 2](#) and AFI 11-214, *Air Operations Rules and Procedures*.

5.5.1. AGM-114 Hellfire. A delivery initiated from a maneuver to achieve and maintain line-of-sight to the target(s). Acquisition, track, laser designation, and launch, followed by egress IAW AFTTP 3-3.MQ-9, *Combat Aircraft Fundamentals MQ-9*, is required. Hit criteria: IAW AFTTP 3-1.*Shot/Kill Criteria*. May be accomplished in a simulator.

5.5.2. Laser Guided Bomb (LGB). An event in which a combat/training laser is employed to self-lase simulated/actual ordnance during an LGB delivery. Post-release actions IAW AFTTP 3-3.MQ-9. Simulated or actual delivery of ordnance is required. Hit criteria: IAW AFTTP 3-1.*Shot/Kill Criteria*. May be accomplished in a simulator.

5.5.3. Inertially Aided Munition (IAM). An event in which an aircraft system is used to determine release parameters for INS/GPS aided/guided munitions (e.g., Joint Direct Attack Munition [JDAM]). Simulated or actual delivery of ordnance is required. Post-release actions IAW AFTTP 3-3.MQ-9. Hit criteria IAW AFTTP 3-1.*Shot/Kill Criteria*. May be accomplished in a simulator.

5.6. Full Scale Weapons Delivery (FSWD). FSWD (live and inert) is not required for qualification, but may be required as an annual training requirement. Reference the current RTM for minimum FSWD annual training requirements.

Chapter 6

SPECIALIZED TRAINING

6.1. General. This chapter establishes the minimum eligibility criteria and the training requirements for upgrade and specialized training. These capabilities and qualifications are in addition to primary missions for the unit and may not apply to every crewmember assigned or attached to the unit.

6.2. Instructor Upgrade. Instructor upgrade is an OG/CC approved, unit-developed, training program that culminates in instructor qualification.

6.2.1. Instructor candidates are nominated from the most qualified aircrew members, considering judgment, personal qualities, technical knowledge, and skill. Candidates must be EXP IAW [paragraph 1.4](#) and mission ready in their unit's mission. **(T-3)** SQ/CCs review and select/approve each instructor candidate.

6.2.1.1. Judgment. The candidate possesses the judgment necessary to meet unexpected or induced emergencies and the ability to exercise sound judgment through mature realization of their own, their student's, and the aircraft's limitations.

6.2.1.2. Personal Qualities. The candidate has the patience, tact, understanding, and the knowledge and ability to instruct others.

6.2.1.3. Technical Knowledge. The candidate is thoroughly familiar with respective aircraft systems and equipment, normal and emergency operating procedures and the prohibited maneuvers and aircraft performance under all conditions of flight. Additionally, all instructors and examiners candidates are thoroughly familiar with the applicable portions of DAFMAN 11-401; AFMANs 11-202V1, 2, and 3; AFMAN 11-2MQ-9, Volume 3, *MQ-9—Operations Procedures*; this manual; and AFTTP3-1.MQ-9 and AFTTP3-3.MQ-9. **(T-3)**

6.2.1.4. Flying Experience. Candidates possess a reasonable background of flying experience to have developed desired standard of knowledge, judgment, and proficiency. Normally, these qualities progress together. However, flying hours alone cannot be accepted as criteria for any one or all qualities. **(T-3)**

6.2.1.5. Tactical Experience. The instructor is familiar with how their aircraft can be employed in threat areas, and are familiar with AFTTP applicable volumes.

6.2.2. MCE Instructor Pilot Upgrade (IPUG) and Instructor Sensor Operator Upgrade (ISUG) Ground Training. This paragraph, along with [paragraphs 6.2.4](#) and [paragraph 6.2.5](#), outlines the minimum requirements for unit MCE IPUG and ISUG. **(T-3)**

6.2.2.1. Principles of Instruction/Instructor Theory. Learning objectives, instructor responsibilities, instructor-student relationship, training facilities, publications, and MDS specific training considerations.

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

6.2.2.3. Conduct of Flight Briefing. Instructor provides an example of an instructional flight briefing. IPUG/ISUG trainee learns different techniques to deliver an instructional flight briefing (use of briefing guides and audiovisual aids, briefing, questioning techniques, and use of recorded media during flight execution for review during debrief).

6.2.2.4. IPUG/ISUG-Led Instructor Flight Briefing. IPUG/ISUG trainee conducts a mission brief providing “how to” instruction using techniques learned from [paragraph 6.2.3.3](#) IPUG/ISUG trainee accomplishes pre-mission planning, determine level of assistance the “student” needs, determine mission requirements, and brief mission execution from beginning to end.

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

6.2.2.6. Debriefing Fundamentals. Instructor reviews mission planning, execution, and debriefing to include administration, reconstruction, review of recorded media, and lessons learned. IPUG/ISUG trainee learns how to identify root causes and provide instructional fixes to correct errors where improper procedures are used.

6.2.2.7. IPUG/ISUG Led Academic Lesson Instruction. IPUG/ISUG trainee delivers a mission instructional briefing to cover specific systems or mission academics.

6.2.2.8. Instructor CRM. See AFMAN 11-290 *Cockpit/Crew Resource Management and Threat & Error Management Program* and MAJCOM supplements for Instructor CRM training requirements prior to assuming duties as an instructor. This lesson covers leading a crew as an instructor. Instructor CRM training may be accomplished prior to entering instructor upgrade training. All instructors will annotate “CRM/TEM Program Instructor” in their training records IAW AFMAN 11-290.

6.2.2.9. Student Evaluations. Review AFMAN 11-202V2 and AFMAN 11-2MQ-9V2 standards to provide a frame of reference for new instructors on what boundaries exist for training and the standards students should be held to for success.

6.2.3. Instructor Upgrade Device Training. IPUG/ISUG trainees should receive the following simulator/training device (ATD) training functions:

6.2.3.1. Operation and Procedures. The IPUG/ISUG trainee learns training device power up and power down procedures and instructor operator station (IOS) power up and power down procedures. The upgrade student operates the IOS. The upgrade student loads and runs a tactical scenario and make injects to the scenario.

6.2.3.2. Tactical Mission Instruction. Trainee performs instructor duties and other tasks as required for a simulator training mission.

6.2.3.3. Emergency Procedures Instruction. The IPUG/ISUG trainee conducts instruction on EPs with emphasis on recognition and correction of the EP. IPUG/ISUG candidates are able to teach students to recognize the correct emergency situation and take proper corrective action.

