COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

This publication implements Air Force Policy Directive (AFPD) 11-2, *Aircrew Operations*, and Air Force Instruction (AFI) 11-200, *Aircrew Training, Standardization/Evaluation and General Operations Structure*; it expands upon Air Force Manual (AFMAN) 11-202V2, *Aircrew Standardization and Evaluation Program*; and is consistent with AFPD 11-4, *Aviation Service*. This publication establishes criteria and procedures for MQ-9 flight evaluations. It applies to all Regular Air Force MQ-9 personnel and units, as well as those in the Air Force Reserve and the Air National Guard (ANG), as applicable. This publication does not apply to the United States Space Force. Ensure all records generated as a result of processes prescribed in this publication adhere to AFI 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. Recommendations for changes to and questions about this publication should be submitted on Department of the Air Force (DAF) Form 847, *Recommendation for Change of Publication*, through Numbered Air Force standardization/evaluation (Stan/Eval) channels, to the parent Major Command (MAJCOM) Stan/Eval. Parent MAJCOM Stan/Eval will forward approved recommendations to lead command Office of Primary Responsibility (OPR) (Air Combat Command Standardization and Evaluation Branch (ACC/A3TV), 204 Dodd Blvd, Suite 133, Langley AFB VA 23665-2789). The publication may be supplemented at any level, but MAJCOMs, direct reporting units (DRUs), and field operating agencies (FOAs), need to forward proposed MAJCOM/DRU/FOA-level supplements to this volume to AF/A3TV to the Air Force Flight Safety Standards Agency Flight Directives Division (AFFSA/XOF) for coordination prior to publication. After approved and published, MAJCOM/ DRU/FOA OPRs will provide copies of those supplements to ACC/A3TV and the user

MAJCOM/DRU/FOA OPRs. Field units below MAJCOM/DRU/FOA level will forward copies of their supplements to this publication to their parent MAJCOM/DRU/FOA OPR for pre-publication review. After approved and published, MAJCOM/ DRU/FOA OPR will provide copies of those supplements to ACC/A3TV and the user MAJCOM/DRU/FOA OPRs. Field units below MAJCOM/DRU/FOA level will forward copies of their supplements to this publication to their parent MAJCOM/DRU/FOA OPR for pre-publication review. The authorities to waive wing/unit level requirements in this publication 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 Process and Procedures*, Table A10, 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 approval authority, or alternately, to the requestor's commander for non-tiered compliance items.

SUMMARY OF CHANGES

This publication has been substantially revised and must be thoroughly reviewed. Major changes include updated aircrew training device (ATD) guidance; converted Launch and Recovery (L/R) to Line of Site (LOS) L/R throughout; added Automatic Takeoff and Landing Capability (ATLC) certification guidance; updated notes for **Table 2.1** for ATD and ATLC guidance; addition of contested, degraded, and operationally limited operations; ATLC criteria throughout; and updated definitions for standardization of new operations syntax with AFMAN 11-2MQ-9 Volume 3, *MQ-9--Operations Procedures*.

Chapter 1

ROLES AND RESPONSIBILITIES

1.1. Flight Examiners (FEs):

1.1.1. Will use grading criteria in this volume for the appropriate crew position when evaluating aircrew. **(T-2)** Units may modify evaluation profiles based on local operating considerations or FE judgment to complete the evaluation.

1.1.2. Should exercise judgment when assigning subjective area grades, when assigning the overall qualification level, and when evaluating in situations not covered explicitly by this manual.

1.1.3. Will brief the examinee on the purpose, conduct, and extent of each evaluation and, if applicable, will inform the pilot in command of any special requirements before the mission briefing. **(T-2)**

1.1.4. Will use the evaluation criteria in this manual for conducting all flight and emergency procedure evaluation(s) (EPEs). **(T-2)** To ensure standard and objective evaluations, FEs will be thoroughly familiar with the prescribed evaluation criteria and evaluate all required areas as observed to complete the evaluation. **(T-2)**

1.1.5. Should not occupy a primary crew position during evaluations except when it would afford the best opportunity to conduct instructor (INSTR) evaluations.

1.1.6. At a minimum will debrief the examinee's overall rating, specific deviations, area grades assigned (if other than qualified), and any required additional training or placement on supervised status. **(T-2)**

1.1.7. Should use all electronic means available to adequately reconstruct, evaluate, and debrief the mission.

1.1.8. Will document alternative evaluation methods on the "additional comments" area of the AF Form 8, *Certificate of Aircrew Qualification*, and determine that if required items cannot be adequately evaluated by alternate methods, then recommend additional events to complete the evaluation. **(T-2)**

1.1.9. Will grade according to the highest qualification/certification that the examinee is seeking, applying unit standards/directives where applicable. More restrictive criteria must be standardized at the operations group level. **(T-3)**

1.2. Examinees: Will accomplish required flight planning in accordance with (IAW) the flight position assigned during the evaluation, furnishing FEs a copy of necessary mission data and mission materials, if appropriate. **(T-3)**

Chapter 2

EVALUATION REQUIREMENTS

2.1. General.

2.1.1. **Flight Publications Check.** Aircrew using electronic publications/programs in lieu of personal publications are required to demonstrate access to electronic publications/programs while ensuring they are the most current version. **(T-2)** Units may specify additional publications to be evaluated in the unit supplement.

2.1.2. **Cockpit/Crew Resource Management (CRM).** See AFI 11-290, *Cockpit/Crew Resource Management And Threat & Error Management* Program for CRM skills evaluation requirements for crewmembers during all evaluations. Include the following areas (AFMAN 11-202, Volume 2, *Aircrew Standardization and Evaluation Program*, may be used as a reference):

2.1.2.1. Mission planning/briefing. **(T-2)**

2.1.2.2. Crew coordination. **(T-2)**

2.1.2.3. Situational awareness/task management. **(T-2)**

2.1.2.4. Risk management/decision making. **(T-2)**

2.1.2.5. Communication. **(T-2)**

2.1.2.6. Mission debriefing. **(T-2)**

2.1.3. **Combined Evaluations.**

2.1.3.1. All evaluations fall under the Instrument (INSTM), Qualification (QUAL), Mission (MSN), Instructor (INSTR), or SPOT criteria outlined in AFMAN 11-202V2 and its subordinate publications. INSTM evaluations apply to pilots only. Launch and recovery (L/R) including, Automatic Takeoff and Landing Capability (ATLC) certification, is inherent in the basic QUAL, using specific areas to reflect L/R capability. Schedule all flight activity to occur on one sortie to the greatest extent possible.