6.2.4. MCE Instructor Upgrade Flight Training. Specific training events do not have to be accomplished on specified sorties. However, all events must be accomplished within the construct of the upgrade program. **(T-3)** Ku link (SATCOM band) and Handover (gaining/losing) procedures may be instructed on any sortie. Inability to complete specific training events need not delay certification. In such cases, SQ/CC will certify instructors with appropriate limitations to preclude performance of duties in which training is incomplete **(T-2)** Unit programs should specify which tasks the upgrade candidate will practice demonstrating, which tasks they will practice evaluating another's performance, and which tasks they will do both.

6.2.4.1. Basic Instruction Sortie. Practice instructing basic flight procedures.

6.2.4.1.1. Specific Tasks:

6.2.4.1.1.1. In-flight instruction:

6.2.4.1.1.1.1. CRM and crew coordination

6.2.4.1.1.1.2. In-flight checks, checklist procedures

6.2.4.1.1.2. Mission briefing and debriefing:

6.2.4.1.1.2.1. Operational mission

6.2.4.1.1.2.2. Emergency mission management

6.2.4.1.1.2.3. Weather checks.

6.2.4.1.2. IPUG trainees practice instructing aircraft handling and navigation procedures, automatic takeoff and landing (if applicable), and SATCOM taxi (if applicable).

6.2.4.1.3. ISUG trainees practice instructing MTS employment, automatic takeoff and landing (if applicable), and SATCOM taxi (if applicable).

6.2.4.2. ISR Sortie. Practice instructing an ISR mission in support of tactical objectives. Specific tasks: mission planning, briefing, in-flight instruction, CRM and crew coordination, in-flight checks and checklist procedures, sensor (e.g., Electro Optical and Infrared, Synthetic Aperture Radar, Signals Intelligence capabilities and limitations, target acquisition procedures, sensor cross-cueing, time management [mission and target prosecution], threat avoidance, navigation procedures, operational and emergency mission planning, airspace management and debriefing).

6.2.4.3. Mission Instructor Sorties. On at least two sorties the IPUG/ISUG trainee will perform instructor duties and other tasks as required for real-world mission accomplishment. **(T-2)** Specific tasks: In-flight instruction; CRM and crew coordination; in-flight checks and checklist procedures (including automatic takeoff/landing if applicable); Fuel, Emitters, Navigation, Communication, and Engage (FENCE) checks: CDO: weapons employment: airspace management: mission briefing and debriefing: threat avoidance; and navigation procedures. Training should include a representative sample of unit DOC-tasked missions.

6.2.4.4. Flight Evaluation. Complete an instructor flight evaluation IAW AFMAN 11-202V2, AFMAN 11-2MQ-9V2, MAJCOM, and unit requirements.

6.2.5. LOS L/R Instructor Upgrade. LOS L/R instructor candidates will meet all of the above requirements and be experienced in LOS L/R operations. **(T-3)** LOS L/R instructor candidates should review LOS L/R-related Flight Crew Information Files, LOS L/R operational guidance, local operating procedures, traffic pattern operations, airfield procedures, and frequency coordination. In addition, LOS L/R instructor candidates should receive training from a current and qualified LOS L/R instructor of the same crew position in at least:

6.2.5.1. One simulator sortie covering common errors experienced in the LOS L/R environment, EPs during LOS L/R operations (e.g., Simulated Flame Outs (SFO), aborts), and instructor intervention techniques.

6.2.5.2. One flight in which the candidate demonstrates the ability to provide instructor demonstrations of LOS L/R procedures. Specific Tasks: aircraft launch and recovery procedures, patterns and landings, approaches (instrument and visual), SFOs, and boresight procedures.

6.2.5.3. One flight in which the candidate demonstrates the ability to instruct an LOS L/R recurrency event.

6.2.6. FTU Instructors. Aircrew designated for FTU instructor duties should already be an MCE or LOS L/R instructor in the MQ-9 for the gaining FTU. They should complete the applicable MQ-9 FIUT syllabus for the FTU.

6.3. Flight Examiner (FE) Upgrade. FE upgrades and certification are accomplished IAW AFMAN 11-202V2, AFMAN 11-2MQ-9V2, and applicable MAJCOM supplements.

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

6.4.1. 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.

6.4.2. Contingency Operations. For contingency operations, units are responsible for contacting appropriate gaining command or organizations to determine expected mission tasking. Prior coordination ensures unit preparation for the appropriate tasking and allows the responding OG/CC to tailor spin-up training for the theater, threat, and tactics for the assigned task. The SQ/CC is responsible for implementing spin-up training, prosecuting the required missions, and determining the specific requirements necessary to reach the desired level of proficiency. Unit training emphasizes preparation for missions not accomplished in daily operations. Conduct spin-up training IAW all applicable instructions. Deploying aircrew complete applicable Chemical, Biological, Radiological, Nuclear, and high-yield Explosives (CBRNE) defense training courses, and other required pre-deployment requirements IAW applicable directives. OG/CCs are responsible for ensuring all participating aircrew are ready to execute contingency operations and are proficient to conduct all missions in support of expected tasking.

6.4.3. Attached and Supporting Aircrew. Aircrew not assigned to the supported SQ receive spin-up training as determined by the supported SQ/CC. This requirement applies to all

attached aircrew (e.g., OG, WG, HHQ staffs) and all aircrew supporting from any other SQ. The objective of this spin-up training is to ensure attached and supporting aircrew are proficient to conduct all expected missions. The supported SQ/CC determines the amount of spin-up training required for each attached and supporting aircrew based on the individual's level of proficiency, currency, qualification, experience, and any other requirements. The supported and supporting SQ/CCs (or equivalent) will jointly agree on the administration, documentation, and evaluation of required spin-up training. **(T-3)**

6.4.4. Ground Training. Aircrew are required to complete academic training prior to contingency operations or exercises. **(T-3)** Units will brief contingency (or exercise) SPINS, ROE, and Command and Control (C2) procedures. **(T-3)** Programs should emphasize deployment airfield capabilities, limitations, approach procedures, and hazards. In addition, air defenses, area terrain, weather, unique operating procedures, threat assessments, training materials, and expected collection tasking should be addressed.

6.4.5. Flying Training. Spin-up training should be tailored to ensure all supporting aircrew are proficient, current, and qualified in expected mission tasking.