2.1.3.2. The INSTM flight phase is normally combined with the QUAL flight phase. Units may elect to administer this evaluation on any compatible training mission or combined with the MSN evaluation.

2.1.4. **Required Graded Areas.** Required graded areas are located in **Table 2.1** and **Table 2.2**.

2.1.4.1. All critical areas (Airmanship/Situational Awareness, Safety, Flight Discipline) as well as the specified areas found in **paragraph 2.1.2** will be graded during all evaluations (INSTM/QUAL/MSN/EPE/INSTR/SPOT/etc.). **(T-2)** Reference **Table 2.1** (QUAL/INSTM/MSN/INSTR) and **Table 2.2** (EPE) for all other required graded areas based on the types of evaluation. (For example, if conducting an Initial (INIT)+INSTR only, grade the critical areas, CRM/**paragraph 2.1.2** areas, and those areas that fall under **Table 2.1**: AIRCREW EVALUATION CRITERIA-INSTR only.)

2.1.4.2. Areas annotated with an "R" are required items for that event.

2.1.4.3. Sections annotated with an "R2" require evaluation of at least two of the items under the associated section.

2.1.4.4. Sections annotated with an "R3" require evaluation of at least three of the items under the associated section.

2.1.4.5. If an area has more than one sub-area, all sub-areas will be completed in order to satisfy the area requirement. **(T-2)** The overall area grade awarded will be the lowest Q, Q-, or U grade of any of the sub-areas. **(T-2)**

2.1.5. **Evaluations in Aircrew Training Device (ATD).** Evaluations will be flown in the live environment to the maximum extent possible. **(T-3)**

2.1.5.1. When a required area is not evaluated in flight, it will be evaluated with a full crew complement using an ATD configured with the same software, ground control station (GCS) block, and aircraft block as unit's mission configuration, or by verbal examination if previously mentioned methods are not available. **(T-3)** Document the use of alternate evaluation methods in the AF Form 8 Additional Comments section (see AFMAN 11-202V2 Documentation Guidance).

2.1.5.2. All ATLC certification events may be conducted in the ATD, as directed by the Squadron Commander (SQ/CC). Additionally, the Operations Group Commander (OG/CC) may approve evaluations in the ATD for all events in **Table 2.1**, with the exception of Line of Sight (LOS) manual landings in Area 25. **(T-2)** The following guidelines apply:

2.1.5.2.1. INIT evaluations and inexperienced pilots require in-flight evaluations. **(T-2)**

2.1.5.2.2. Aircrew members on DOWN/Duties Not Involving Flying (DNIF) status will not be evaluated or administer evaluations conducted in the cockpit. **(T-1)** The DOWN/DNIF crewmember may be evaluated in the ATD if the aircrew's DD Form 2992, *Medical Recommendation for Flying or Special Operational Duty*, clearly states the affected member is cleared to conduct simulator events. Regardless of annotation on the DD Form 2992, an individual may not be evaluated in the ATD on consecutive evaluations unless the unit processes a waiver. **(T-2)**

2.2. Examinations.

2.2.1. **Closed book.** See AFMAN 11-202V2 and IAW the following:

2.2.1.1. Examination questions for aircrew that will not contain L/R areas/comments on their AF Form 8 will be taken from the Mission Control Element (MCE) section of the master question file (MQF). **(T-2).**

2.2.1.2. Examination questions for aircrew that will have L/R areas/comments on their AF Form 8 will be taken from the entire MQF. **(T-2)**

2.2.2. **Open book.** See AFMAN 11-202V2. Open book questions will come from publications containing information pertinent to the operation of applicable aircraft and performance of the assigned mission. **(T-1)**

2.2.3. **Critical Action Procedure (CAP) examination.** This will be an individual, written examination from memory without assistance/"crew swaps." **(T-2)** Responses must correctly contain all critical action items in proper sequence. **(T-2)**

2.2.3.1. CAP examination for aircrew that will not address L/R areas/comments on their AF Form 8 will be specific to MCE operations. **(T-2)**

2.2.3.2. CAP examination for aircrew that will address L/R areas/comments on their AF Form 8 will include all critial action procedures (CAPs) in their mission design series (MDS) technical order (TO). **(T-2)**

2.2.3.3. Examinees receiving a U (unqualified) because of unsatisfactory CAP examination will not be permitted to fly in their aircrew position until a successful reevaluation is accomplished within a timeframe deemed acceptable by the unit commander (CC). **(T-3)**

2.3. Instrument (INSTM) Evaluations.

2.3.1. **Procedures.** A sortie flown according to instrument flight rules (to the extent practical) best fulfills the objective of the INSTM evaluation.

2.3.2. **Minimum requisites.** The minimum requisites for an INSTM evaluation is an instrument examination.

2.4. Qualification (QUAL) Evaluations.

2.4.1. **Procedures.** A mission that evaluates the examinee's ability to safely and effectively operate the aircraft and associated subsystems. This evaluation encompasses basic aircraft handling and basic operation of the aircraft sensors.