6.5. Difference Training.

6.5.1. Difference training for initial cadre is usually conducted under the supervision of the engineering specialists (usually coordinated through program office officials) responsible for improving the aircraft systems (e.g., new engines, baseline upgrades, major software changes). These personnel will provide training for an initial cadre whenever possible. In some instances, it will be necessary for units to form an initial cadre of personnel for whom certain training requirements will be waived. Instructors completing difference training will provide upgrade training to other unit aircrew. Air Force Life Cycle Management Center/WII, Detachment 3 (AFLCMC/WII Det 3) will be considered the primary unit for difference training when new systems come online which represent major changes from current configurations; the 53d Test and Evaluation Group (53 TEG)/556th Test and Evaluation Squadron (556 TES) is the alternate unit. **(T-2)**

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

6.5.2.1. Form a nucleus of instructor and FE personnel (initial cadre) to begin aircrew upgrades. Initial cadre will not be designated in a crew position higher than currently held unless previously qualified. The host unit providing training will document all difference training and maintain the training folder until successful completion of the upgrade program. Initial cadre aircrew are responsible for completing recommended training on any equipment, systems, or crew procedures which differ from that in the MDS they are currently qualified. **(T-2)**

6.5.2.2. The OG/CC (or equivalent) should 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. The OG/CC may require aircrew to complete a written examination prior to unsupervised flight when EPs have changed even if an AF Form 8 flight evaluation is not required. Units should forward a copy of proposed training qualification plan to MAJCOM/A3 when training requires a flight evaluation.

6.5.3. Difference training not requiring an evaluation must be annotated in the individual's training records and tracked in the unit LoX. (T-2)

6.6. Line of Sight Launch and Recovery Element (LOS L/R) Training. The goal of this training is to produce aircrew proficient in manual MQ-9 launch, takeoff, pattern, handoff, transition, landing, and recovery operations. The primary method of course completion is at an FTU. Secondary method of training is in-unit (if primary method unavailable) using formal school courseware and syllabi. Completion of LOS L/R QUAL training will conclude with an AF Form 8 flight evaluation IAW AFMAN 11-202V2 and applicable AFMAN 11-2MQ-9V2. (T-2)

6.6.1. Upgrade to LOS L/R operations is at the discretion of the SQ/CC based on standard squadron operations, taskings, and manning. Crews performing LOS L/R operations will be qualified IAW AFMAN 11-2MQ-9V2. (T-2)

6.6.2. For individuals never qualified in MQ-9 LOS L/R operations, upgrade training will meet the syllabus course prerequisites and follow the course flow in the MQ-9 Pilot and Sensor Operator LRQT course syllabus. (T-2)

6.6.3. The OG/CC may approve local LOS L/R requalification training to aircrew previously qualified in LOS L/R operations within the last three years. Timing starts from the date of the loss of LOS L/R QUAL. An abbreviated SQ/CC-approved course may be administered. Units should forward copy of unit re-qualification program to gaining MAJCOM Aircrew Training function (ACC/A3M, AFSOC/A3T, NGB/A3/100, AFRC/A3D).

6.6.3.1. SQ/CCs should base unit-level LOS L/R training programs on the applicable MQ-9 LRQT course.

6.6.3.2. Mishap videos should be used to the maximum extent possible when reviewing MQ-9 landing mishaps.

6.7. Flight Lead Upgrade (FLUG).

6.7.1. FLUG is an OG/CC approved, unit-developed, training program that culminates in flight lead (FL) certification. SQ/CCs select only the most qualified aircrew members as FLs considering judgment, personal qualities, technical knowledge, skill, and experience. SQ/CCs will personally review each FL candidate's qualifications. (T-2)

6.7.2. SQ/CCs ensure the following guidelines are met:

6.7.2.1. All FLUG training will be under the direct supervision of an IP/ISO. (T-3)

6.7.2.2. A dedicated FL certification mission will be flown with the SQ/CC or a designated representative. (T-3)

6.7.3. FLUG Missions and Events. Units tailor FLUG missions and events to unit DOC statement.

6.7.4. The SQ/CC may combine FLUG and Mission Commander (MC) Upgrade for candidates deemed appropriate.

6.8. Mission Commander (MC) Upgrade (MCUG).

6.8.1. MC Prerequisites. MCUG is an OG/CC approved, unit-developed, training program that culminates in MC certification. SQ/CCs select pilots certified as a FLs for MC upgrade based on proficiency and experience.

6.8.2. MC Responsibilities.

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

6.8.2.2. MCs may delegate authority and responsibility for a portion of the mission to a package commander/deputy MC.

6.8.3. MC Ground Training. Units develop local training in the following areas:

6.8.3.1. Review AFTTP 3-1 volumes for specific MC checklists and considerations.

6.8.3.2. Mission Planning Considerations. Airspace requirements/restrictions, air traffic control restrictions/considerations/flight plans, air refueling operations, inter-unit coordination, Air to Air (A/A) and Air to Ground (A/G) force integration, IADS penetration/avoidance, on-range controlling agencies coordination, and C2 coordination.

6.8.4. MC ATD (Air Training Device) Training. Units should incorporate, as available, one ATD profile prior to MC certification.

6.8.5. MC Flight Training. The upgrading MC observes a certified MC during the planning, briefing, flight, and debriefing of at least one composite force mission prior to certification. The upgrading MC then plans, briefs, flies, and debriefs a minimum of one mission under the supervision of an MC-certified IP. Unit tasking should drive force composition and adversaries. **(T-2)**

6.9. Test Qualification. The 556th Test and Evaluation Squadron Commander (556 TES/CC) ensures newly assigned and attached aircrew members complete a unit derived program to certify aircrew members as test qualified.

6.10. Automatic Takeoff and Landing Capability ATLC Training.

6.10.1. ATLC Training is an OG/CC approved, unit-developed, training program that culminates in ATLC certification. Units will develop an ATLC training program to certify ATLC (either SATCOM or LOS L/R) crews. **(T-2)** The training program will mirror unit developed MQT program, and may be executed concurrently with MQT crews or stand-alone for current CMR/BMC crews. **(T-2)**

6.10.2. Unit ATLC training program will (at a minimum):

6.10.2.1. Train to ACC approved Training Task List (TTLs) for ATLC related items pertaining to IQT. **(T-3)**

6.10.2.2. Training items recommended by 556 TES Operational Test Bulletin. **(T-3)**

6.10.2.3. Local considerations. **(T-3)**

JAMES C. SLIFE, Lt Gen, USAF
Deputy Chief of Staff, Operations

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

AFI 11-214, *Air Operations Rules and Procedures*, 8 July 2020

AFI 11-418, *Operations Supervision*, 22 December 2021

AFI 14-404, *Intelligence Oversight*, 3 September 2019

AFI 31-117, *Arming and Use of Force by Air Force Personnel*, 6 August 2020

AFI 33-322, *Records Management and Information Governance Program*, 23 March 2020