2.4.2. **Minimum ground phase requisites must include:**

2.4.2.1. Closed-book examination. **(T-2)**

2.4.2.2. Open-book examination. **(T-2)**

2.4.2.3. QUAL EPE. **(T-2)**

2.4.2.4. CAP examination. **(T-2)**

2.4.3. **Line of Site Launch and Recovery (LOS L/R) Considerations.**

2.4.3.1. Certain elements of the QUAL evaluation specific to LOS L/R are listed in **Table 2.1** and **Table 2.2**, and are not required to be accomplished to complete a QUAL evaluation for MCE aircrew. Unless appropriate LOS L/R comments are made on the AF Form 8, all evaluations are assumed to complete MCE QUAL portions only. Requisites specified in AFMAN 11-202V2 can be applied to all evaluations completed within the same 6-month timeline.

2.4.3.1.1. LOS L/R SPOT Evaluation. Unless conducted in conjunction with a QUAL evaluation, a SPOT evaluation will be used to qualify aircrew in LOS L/R by addressing LOS L/R areas/comments for aircrew completing a formal or commander-directed LOS L/R training syllabus. **(T-2)** At a minimum, profiles will incorporate all requirements in **Table 2.1**, and all identified LOS L/R requirements in **Table 2.1** or **Table 2.2**. **(T-2)**

2.4.3.1.1.1. Provided no additional training is required, include the following verbiage in the comments section of AF Form 8: "Member is qualified to perform LOS L/R events." If additional training is required, provide appropriate grading/restrictions and the following verbiage: "Upon successful completion of additional training, member is qualified to perform LOS L/R events." If a member has a previous manual LOS L/R QUAL, a subsequent MCE QUAL or QUAL/MSN AF Form 8 will have the following verbiage "Member is qualified to perform LOS L/R events until the expiration of the LOS L/R QUAL evaluation dated DD Mmm YY." **(T-2)**

2.4.3.1.1.2. Aircrew earning a Q3 during an L/R SPOT or aircrew member L/R performance/evaluation lapsing without being re-evaluated, will have "Member is not qualified to perform LOS L/R events." in the comments section of the AF Form 8. **(T-2)**

2.4.3.1.1.3. Mission description will include LOS L/R profile flown.

2.4.3.1.2. Minimum ground phase requisites for this specific type of SPOT evaluation must include:

2.4.3.1.2.1. Closed-book examination; **(T-2)**

2.4.3.1.2.2. EPE; **(T-2)**

2.4.3.1.2.3. CAP examination. **(T-2)**

2.4.3.2. In-lieu of SPOT evaluation, the crewmember may opt to do a complete INSTM/QUAL/MSN or QUAL/MSN evaluation profile. The following caveats apply:

2.4.3.2.1. The examinee must be currently in their eligibility window. **(T-3) Note:** AFMAN 11-202V2 may also apply if home station CC determines mission demands dictate.

2.4.3.2.2. Appropriate ground phase requisites for all administered evaluations must adhere to the evaluation for which the examinee is attempting to complete. **(T-2)**

2.4.3.2.3. The FE must determine the available sortie and/or ATD will meet all requirements/suitability for the evaluation(s) being attempted. **(T-3)**

2.4.3.2.4. Aircrew will be evaluated in LOS L/R applicable areas IAW **Table 2.1** and **Table 2.2** on subsequent periodic QUAL evaluations. **(T-2)** For LOS L/R crews that are also ATLC certified, LOS L/R events (**Table 2.1** Note 1) may count toward all ATLC events (**Table 2.1** Note 3) except takeoff and landing.

2.4.4. **Automatic Takeoff and Landing Capability (ATLC) Certification Considerations.** See AFMAN 11-2MQ-9 Volume 3, Attachment 6 for certification/evaluation programmatic guidance.

2.4.4.1. ATLC certification will remain a stand-alone certification until such time as its fielding will allow full incorporation into the QUAL evaluation. Certain elements of the QUAL evaluation specific to ATLC certification are listed in **Table 2.1** and **Table 2.2**, and are not required to be accomplished to complete a QUAL evaluation for non-ATLC certified MCE aircrew. Unless appropriate ATLC certification comments are made on the AF Form 8, all evaluations are assumed to complete MCE QUAL portions only. Requisites

specified in AFMAN 11-202V2 can be applied to all evaluations completed within the same 6-month timeline.

2.4.4.2. Units will certify aircrew in ATLC during initial fielding using unit produced program (See AFMAN 11-2MQ-9 Volume 1, *MQ-9—Aircrew Training*). Document initial ATLC certification via MAJCOM/unit processes (e.g., AF Form 4348, *USAF Aircrew Certifications* or Letter of Xs [LoX]). There is no requirement to conduct a "SPOT" event for initial certification of ATLC. Initial certification may be documented by any instructor current/certified in ATLC.

2.4.4.3. On subsequent QUAL evaluations following initial certification (or the initial certification if conveniently aligned), aircrew will be certified for ATLC if appropriate. The following caveats apply:

2.4.4.3.1. ATLC certification ground phase events will be included in the QUAL ground phase requisites. **(T-2)**

2.4.4.3.2. The FE must determine the available sortie and/or ATD will meet all requirements/suitability for the ATLC certification and other INSTM/QUAL/MSN events. **(T-3)**

2.4.4.3.3. Aircrew will be certified in ATLC using the applicable evaluation criteria areas IAW **Table 2.1** or **Table 2.2**. **(T-2)**

2.4.4.3.4. Provided no additional training is required, include the following verbiage in the comments section of AF Form 8: "Member is certified to perform automatic L/R events." If additional training is required, provide appropriate grading/restrictions and the following verbiage: "Upon successful completion of additional training, member is certified to perform automatic L/R events." **(T-2)**

2.4.4.3.5. Aircrew earning a Q3 during an ATLC certification, or aircrew member ATLC certification lapsing without being re-evaluated, will have "Member is not certified to perform automatic L/R events." in the comments section of the AF Form 8. **(T-2)**

2.4.4.3.6. Mission description will include ATLC profile flown.

2.5. Mission (MSN) Evaluations.

2.5.1. **Procedures.**

2.5.1.1. FEs should tailor MSN evaluations IAW current tactics, unit designed operational capability statement, and/or theater Area of Responsibility scenarios, and should incorporate all appropriate evaluation requirements from **Table 2.1** The profiles should be designed to evaluate any training/certifications as well as basic airmanship of the examinee. MSN evaluations may be combined with QUAL and/or INSTM evaluations. Requisites specified in AFMAN 11-202V2 can be applied to all evaluations completed within the same 6-month timeline.