AFI 36-2654, *Combat Arms Program*, 16 April 2020

AFI 48-139, *Laser and Optical Radiation Protection Program*, 30 September 2014

AFI 51-401, *The Law of War*, 3 August 2018

AFI 91-202, *The US Air Force Mishap Prevention Program*, 12 March 2020

AFMAN 11-2MQ-9, Volume 2, *MQ-9 Aircrew Evaluation Criteria*, 12 January 2023

AFMAN 11-2MQ-9, Volume 3, *MQ-9 Operations Procedures*, 12 January 2023

AFMAN 11-202, Volume 1, *Aircrew Training*, 27 September 2019

AFMAN 11-202, Volume 2, *Aircrew Standardization/Evaluation Program*, 30 August 2021

AFMAN 11-202, Volume 3, *Flight Operations*, 10 January 2022

AFMAN 11-210, *Instrument Refresher Program (IRP)*, 21 December 2021

AFMAN 11-290, *Cockpit/Crew Resource Management and Threat & Error Management Program*, 25 October 2021

AFMAN 11-402, *Aviation and Parachute Service*, 24 January 2019

AFMAN 11-403, *Aerospace Physiological Training*, 13 August 2020

AFMAN 36-2100, *Military Utilization and Classification*, 7 April 2021

AFPD 11-2, *Aircrew Operations*, 31 January 2019

AFPD 11-4, *Aviation Service*, 12 April 2019

AFTTP 3-3.IPE, *Integrated Planning and Employment Considerations*, 4 Feb 2022

AFTTP 3-1.IPE, *Tactical Employment IPE*, 4 Feb 2022

AFTTP 3-1.*Shot/Kill Criteria*, 9 April 2021

AFTTP 3-1.Threat Guide, *Threat Reference Guide*

AFTTP 3-1.MQ-9, *Tactical Employment MQ-9 (S)*, 9 April 2021

AFTTP 3-3.MQ-9, *Combat Fundamentals MQ-9*, 9 April 2021

DAFMAN 11-401, *Aviation Management*, 27 October 2020

Adopted Forms

AF Form 8, *Certificate of Aircrew Qualification*

DAF Form 679, *Department of the Air Force Publication Compliance Item Waiver Request/Approval*

DAF Form 847, *Recommendation for Change of Publication*

DD Form 2992, *Medical Recommendation for Flying or Special Operational Duty*

Abbreviations and Acronyms

A3—Director of Operations

A/A—Air-to-Air

A/G—Air to Ground

ACC—Air Combat Command

ADO—Assistant Operations Officer

AF—Air Force

AFI—Air Force Instruction

AFLCMC—Air Force Life Cycle Management Center

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFR—Air Force Reserves

AFRC—Air Force Reserve Command

AFSOC—Air Force Special Operations Command

AFTTP—Air Force Tactics, Techniques and Procedures

AGM—Air-to-Ground Missile

AHC—Aircraft Handling Characteristics

ANG—Air National Guard

AOMSW—Air Operations In Maritime Surface Warfare

API—Aircrew Position Indicator

ARC—Air Reserve Component

ARM—Aviation Resource Management

ARMS—Aviation Resource Management System

ATD—Aircrew Training Device

ATLC—Automatic Takeoff and Landing Capability

BAQ—Basic Aircraft Qualification

BMC—Basic Mission Capable
C2—Command and Control
CAF—Combat Air Forces
CAP—Critical Action Procedure
CAS—Close Air Support
CBRNE—Chemical, Biological, Radiological, Nuclear, and High-Yield Explosive
CB—Coded—Designated Test Aircraft
CDO—Contested, Degraded, Operationally Limited
CMR—Combat Mission Ready
CRM—Crew Resource Management
CSAR—Combat Search and Rescue
CT—Continuation Training
CTS—Course Training Standards
DNIF—Duty Not Involving Flying
DOC—Designed Operational Capability
DRU—Direct Reporting Unit
DTV—Day TV
EP—Emergency Procedure
EPE—Emergency Procedures Evaluation
EOC—End of Cycle
ETCA—Education and Training Course Announcements
EXP—Experienced
EXPLAN—Exercise Plan
FAC—Forward Air Controller
FAM—Familiarization
FE—Flight Examiner
FENCE—Fuel, Emitters, Navigation, Communication, and Engage
FHP—Flying Hour Program
FIUT—Formal Training Unit Instructor Upgrade Training
FL—Flight Lead
FLUG—Flight Lead Upgrade
FMT—Full Mission Trainer

FOA—Field Operating Agency
FTU—Formal Training Unit
GBU—Guided Bomb Unit
GLS—GPS Landing System
GPS—Global Positioning System
HHQ—Higher Headquarters
HQ—Headquarters
HUD—Head Up Display
IADS—Integrated Air Defense System
IAW—In Accordance With
ID—Identification
INEXP—Inexperienced
INFLTREP—In Flight Report
INSTM—Instrument
IP—Instructor Pilot
IPUG—Instructor Pilot Upgrade
ISUG—Instructor Sensor Operator Upgrade
IQT—Initial Qualification Training
IRC—Instrument Refresher Course
IRP—Instrument Refresher Program
ISO—Instructor Sensor Operator
ISR—Intelligence, Surveillance, Reconnaissance
JTAC—Joint Terminal Attack Controller
L/R—Launch and Recovery (both manual and automatic)
LOS—Line of Sight
LOS L/R—Line of Sight Launch and Recovery
LoX—Letter of X's
LRE—Launch and Recovery Element
LRQT—Launch and Recovery Qualification Training
MAJCOM—Major Command
MAJCOM/A3s—MAJCOM Directorates of Air and Space Operations
MC—Mission Commander

MCUG—Mission Commander Upgrade
MCE—Mission Control Element
MDS—Mission Design Series
MDT—Mission Directed Training
MQT—Mission Qualification Training
MR—Mission Ready
MSA—Minimum Sector Altitude
MSN or Msn—Mission
MTS—Multispectral Targeting System
N/A—Not Applicable
N-BMC—Non-Basic Mission Capable
N-CMR—Non-Combat Mission Ready
NGB—National Guard Bureau
NLT—Not Later Than
OG—Operations Group
OG/CC—Operations Group Commander
OPR—Office of Primary Responsibility
OSC—On-scene Commander
OT—Operational Test
PAI—Primary Assigned Inventory
PCS—Permanent Change of Station
PIC—Pilot In Command
PPS—Pattern Proficiency Sortie
PSO—Pilot/Sensor Operator
QUAL—Qualification
RAP—Ready Aircrew Program
ROE—Rules of Engagement
RPA—Remotely Piloted Aircraft
RPL—Required Proficiency Level
RQ—Requalification or Requalified
RSTA—Reconnaissance, Surveillance and Target Acquisition
RTM—RAP Tasking Memorandum

SAR GMTI—Synthetic Aperture RADAR Ground Moving Target Indicator

SATCOM L/R—Satellite Communications Launch and Recovery

SCAR—Strike Coordination and Reconnaissance

SEPT—Situational Emergency Procedure Training

SFO—Simulated Flameout

SLQT—Senior Leader Familiarization Training

SLQT—Senior Leader Qualification Training

SO—Sensor Operator

SPINS—Special Instructions

SQ—Squadron

SQ/CC—Squadron Commander

SQ/DO—Squadron Operations Officer

TDY—Temporary Duty

TEG—Test and Evaluation Group

TES—Test and Evaluation Squadron

TF—Training Coded Units

TTP—Tactics, Techniques, and Procedures

TX—Transition and Requalification

UMD—Unit Manning Document

USAF—United States Air Force

USAFWS—USAF Weapons School

WIC—Weapons Instructor Course

WG—Wing

WG/CC—Wing Commander

Office Symbols

556th TES/CC—556th Test and Evaluation Squadron Commander

ACC/A3—Air Combat Command Directorate of Air and Space Operations

ACC/A3M—Air Combat Command Persistent Attack and Reconnaissance Division

ACC/A3MQ—Air Combat Command MQ-9 Operations Branch

ACC/CG—Air Combat Command Air National Guard Advisor to the Commander

ACC/TRSS—Air Combat Command Training Support Squadron

AF/A3TF—Air Force Total Force Aircrew Management Directorate

AFLCMC/WII Det 3—Air Force Life Cycle Management Center/WII, Detachment 3

AFRC/A3D—Air Force Reserve Command Operations Division

AFSOC/A3T—Air Force Special Operations Command Operations Training Division

NGB/A3/10—National Guard Bureau Intelligence, Surveillance, Reconnaissance Operations

NGB/A3/10CI—National Guard Bureau C2ISR Division

NGB/A3/10O—National Guard Bureau Combat Air Forces Division

Terms

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

Aircrew—For the purpose of this manual, aircrew is defined as any current and qualified, rated officer performing MQ-9 Pilot duties and a current and qualified, Remotely Piloted Aircraft Sensor Operator performing Sensor Operator duties. In the event of instruction or evaluation, aircrew may consist of one or more additive members; with an instructor over the shoulder getting a crew member recurrent, the member in the seat may be noncurrent in one or more events.

Aircrew Training Device (ATD)—A training device used to prepare aircrew members for the actual performance of flight duties. The official categories for ATDs are Flight Simulators, Flight Training Devices, Aircraft System Trainers, and Other (for those that do not fall into the first three categories). ATDs are cockpit familiarization trainer, cockpit procedures trainer, operational flight trainer, part task trainer, and weapon system trainer to name a few.

Automatic Takeoff and Landing Capability (ATLC)—Technology on appropriately configured MQ-9 that permit automatic takeoff and landing. Term utilized to describe the capability or equipment irrespective of LRE or MCE.

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

Basic Mission Capable (BMC)—The status of an aircrew member who has satisfactorily completed MQT or FTU Instructor Pilot Upgrade or Instructor Sensor Upgrade, prescribed to be fully qualified to perform the basic unit operational missions, but does not maintain CMR status. Aircrew members accomplish training required to maintain familiarity in all, and may be qualified and proficient in some, of the units primary missions. BMC crewmembers may also maintain special capabilities.

CB-Coded—Designated Test Aircraft

Certification—Procedure used to document competency in a particular task. Not interchangeable with “qualification,” which requires AF Form 8/AF Form 8a, *Certification of Universal Aircrew Qualification* documentation.

Combat Mission Ready (CMR)—A status of an aircrew member who has satisfactorily completed MQT, prescribed to be fully qualified to perform the basic unit operational missions, and maintains qualification and proficiency in these missions. All CC-coded active duty API-1, API-2, SQ/CC, SQ/DO, and OG/CC designated API-6 manning positions are required to maintain CMR. **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.

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

Currency—A measure of how frequently and/or recently a task is completed. Currency requirements should ensure the average aircrew member maintains a minimum level of proficiency in a given event.

Emergency Procedures Evaluation (EPE)—A flight, simulator, or verbal evaluation used to evaluate EPs and systems knowledge.

Familiarization (FAM)—A level of familiarity with a given system or event provided in training that is not in-depth enough to expect the aircrew member to achieve proficiency. Aircrew members are not expected to maintain currencies in FAM events or systems. Normally requires a minimum of six weapons deliveries for Precision Guided Munitions and bombing events in a twelve month cycle.

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

Initial Qualification Training (IQT)—Training needed to qualify aircrew for basic aircrew duties in an assigned crew position for a specific aircraft, without regard for the unit's operational mission. The minimum requirement for BAQ status.

Launch and Recovery (L/R)—Term used to describe the operations pertaining to pre-takeoff, takeoff, initial departure (before Gaining Handover), terminal area operations (after Losing Handover), landing, and post-landing ground operations. This term is utilized for both automatic and manual operations. When more specific requirements or situation is intended, LOS L/R or SATCOM L/R will be used.

Launch and Recovery Element (LRE)—Personnel who are responsible for the launch, recovery and ground support of the MQ-9. LRE is accomplished using a standard deployable cockpit, or a modified cockpit equipped with the functionality of two Pilot/Sensor Operator (PSO) racks and associated systems, a communications interface, and a GDT. Operations may entail LOS operations for manual or automatic control.

Line of Sight Launch and Recovery (LOS L/R)—Term used predominately to describe the traditional LRE model for launch and recovery with LOS. This term is generally synonymous with LRE, but consideration must be given not to include ATLC (SATCOM or LOS) operations with LOS L/R.

Mission Control Element (MCE)—A cockpit (usually geographically separated from LRE) responsible for taking an MQ-9 from Ku ground handover for automatic takeoff (if applicable), or from an LRE following manual takeoff, executing the mission, and then handing the MQ-9 back to the LRE for manual recovery and landing, or automatic landing.

Mission Commander (MC)—A SQ/CC certified FL designated to lead large force employment (see AFI 11-214) and joint/composite force missions.

Mission Currency—An identifier that exists to drive a 30-day clock to meet currency requirements in [Table 4.1](#). This Task ID is dual credited when logging either Mission Sortie or Sim Mission Sortie Task IDs.