2.5.1.2. Evaluations during contingency/combat deployments may be used in order to maintain mission qualification status, but CCs and evaluators should weigh this need against the objective quality of the evaluation.

2.5.1.3. Basic Mission Capable (BMC) aircrew should only be evaluated on those missions they routinely perform.

2.5.2. **Minimum ground phase requisites must include:**

2.5.2.1. MSN EPE. May be combined with the QUAL EPE, but must include weapons employment emergency procedures to qualify; **(T-2)**

2.5.2.2. CAP examination; **(T-2)**

2.5.2.3. and Closed-Book examination. May be combined with the QUAL closed-book, but must include mission/weapon-specific questions. **(T-3)** If no mission/weapon-specific questions are administered on the QUAL closed-book, then a MSN closed-book examination must be accomplished. **(T-3)**

2.5.3. Evaluation Profiles. The following evaluation profiles are used to conduct MSN Evaluations. FE judgment may be used to modify evaluation profiles based on local/theater operating considerations.

2.5.3.1. Target development. Through traditional or non-traditional means, acquire pre-planned or ad-hoc targets and satisfy applicable essential elements of information (EEI or EEIs) as assigned by real-world taskings or FE-directed scenario. FEs may assign targets in-flight. The pilot is responsible for positioning the aircraft to allow for EEI satisfaction. Targets not acquired due to adverse weather, verified sensor malfunction, or threat reaction will not be graded as misses. **(T-3)**

2.5.3.2. Air-to-Surface (A-S). Crews will comply with appropriate provisions of AFI 11-214, *Air Operations Rules and Procedures*, and MAJCOM supplements. Acceptable missions and their requirements to fulfill the A-S requirement include:

2.5.3.2.1. Close Air Support – Mission sortie flown in support of ground forces (actual or simulated) under the control of a joint terminal attack controller (JTAC) or an air or ground forward air controller (FAC) providing control for air strikes. Mission elements include: Intelligence scenario and tactical mission planning, execution against actual or simulated threats, simulated or actual weapons employment against designated targets while under positive control of a JTAC or air or ground FAC interfacing (actual or simulated) with the Tactical Air Control System (TACS)/Army air-ground system command and control network, and in-flight report (INFLTREP).

2.5.3.2.2. Strike Coordination and Reconnaissance (SCAR) – Coordinate one or more independent attacks by real or simulated strike aircraft, on or off range, with actual or simulated ordnance against targets identified and validated in specified geographic locations.   Mission elements include: target area reconnaissance and target identification; command, control, communications, and intelligence network interface; remotely piloted aircraft-to-striker brief; target marking and striker hand-off; battle damage assessment; and INFLTREP, as required.

2.5.3.2.3. Surface Attack Tactics (SAT) – Mission sortie designed to develop proficiency in SAT. Mission types include Strategic Attack (SA), Air Interdiction (AI), Dynamic Targeting (DT), Destruction of Enemy Air Defenses (SEAD), and Air Operations in Maritime Surface Warfare (AOMSW). Mission elements include: Intelligence scenario and tactical mission planning, execution against actual or

simulated threats, simulated or actual weapons delivery against a tactical target, and INFLTREP. Simulated attacks may be conducted against realistic targets IAW local restrictions.

2.6. Formal Course Evaluations. Evaluations will be flown on a mission profile developed from syllabus training objectives and requirements from this AFMAN. **(T-3)** Units may modify evaluation profiles to incorporate local operating considerations. Grade training objectives and related areas using appropriate performance criteria.

2.7. Instructor Evaluations.

2.7.1. INSTR flight evaluations will include a thorough evaluation of knowledge, judgment, instructor ability (including error analysis of student activity) and use of grading documents, as well as proficiency in their aircrew specialty. **(T-3)** During the initial INSTR evaluation the examinee must demonstrate the ability to instruct in some phase of the unit's mission. **(T-3)** The instructional topic/area will be annotated in the mission description of AF Form 8. **(T-2)** Except for requirements delineated in **Table 3.3**, the FE will determine specific profiles and/or events. **(T-3)** Subsequent periodic evaluations (for example, INSTM/QUAL, QUAL, or MSN) will include instructor portions during the evaluations. **(T-2)**

2.7.2. Instructors must demonstrate proficiency by instructing a student, Combat Mission Ready (CMR) crewmember, other instructor, or FE; listed by desired priority. **(T-3)** The FE may require the examinee to present verbal explanations of equipment operations, procedures, and techniques pertinent to crew duties and responsibilities.

2.7.3. During any phase of the flight portion of the evaluation, the FE may require the examinee to demonstrate and/or present verbal explanations of system operations and/or procedures. FEs ensure verbal questions/instructions are clear, concise, and pertinent to the individual's crew duties, and do not interfere with normal mission accomplishment.

2.7.4. MCE instructors who receive a LOS L/R qualification are eligible to be LOS L/R instructors upon becoming experienced in LOS L/R and at the discretion of the SQ/CC. Any LOS L/R instructor pilot (IP) or instructor sensor operator (ISO) qualification will be documented in the member's Flight Evaluation Folder. **(T-2)** SQ/CCs should track L/R instructors separate from MCE instructors on the squadron Letter of Xs (LoX and AF Form 4348 if used). For LOS L/R experienced definition, see AFMAN 11-2MQ-9V1.

2.7.5. Instructors who receive an ATLC certification are eligible to instruct ATLC events at the discretion of the SQ/CC. Any ATLC IP or ISO certification will be documented in the member's flight evaluation folder. **(T-2)** SQ/CCs should track ATLC instructors separate from MCE and LOS L/R instructors on the squadron LoX (and AF Form 4348 if used).