Mission Qualification Training (MQT)—Training required to achieve a basic level of competence in unit's primary tasked missions. Prerequisite for CMR(MR) or BMC.

Mission Sortie—A live flight mission flown in training or operational missions. Mission Sortie is updated with Msn Sortie Task Identification (ID). Log Mission Sorties on training or operational missions. Mission Sortie is combined with Sim Mission for recurring currency requirement per [Table 4.1](#). Aircrew members may dual credit Msn Sortie Task ID with any type of sortie flown IAW MAJCOM-specific RTM. Instructors/evaluators get credit a mission sortie, only if they actively control the aircraft (pilots) or sensor operator controls (sensor operators) for a portion of the sortie.

Proficiency—Demonstrated ability to accomplish tasked event expediently, safely and accurately. For purposes of this manual, proficiency requires currency in the event, if applicable.

Satellite Communications Launch and Recovery (SATCOM L/R)—Launch and Recovery operations over SATCOM controlled with ATLC. SATCOM L/R used only in MCE context.

Simulator Mission Sortie—A simulator mission flown is updated with Sim Msn Task ID. Simulator Mission is combined with Mission Sortie for recurring currency requirement per [Table 4.1](#). Aircrew members may dual credit Sim Mission Task ID with any type of simulator flown IAW MAJCOM-specific RTM. Instructors/evaluators get credit a simulator mission only if actively control the aircraft (pilots) or sensor operator controls (sensor operators) for a portion of the simulator.

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

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

Squadron Supervisor—Any of the following: SQ/CC, SQ/DO, Assistant Operations Officer (ADO), flight commander or person specifically designated by the SQ/CC. Except for SQ/CC, SQ/DO, and ADO, appointment must be endorsed by the OG/CC, and certification will be documented on unit LoX. (AFSOC: N/A). **(T-3)**

Training Cycle—The RAP training cycle is aligned on an annual cycle from 1 October – 30 September. Units and individual aircrew will complete all training requirements within the training cycle unless specifically excepted by this manual or MAJCOM/A3 guidance.

Weapons Delivery—Simulated or actual expenditure of munitions representing a typical combat configuration or standard conventional load in a tactical scenario.

Attachment 2

GLOSSARY OF MISSION/SORTIE AND EVENT DEFINITIONS

A2.1. General Definitions.

A2.1.1. Sortie. The operational nature of MQ-9 requires clarification of the term “sortie” within the scope of this AFMAN. 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 aircrew member performs his or her assigned duties. For the purposes of this instruction the terms mission and sortie are synonymous.

A2.1.2. Logging Sorties. Normally, aircrew members will not log more than one type of sortie on a single flight, unless:

A2.1.2.1. Specifically allowed in the sortie description (e.g., instructor sortie).

A2.1.2.2. An aircrew performs both MCE and LRE operations on the same sortie.

A2.1.2.3. An aircrew member is relieved by another aircrew member for the purpose of accomplishing a sortie, and subsequently takes over the position again during the same flight.

A2.1.3. LOS L/R Time. LOS L/R time is logged by an LOS L/R crewmember controlling a Remotely Piloted Aircraft (RPA) inside the terminal area while actively accomplishing launch and recovery events using Line of Sight (LOS) communications for RPA control. The Launch phase is as defined as the initiation of the Manual Takeoff checklists through the completion of the Climb, Level Off, and Cruise checklist (LRE outbound). The Manual Landing phase is defined as the initiation of the Descent checklist through the completion of the After Landing checklist (LRE inbound). Crewmembers performing Touch and Go operations within the terminal area can log LOS L/R time, but cannot log any Takeoff or Landing event unless they performed said action.

A2.2. Specific Mission Sortie definitions. Unless otherwise indicated, the following definitions apply to those flown either in live-flight or simulated environment. Aircrew members may dual credit Msn Sortie Task ID with any type of sortie flown IAW MAJCOM-specific RTM. Aircrew members may dual credit Sim MSN Task ID with any type of simulator flown IAW MAJCOM-specific RTM.

A2.2.1. Air Interdiction (AI) Mission. Preplanned or immediate air operations conducted in order to divert, disrupt, delay or destroy the enemy’s military potential before it can be brought to bear effectively against friendly forces, or to otherwise achieve objectives. See RTM for expanded definition and critical skills set.

A2.2.2. Air Operations In Maritime Surface Warfare (AOMSW) Mission. Operations conducted over water for the surveillance, reconnaissance, and the engagement of all hostile surface threats. See RTM for expanded definition and critical skills set.

A2.2.3. CAS Mission. Operations designed to strike targets in close proximity to ground forces in detailed coordination with ground parties while under positive control of a JTAC/FAC to find, fix, track, target, engage, and assess static and mobile targets. See RTM for expanded definition and critical skill sets.

A2.2.4. Combat Search and Rescue (CSAR) Mission. Operations conducted for the safe recovery of isolated personnel (IP). See RTM for expanded definition and critical skill set.

A2.2.5. Commander Option Mission. A sortie/simulator that may be used to provide individualized training based on proficiency and demonstrated performance. This sortie/simulator may be allocated above the guidelines in the RTM 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.

A2.2.6. Contingency Operations Sortie. Sorties at a contingency location, or in support of real-world operations. Units may use Contingency Operations Sorties for lookback purposes. RAP events accomplished during sorties logged as Contingency Operations may be counted toward training cycle RAP requirements if effective training per this instruction and the RTM/MAJCOM-specific guidance was accomplished. Individual events flown during contingency operations can be used to update currencies. Contingency Operations Sorties apply to live-fly operations only. Contingency Operations Sorties are not logged as stand-alone task IDs, as the 5th digit of other IDs. See RTM section 5 for details.

A2.2.7. Intelligence, Surveillance, and Reconnaissance (ISR) Mission. Operations with the primary purpose of sensor utilization (Lynx SAR and MTS) to find, fix, and track targets of interest which ultimately results in the targeting, engagement, and assessment of said targets. See RTM for expanded definition and critical skills set.

A2.2.8. Offensive Counter-Air (OCA)-Attack Operations (AO). Different types of Offensive Counter-Air (OCA) operations are used to achieve specific counter-air effects. Tasked units normally have decentralized execution authority and are given significant latitude in the detailed planning and coordination of the tasks. OCA efforts should be properly planned for, directed, and integrated with other offensive operations. OCA operations, in addition to supporting operations against adversary air and missile targets, support missions such as strategic attack, air interdiction, and CAS. OCA-Attack Operations are intended to destroy, disrupt, or degrade counter-air targets on the ground and may be accomplished through kinetic or non-kinetic actions. See RTM for expanded definition and critical skills set.

A2.2.9. Pattern Proficiency Sortie (PPS) (only required for LOS LRE-qualified crews). A PPS is a live-fly mission to practice instrument, transition, traffic patterns, and EPs. A PPS can be logged at the discretion of the aircrew when sufficient training has been accomplished. A PPS should be briefed as a standard alternate mission whenever possible. A single PPS may be accomplished over the course of either 2 or 3 sorties if unable to accomplish all tasks on a single PPS. PPS with tasks spanning multiple days are logged on the day of the final task completion. As reference, a PPS consists of the following: Review of CAPs, MTS (EO or IR) and nose camera (EO or IR) touch and go/landing(s), automatic takeoff and landing (if applicable), SFO(s), Go-arounds(s).

A2.2.10. Strike Coordination and Reconnaissance (SCAR) Mission. During counterland operations, perform kinetic strike against pre-assigned or ad hoc target(s), act as the SCAR, reconnaissance, or attack platform utilizing airspace control. See RTM for expanded definition and critical skills set.

A2.3. Events. Some events may be defined in the core of this instruction above (example, CT ground training, [paragraph 4.2](#)), or in the remainder of this Attachment. Unless otherwise

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

A2.3.1. Accomplishment of a specific training element, function, or task.

A2.3.2. A specific type of weapon delivery performed during a mission, defined by aircraft flight path, ordnance delivered, delivery method, or target struck.

A2.3.3. Expending ordnance, or simulated attack where allowed, against a target according to predetermined flight path parameters and delivery methods. A single delivery constitutes an event.

A2.4. Tactical/Basic Skills Events. The following is an alphabetical listing of events to be used for fulfilling tasked requirements. In the absence of guidance, units determine the content of tasked events and how often they may be logged.

A2.4.1. Aircraft Handling Characteristics (AHC). Basic flying skills event. Training for proficiency in utilization and exploitation of the aircraft flight envelope, consistent with operational and safety constraints. Credit an AHC event only if the pilot maneuvers the aircraft with all hold modes disabled.

A2.4.2. Armed Reconnaissance/Overwatch. Scenarios involving scanning a route ahead of a planned ground movement conducting improvised explosive device sweeps or providing coverage on a target area prior to a raid by ground forces and/or providing cover for a maneuver unit while providing immediate to the ground force commander through full motion video. This includes convoy escorts TTPs, force protection/base defense missions, or providing coverage on a target area prior to a raid by ground forces.

A2.4.3. Buddy Lase Procedures. Practice tactical target lock-ons for strike assets equipped with laser guided munitions using laser operational terminology and procedures to include: striker rendezvous and briefing, establishment of safe observation position, target plotting, identification, actual or simulated marking, and fire coordination.

A2.4.4. Degraded/Denied Comm. Inflight or simulated operations in a Comm jamming environment that provides realistic effects (intervals and duration) without use of active anti-jam radios and/or effective chattermark procedures to counter jamming.

A2.4.5. Degraded/Denied Datalink. Inflight or simulated operations with degraded or denied datalink (including command/control links). Log only one event per sortie. In the absence of systems capable of degrading or denying datalink, the event may be logged if talking through the expected symptoms and responding TTPs.

A2.4.6. Degraded/Denied GPS. Inflight or simulated operations with degraded or denied GPS which impacts navigation and/or weapons capability at a minimum. In the absence of actual systems capable of degrading or denying GPS, the effects may be generated by selecting a non-GPS navigational aid or turning GPS OFF, or by talking through the expected symptoms and responding TTPs.

A2.4.7. Handover Procedures. Accomplish all applicable checklists and procedures involved with successfully transferring an 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 if using local area network connectivity or requires accurate reproduction of handover events by someone controlling the ATD (if the ATD supports those functions).

A2.4.7.1. Gaining Handover. Accomplish all applicable gaining handover checklists and successfully take control of an airborne or parked aircraft from another control station. This can be accomplished as an MCE crew or LRE crew and link type does not matter.

A2.4.7.2. Losing Handover. Accomplish all applicable losing handover checklists and successfully transfer control of an airborne or parked aircraft to another control station. This can be accomplished as an MCE crew or LRE crew and link type does not matter.

A2.4.8. 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 log this event on evaluation sorties. Weapons Instructor Course (WIC) students log this event for all WIC syllabus directed rides. Logging this event updates instructor currency. Maximum of one event may be logged per sortie.

A2.4.9. Infrared Pointer Mark. Illuminate target with IR pointer using any/all modes of the Laser Target Marker.

A2.4.10. Joint Force Training. Scenarios employing integrated ground, aerospace, land, and/or naval forces from other services. Maximum of one event may be logged per sortie.

A2.4.11. Ku Target Tracking/Imaging. Using Ku in-flight as the sensor datalink, acquire and track mobile or fixed targets applying proper search and acquisition techniques. Perform 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 event may be logged per sortie.

A2.4.12. Landing. Accomplish the Before Landing checklists and accomplish a full- stop or touch-and-go landing (automatic or manual).

A2.4.12.1. Nose Camera Landing. Accomplish a landing using the nose Day TV (DTV) or nose IR camera.

A2.4.12.2. MTS Landing. A landing accomplished using the MTS DTV or MTS IR camera.

A2.4.12.3. Automatic Landing. A landing conducted with ATLC performed by either an LOS L/R or MCE L/R crew.

A2.4.12.4. Manual Landing. A landing conducted under LOS operations without ATLC.

A2.4.13. Laser Spot Search and Track (LSS/T). Provide a laser designation for advanced targeting pod acquisition and subsequent confirmation of proper target.

A2.4.14. Laser Target Marking. Acquire and track mobile or fixed target. Illuminate, simulate illumination if range rules preclude illumination, and hold tasked target in support of actual or simulated tactical weapon delivery or tactical operations.

A2.4.15. Live JTAC Controlled Event. An event conducted to employ live/inert or simulated ordnance against a ground target under the control of a live JTAC.

A2.4.16. Moving Target Attack. Engage and employ ordnance against a target in motion, and accomplish In Flight Report (INFLTREP). The target should be a wheeled or tracked vehicle in transit and should remain moving throughout the engagement. Engagement may be an

actual or simulated combat flight environment. Ordnance delivery may be actual or simulated against actual or simulated targets. **Note:** During instruction or evaluation, subtasks of Moving Target Attack are accomplished to the satisfaction of the instructor or evaluator.