2.8. Formal Training Unit (FTU) Instructor, Weapons Instructor Course (WIC) Instructor, and Operational Test Mission Evaluations.

2.8.1. **FTU IP or ISO Evaluations.** FTU IP or ISO certification will adhere to FTU Instructor Upgrade Training syllabus requirements. **(T-2)** If the candidate is receiving their INIT INSTR qualification evaluation as part of the syllabus, document in the additional comments with: "This evaluation is the examinee's FTU instructor certification." Periodic FTU INSTR evaluations conducted with an FTU student will comply with the student FTU evaluation sortie requirements. **(T-3)**

2.8.2. Operational Test Mission Evaluations.   Operational test aircrew MSN evaluation profiles may be conducted on any test mission.

Table 2.1. Aircrew Evaluation Grading Areas.

AREA	NOTE	AREA TITLE	QUAL	INSTM	MSN
AIRCREW EVALUATION CRITERIA – GENERAL					
1		MISSION PLANNING	**R**	**R**	**R**
2		BRIEFING (if applicable)	**R**	**R**	**R**
3	1,2	PRE-TAKEOFF	**R**		
4	1,2	TAKEOFF	**R**		
6	1,2	DEPARTURE	**R**		
7	2	LEVEL OFF	**P**	**R**	
8		CRUISE/ NAVIGATION	**R**	**R**	**R**
10		IN-FLIGHT CHECKS	**R**	**R**	**R**
11		FUEL MANAGEMENT	**P**	**R**	**P**
12		COMMUNICATIONS (COMM)/ IDENTIFICATION FRIEND OR FOE (IFF)/ SELECTIVE IDENTIFICATION FEATURE (SIF)	**P**	**R**	**P**
16		WEAPONS SYSTEM/BUILT IN TEST (BIT) CHECKS	**R**		**R**
18	1,2	DESCENT	**R**	**R**	
19	1,2	GO-AROUND	**R**		
20	1,2	RECOVERY	**R**		
21	1	EMERGENCY TRAFFIC PATTERN (PRIOR TO CONFIGURATION)	**R**		
22	1	EMERGENCY APPROACH/LANDING (CONFIGURATION THROUGH ROLLOUT)	**R**		
23	1	Visual Flight Rules (VFR) PATTERN/APPROACH	**R**		
25a.	1	LANDING (manual)	**R**		
25b.	2	LANDING (automatic)	**R**		

26	1,2	AFTER LANDING	R		
28		DEBRIEFING/CRITIQUE	R		R
29		KNOWLEDGE	R	R	R
30	**Critical**	AIRMANSHIP/SITUATIONAL AWARENESS	R	R	R
31	**Critical**	SAFETY	R	R	R
32	**Critical**	FLIGHT DISCIPLINE	R	R	R
35		RESERVED FOR FUTURE USE			
36		TASK PRIORITIZATION	R	R	R
37		COCKPIT/CREW RESOURCE MANAGEMENT	R	R	R
38	1,2	TAKEOFF AND LANDING DATA	R	R	R
43		RESERVED FOR FUTURE USE			
53		RISK MANAGEMENT/DECISION MAKING	R	R	R
800		RESERVED FOR FUTURE USE			
801		AIRCRAFT OPERATION	R		R
AIRCREW EVALUATION CRITERIA – INSTRUMENT					
34		INSTRUMENT INTERPRETATION		R	
62	1,2	INSTRUMENT PENETRATION/ ENROUTE DESCENT HOLDING	P		
67	1,2	CLIMB OUT	R		R
69		INSTRUMENT CROSS-CHECK		R	
70	1	ENGINE-OUT PATTERN (EMERGENCY LANDING PROCEDURES)	R		
AIRCREW EVALUATION CRITERIA – TACTICAL EMPLOYMENT					
81		TACTICAL/MISSION PLAN			R
83		TACTICAL/MISSION EXECUTION			R
85		TACTICAL COMMUNICATIONS			R
88		TACTICAL NAVIGATION			R

89		INGRESS			R
90		EGRESS			R
92		MISSION TIMING			R
93		TRAINING RULES/Rules of Engagement (ROE)			R
94		THREAT REACTIONS			R
95		IN-FLIGHT REPORT			R
100		SENSOR/PAYLOAD MANAGEMENT	S		S
131		TARGET ACQUISITION/TRACKING	S		S
132		AIR-TO-SURFACE WEAPONS EMPLOYMENT			R
133		RANGE/AIRSPACE PROCEDURES			R
134		AIR-TO-SURFACE SENSOR OPERATIONS			S
139		DYNAMIC TARGETING			R
161		DEGRADED/DENIED Global Positioing System (GPS)			R
162		DEGRADED/DENIED COMMUNICATIONS			
163		DEGRADED/DENIED DATALINK			
164		DATALINK OPERATION	R		R
172		IMAGERY QUALITY	S		S
174		TARGET ANALYSIS			S
182		TACTICAL AIR CONTROL SYSTEM (TACS) COORDINATION	P		
227		POST-MISSION	R		R
802		AIRCRAFT POSITIONING	P		R
AIRCREW EVALUATION CRITERIA – INSTR					
33		INSTRUCTOR ABILITY	R		
47		INSTRUCTOR BRIEFING/DEBRIEFING	R		
50		TRAINING/EVALUATION FORMS PREPARATION	R		

| 55 | | INSTRUCTOR KNOWLEDGE | R | | |
| 56 | | DEMONSTRATION OF PROCEDURES | R | | |

Notes:
P: Pilot requirement only.
S: Sensor Operator (SO) requirement only.
1. Required for LOS L/R evaluations IAW paragraph 2.4. Paragraph 2.1.5 applies.
2. Required as pertains to automatic takeoff/landing operations for ATLC certified crews. Paragraph 2.1.5 applies.

2.9. Emergency Procedures Evaluations (EPEs).

2.9.1. EPE scenarios are specifically designed to gauge examinees' general knowledge and ability to bring emergency scenarios to a logical conclusion. FEs will use an ATD to conduct EPEs, if available. **(T-3)** If an ATD is unavailable, administer the EPE verbally and document in the Additional Comments section of AF Form 8. Crewmembers will not be evaluated on events in which they are not specifically trained/qualified. **(T-2)**

2.9.2. Individual QUAL or MSN EPEs will be documented as "EPE" in the Ground Phase portion of AF Form 8. **(T-2)** Documentation will be based on the type of evaluation identified on the Flight Phase Portion of AF Form 8. **(T-2)** Areas graded in a SPOT EPE will be specified in the additional comments section. **(T-2)**

2.9.3. In situations where QUAL and MSN evaluation eligibility zones overlap, a single EPE may be administered to fulfill the requisites for combined QUAL/MSN evaluations. The combined EPE must be of sufficient scope and length to ensure all required areas for each evaluation are accomplished. **(T-2)**

2.9.4. All EPEs shall evaluate Pilots and SOs on general aircraft, mission systems knowledge as required by their crew position, and crew resource management. **(T-2)**

2.9.5. QUAL EPEs shall evaluate all CAPs and at least two additional EPs for each phase of flight in which the aircrew member is attaining or maintains qualification, and three additional EPs for the inflight phase, for a total of eight total EPs minimum. **(T-3)**

2.9.6. SPOT EPEs specific to LOS L/R and ATLC certifications areas on a current AF Form 8 will evaluate all CAPs and required areas per **Table 2.2**. **(T-2)**

2.9.7. MSN EPE scenarios will be tailored to unit tasking and include areas not normally evaluated in flight, including the following items: **(T-3)**

2.9.7.1. Basic sensor systems operation. **(T-3)**

2.9.7.2. Safe passage procedures/threat avoidance/reaction. **(T-3)**

2.9.7.3. Weapons employment and switchology. **(T-3)**

2.9.7.4. Unit specific additional hardware/software and techniques for mission execution. **(T-3)**

2.9.8. EPE examinees receiving an EPE grade of Unqualified (Q3):

2.9.8.1. Will be placed in supervised status IAW AFMAN 11-202V2 until completing recommended additional training, if required, and successfully accomplishing a reevaluation. **(T-2)**

2.9.8.2. Examinees receiving a Q3 because of an incorrect response to a CAP situation will not be permitted to fly in their aircrew position until a successful reevaluation is accomplished. **(T-2)**

2.9.9. EPE examinees receiving a Q2 should be placed in supervised status IAW AFMAN 11-202V2 until completion of recommended additional training. **(T-2)**

2.9.10. Use the following general grading criteria to grade individual areas on EPEs:

2.9.10.1. **Q.** Correct performance. Quickly recognizes and corrects errors.

2.9.10.2. **Q-.** Safe Performance, but limited in proficiency. Makes errors of omission or commission.

2.9.10.3. **U.** Performance indicates lack of knowledge, ability, and/or is unsafe.

2.9.11. The following areas are required and shall be graded on all EPEs:

2.9.11.1. Aircraft General Knowledge **(T-2)**

2.9.11.2. Cockpit/Crew Resource Management (CRM) **(T-2)**

2.9.11.3. Checklist Usage **(T-2)**

2.9.11.4. Emergency Procedures/Aircraft Malfunctions **(T-2)**

2.9.11.4.1. All CAPs **(T-2)**

2.9.11.4.2. Required areas per **Table 2.2**. **(T-3)**

2.9.12. The following areas are required and shall be graded on all INSTM and/or QUAL EPEs:

2.9.12.1. Instrument Flight Procedures, IAW AFMAN 11-202 Volume 3, *Flight Operations.* **(T-2)**

2.9.12.2. Unusual Attitude Recoveries. **(T-2)**

2.9.13. Weapon System Operation is required and shall be graded on all MSN EPEs, as the FE tailors the MSN evaluation scenario to the unit tasking/mission. **(T-3)**

Table 2.2. EPE Grading Areas.

AREA	NOTES	AREA TITLE	INSTM/ QUAL	MSN
GENERAL				
15		UNUSUAL ATTITUDE RECOVERIES	R	
29		KNOWLEDGE	R	R

37		COCKPIT/CREW RESOURCE MANAGEMENT	**R**	**R**
301		EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (GENERAL)	**R**	**R**
302		CHECKLIST USAGE	**R**	**R**
305		WEAPON SYSTEM OPERATION		**R**
306		WEAPONS EMPLOYMENT		**R**
PRE-TAKEOFF			**R2**	**R2**
321	1,2	HYDRAULIC EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		
331	1,2	ELECTRICAL EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		
341	1,2	FUEL EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		
361	1,2	ENGINE EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		
371	1,2	LINK EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		
381	1,2	WEAPONS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		
391	1,2	AUTOPILOT EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		
401	1,2	BRAKES/LANDING GEAR EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		
411	1,2	EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (PRE-TAKEOFF)		
TAKEOFF			**R2**	**R2**
421	1,2	HYDRAULIC EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)		

431	1,2	ELECTRICAL EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)		
441	1,2	FUEL EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)		
461	1,2	ENGINE /AIRCRAFT MALFUNCTIONS (TAKEOFF)		
463	1,2	ABORT	**R**	
471	1,2	LINK EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)		
481	1,2	WEAPONS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)		
491	1,2	AUTOPILOT EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)		
501	1,2	BRAKES/LANDING GEAR EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)		
511	1,2	EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (TAKEOFF)		
IN-FLIGHT			**R3**	**R3**
531		ELECTRICAL EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		
541		FUEL EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		
561		ENGINE/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		
571		LINK EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		
581		WEAPONS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		**R**
591		AUTOPILOT EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		

601		BRAKES/LANDING GEAR EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		
611		EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (IN-FLIGHT)		
808	2	SATCOM FORCED LANDING PROCEDURES (Not Applicable (N/A) FOR LOS L/R QUALIFIED AIRCREW)	**R**	
LANDING			**R2**	**R2**
641	1,2	ELECTRICAL EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)		
651	1,2	FUEL EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)		
671	1,2	ENGINE/ AIRCRAFT MALFUNCTIONS (LANDING)		
681	1,2	LINK EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)		
691	1,2	WEAPONS EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)		
701	1,2	AUTOPILOT EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)		
711	1,2	BRAKES/LANDING GEAR EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)		
721	1,2	EMERGENCY PROCEDURES/AIRCRAFT MALFUNCTIONS (LANDING)		
Notes: 1. Required for LOS L/R evaluations IAW paragraph 2.4. 2. Required as pertains to automatic takeoff/landing operations for ATLC certified crews.				