A2.4.17. Moving Target Tracking. Acquire and track a mobile target, holding target for a minimum of 60 seconds. During training or evaluation, the tracking is accomplished to the satisfaction of the instructor or evaluator.

A2.4.18. Synthetic Aperture RADAR Ground Moving Target Indicator (SAR GMTI). Scenarios requiring employment of Lynx SAR to meet mission objectives.

A2.4.19. Secure Voice. Requires proper radio configuration for secure voice operation (e.g., KY-100) and successful utilization during tactical mission accomplishment. Maximum of one event may be logged per sortie.

A2.4.20. SFO. An emergency pattern accomplished in response to simulated engine failure as described in the flight manual.

A2.4.20.1. SFO Overhead Approach. An SFO approach utilizing Technical Order and AFTTP 3-3.MQ-9 indicated key positions, starting from high key.

A2.4.20.2. SFO Random Approach. An SFO approach utilizing an entry from other than high-key, to facilitate energy management techniques from other than a pre-established overhead approach. An SFO flown as a straight-in constitutes a random approach.

A2.4.21. Supervised EP Simulator. Practice in-flight EPs and maintain proficiency in applying aircraft general knowledge to abnormal situations. Specific Mission Tasks: Unusual attitude recoveries, spatial disorientation, inadvertent weather entry, controlled flight departure recognition and recovery procedures, CAPs, aircraft subsystem failure checklist procedures, in-flight EPs, and instrument procedures. LR qualified crews practice emergencies at low-altitude (< 5,000 feet Above Ground Level).

A2.4.22. Takeoff. Accomplish actual takeoff to include Takeoff checklists and associated procedures.

A2.4.22.1. Automatic Takeoff. A takeoff using ATLC conducted by either MCE L/R or LOS L/R crews.

A2.4.22.2. Manual Takeoff. A takeoff using LOS operations without ATLC.

A2.4.23. Target Talk-on. Convey validated target information to an attacking aircraft and confirm positive target ID. A Talk-on includes visual identification/confirmation of the target from attacking aircraft crew.

A2.4.24. Time Sensitive Target (TST) Event. Perform 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 C2 asset. Coordination with actual or simulated air controlling assets, fire control assets, assets commonly coordinated with in DOC statement, or a simulation thereof is required. Scenarios should include standard fire support control measures utilizing standard brevity 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.

A2.4.25. Verification. Procedure aimed at verifying and refreshing crewmember tactical employment knowledge, executing DOC-task missions. Conduct verification in both initial and follow-on phases. Initial verification phase is a formal board convened to verify individual crewmember knowledge. CT is to reinforce, refresh, and update crewmembers on unit wartime mission, tasking, tactics, and procedures.

A2.5. Weapons Delivery Event. A delivery event defined as a pass at a target on which ordnance is expended, or simulated, and meets the criteria defining a specific weapon delivery. The event includes target acquisition followed by the actual or simulated laser designation (self or buddy), weapons release, and weapon impact; ending with a tactical escape maneuver for the ordnance being delivered (or simulated). These delivery events are used to update weapons qualifications and currencies. Weapon events are defined in [Chapter 5](#). Ensure all deliveries are recorded for debrief, but not necessarily “recorded” for events tracking. Weapons delivery events fall into two categories:

A2.5.1. Non-Record. Basic or Tactical weapons delivery accomplishments not credited toward weapons qualification provided the aircrew declares non-record prior to beginning event.

A2.5.2. Record. Conventional delivery scored for individual weapons qualification. Scoring shall be accomplished by ground, air, or recorded 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 are considered record unless otherwise declared prior to the roll-in to final. Scores are documented by circular error probable and clock position. Recorded deliveries count towards FAM and QUAL requirements in [Chapter 5](#).

A2.6. Miscellaneous Weapons Delivery Definitions and Descriptions.

A2.6.1. 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.

A2.6.2. Foul. A penalty directed to a specific aircraft and crew for actions inconsistent with established procedures or safety considerations. A foul results in a gross error for that delivery. Do not substitute verbal warnings for fouls. A second foul or any dangerous pass results in mandatory expulsion from any further deliveries during that mission and a gross error score for the event. Foul are charged IAW flying directive publications.

A2.6.3. Full Scale Weapons Delivery. Delivery of live or inert ordnance in a combat configuration. Also known as live-fire.

A2.6.4. Gross Error. A penalty score or miss assigned to an aircrew's records when a weapons delivery attempt results in: munitions impact outside the range scoring capability, a chargeable dry pass, a foul, an unintentional release, or exceeding tactical delivery time on final requirements.

A2.6.5. Hit. Any munitions impact within the weapons criteria established for that event.

A2.6.6. Single/Multiple Release. One or more weapons released against the same target on a single pass.

A2.6.7. Intentional. The aircrew must advise the range officer prior to delivery and designate which impact to be scored.

A2.6.8. Inadvertent. Ordnance which has released without command by the aircrew. Impact is not scored.

A2.6.9. System Malfunction. An undeclared multiple release caused by a verified system malfunction. Score is void after system malfunction verification, otherwise, unintentional rules apply.

A2.6.10. Unintentional. Ordnance released due to aircrew error are scored as gross error regardless of impact point.

A2.6.11. No Spot. A weapons release during which no impact was observed. In the event the instructor/evaluator (if no instructor/evaluator present, PIC) believes the No Spot is due to ordnance malfunction upon impact, no score or error is assigned. In the event the No Spot was due to crew error, delivery results in Gross Error.

A2.6.12. Void Delivery. Weapons delivery not successfully completed due to: a documented and verified weapons system malfunction, pass aborted for safety, No Spot, or circumstances beyond the control of the aircrew.

A2.7. Operations Supervisor Event. A log-able event for tracking operations supervisor tours, if used. Currency requirements for Operations Supervisors do not exist in the parent instruction, but may apply in the unit supplement per Chapter 7 of AFI 11-418.

Attachment 3**SAMPLE VERIFICATION GUIDE BRIEFING OUTLINE****A3.1. Overview.**

A3.1.1. Introduction (participants and briefing classification).

A3.1.2. Mission overview.

A3.1.3. Status of friendly forces (ground, air, and support).

A3.2. Area of Operations.

A3.2.1. Geography (topography, population centers, lines of communications, chokepoints, natural obstacles, and major visual identification points).

A3.2.2. Climatology (effects on 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. Include strengths and weaknesses for all previously listed items.

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 and 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, backups, and egress plan).

A3.4.6. Lost Link procedures and emergency airfield plan.

A3.4.7. Airspace coordination plan