Chapter 3

EVALUATION CRITERIA

3.1. General Grading Standards.

3.1.1. FEs should exercise judgment when the wording of areas is subjective and when specific situations are not covered.

3.1.2. FEs assign appropriate area grades by comparing examinee performance against standards per descriptions in this chapter. The overall flight evaluation grade should be derived from individual area grades based on a composite for the observed events and tasks. Refer to **Table 3.1**.

3.1.3. When evaluation grading criteria specifies airspeeds and the flight manual lists only minimum/maximum airspeed for that area, the examinee will brief the desired airspeed. **(T-3)**

Table 3.1. General Aircraft Control Criteria.

The following general criteria apply during all phases of flight except as noted for specific events (weather, mission requirements or other events not requiring FE intervention) and instrument final approaches:		
Q	Altitude	±150 feet
	Airspeed	+10/-5 knots indicated airspeed (KIAS)
	Course	±10 degrees/1.5 nautical miles (NM) (whichever is greater)
Q-	Altitude	+/- 200 feet
	Airspeed	+15/-7 KIAS
	Course	+/- 20 degrees/3 NM (whichever is greater)
U		Exceeded Q- limits

3.2. Documentation of Target Development Results. Document results in the Mission Description Section of AF Form 8. Reasons for unsuccessful attempts must be documented on AF Form 8. **(T-3)** Refer to **Table 3.2** for example.

Table 3.2. Documenting Target Development Results (Example).

Target Acquisition scores were:	ATTEMPTED	VALID
Planned	1	1
Ad Hoc	1	0

3.3. Documentation of Weapons Employment Delivery Results. FEs document weapons employment results in the Mission Description Section of AF Form 8 for mission evaluations. Include entries for each type of actual and simulated ordnance that were employed. Refer to **Table 3.3** for example.

3.3.1. Air-to-Surface (A-S). Record result validity for each A-S attempted delivery. Document results as in **Table 3.3** Document reasons for unsuccessful deliveries in the Additional Comments section on AF Form 8.

3.3.2. FE judgment should be the determining factor in deciding the weapons employment grade. Weapons ruled valid/invalid per Air Force Tactics, Techniques, and Procedures (AFTTP) 3-1.Shot/Kill, *Tactical Employment Shot Kill*, criteria may be confirmed through the use of weaponeering software. The FE may elect to award a higher area grade than warranted by the score(s), and include the justification in the Comments Section of the AF Form 8.

Table 3.3. Documenting A-S Weapons Delivery Results (Example).

Simulated A-S weapons scores were:	ATTEMPTED	VALID
Air-to-Ground Munition (AGM)	2	2*
Laser-Guided Bomb (LGB)	1	0**
Precision-Guided Munition (PGM) (as applicable)	2	1
Video assessment is assumed, otherwise *Simulator assessed/ **Range Scored		

3.4. Documenting Laser Designator Target Marking. Laser Designator Target Marks. Score as a "HIT" those marks (including buddy lase) if they are assessed as valid for marking the designated target, delivered in a timely manner, and delivery used is tactically sound. Score as a "MISS" if they are invalid for target marking, untimely, or the deliveries are tactically unsound. Annotate reasons for misses/unsuccessful attempts in the Additional Comments section on the AF Form 8. Refer to **Table 3.4** for example.

Table 3.4. Documenting Laser Designator Target Marking (Example).

Laser Designator Target Marking scores were:	HIT	MISS
Quantity	1	1

Chapter 4

EVALUATION GRADE CRITERIA

4.1. General Aircrew Evaluation Criteria. Criteria marked "[P]" are for Pilots only. Criteria marked "[SO]" are for Sensor Operators only.

  4.1.1. **Area 1 — Mission Planning** .

    4.1.1.1. Mission Preparation.

      4.1.1.1.1. **Q.** Clearly defined the mission overview and mission goals. Effectively accomplished directed mission planning tasks. Developed a sound plan to accomplish the mission.   Solicited feedback from others to ensure understanding of mission requirements. Thoroughly critiqued plans to identify potential problem areas and ensured all flight members understood possible contingencies. Checked all factors applicable to flight IAW applicable directives. When required, extracted necessary information from air tasking order/fragmentary order. Aware of alternatives available if flight cannot be completed as planned. Accomplished all items required by Go/No-Go Processes. Prepared at briefing time.

      4.1.1.1.2. **Q-.** Did not adequately define the mission overview and mission goals. Did not adequately address potential problem areas. Did not adequately solicit feedback or critique the plans to ensure understanding of possible contingencies. Minor error(s) or omission(s) detracted from mission effectiveness, but did not affect mission accomplishment. Demonstrated limited knowledge of performance capabilities or approved operating procedures/rules in some areas.

      4.1.1.1.3. **U.** Did not define the mission overview and goals. Did not accomplish directed mission planning tasks. Lack of specific information on required items. Did not solicit feedback from other crewmembers to ensure understanding. Did not critique plans to identify potential problem areas. Major error(s) or omission(s) would have prevented a safe or effective mission. Displayed unsatisfactory knowledge of operating data or procedures. Did not review or initial Go/No Go items. Not prepared at briefing time.

    4.1.1.2. Publications.

      4.1.1.2.1. **Q.** Publications were current and usable for any of the unit's combat/mission taskings. Contained only minor deviations, omissions, and/or errors.

      4.1.1.2.2. **Q-.** Publications contained deviations, omissions, and/or errors; however, contained everything necessary to effectively accomplish the mission and did not compromise safety of flight.

      4.1.1.2.3. **U.** Publications were not current, contained major deviations, omissions, errors, and/or utilized out of date publications that were not marked for reference only.

  4.1.2. **Area 2 — Briefing (if applicable).**

    4.1.2.1. Organization.

4.1.2.1.1. **Q.** Well organized, included all applicable information and presented in a logical sequence. Briefed flight member responsibilities, combat mission priorities and sensor management.

4.1.2.1.2. **Q-.** Events out of sequence, hard to follow, some redundancy. Not fully prepared for briefing.

4.1.2.1.3. **U.** Confusing presentation, poorly organized and not presented in a logical sequence. Failed to brief required areas.

4.1.2.2. Presentation.

4.1.2.2.1. **Q.** Presented briefing in a professional manner covering all pertinent items. Effectively used available briefing aids. Flight members clearly understood mission requirements.

4.1.2.2.2. **Q-.** Some difficulty communicating clearly. Did not make effective use of available briefing aids. Dwelt on nonessential mission items.

4.1.2.2.3. **U.** Failed to conduct/attend required briefings. Failed to use available briefing aids. Redundant with lack of continuity. Lost interest of flight members. Demonstrated lack of knowledge of subject. Presentation created doubts or confusion.

4.1.2.3. Mission Coverage.

4.1.2.3.1. **Q.** Established objectives for the mission. Presented all training events and special interest items. Included effective technique discussion for accomplishing the mission.

4.1.2.3.2. **Q-.** Omitted items pertinent, but not critical, to the mission. Limited discussion of training events or special interest items. Dwelt on non-essential items. Limited discussion of valid techniques.

4.1.2.3.3. **U.** Did not establish relevant objectives for the mission. Omitted essential items. Failed to discuss training events or special interest items. Presented erroneous information and/or did not correct erroneous information that would affect safe/effective mission accomplishment. Omitted major training events. Did not discuss valid techniques.

4.1.3. **Area 3 — Pre-Takeoff.**

4.1.3.1. **Q.** Accurately determined readiness of aircraft for flight. Performed all checks and procedures prior to takeoff IAW approved checklists and applicable directives.

4.1.3.2. **Q-.** Made minor procedural deviations which did not detract from mission effectiveness.

4.1.3.3. **U.** Omitted major item(s) of the appropriate checklist. Major deviations in procedure which would preclude safe mission accomplishment. Failed to accurately determine readiness of aircraft for flight. Crew errors directly contributed to a late takeoff, which degraded the mission or made it non-effective.

4.1.4. **Area 4 — Takeoff.**

4.1.4.1. **Q.** Maintained smooth aircraft control throughout takeoff. (ATLC: appropriately monitored/actioned automatic takeoff) Performed takeoff IAW MDS TOs and AFTTPs.

4.1.4.2. **Q-.** Minor procedural deviations. Control was inconsistent, rough or erratic. (ATLC: lack of effective monitoring/action)

4.1.4.3. **U.** Takeoff potentially dangerous. Exceeded aircraft/systems limitations and/or violated applicable flight rules. Failed to establish proper climb attitude. (ATLC: failed to intervene appropriately to dangerous situation on automatic takeoff)

4.1.5. **Area 6 — Departure.**

4.1.5.1. **Q.** Performed departure as published/directed and complied with all restrictions.

4.1.5.2. **Q-.** Minor deviations in airspeed and navigation occurred during completion of departure.

4.1.5.3. **U.** Failed to comply with published/directed departure instructions.

4.1.6. **Area 7 — Level Off.**

4.1.6.1. [P] **Q.** Leveled off smoothly. Promptly established proper cruise airspeed.

4.1.6.2. [P] **Q-.** Level off was not smooth. Slow in establishing proper cruise airspeed. Slow to set/reset altimeter, as required.

4.1.6.3. [P] **U.** Level-off was erratic. Excessive delay or failed to establish proper cruise airspeed. Failed to set/reset altimeter, as required.

4.1.7. **Area 8 — Cruise/Navigation.**

4.1.7.1. **Q.** Demonstrated satisfactory capability to navigate using all available means. Used appropriate navigation procedures. Complied with clearance instructions. Aware of position at all times. Remained within the confines of assigned airspace.

4.1.7.2. **Q-.** Minor errors in procedures/use of navigation equipment. Slow to comply with clearance instructions. Had some difficulty in establishing exact position, area, and course.

4.1.7.3. **U.** Major errors in procedures/use of navigation equipment. Could not establish position. Failed to recognize checkpoints or adjust for deviations in time and course. Did not remain within the confines of assigned airspace.

4.1.8. **Area 10 — In-Flight Checks.**

4.1.8.1. **Q.** Performed all in-flight checks as required.

4.1.8.2. **Q-.** Made minor deviations or omissions during checks. Did not detract from mission accomplishment.

4.1.8.3. **U.** Did not perform in-flight checks or monitor systems to the degree that an emergency condition would have developed if allowed to continue uncorrected or would have severely degraded mission accomplishment.

4.1.9. **Area 11 — Fuel Management.**

4.1.9.1. [P] **Q.** Actively managed fuel throughout the mission. Complied with all established fuel requirements.

4.1.9.2. [P] **Q-.** Errors in fuel management procedures that did not preclude mission accomplishment.

4.1.9.3. [P] **U.** Failed to monitor fuel status or comply with established fuel requirements. Poor fuel management precluded mission accomplishment or required intervention for safety. Did not adhere to briefed fuel requirements.

4.1.10. **Area 12 — Communications (COMM)/Identification Friend or Foe (IFF)/ Selective Identification Feature (SIF).**

4.1.10.1. [P] **Q.** Complete knowledge of and compliance with correct COMM/IFF/SIF procedures. Transmissions concise, accurate and utilized proper terminology. Complied with and acknowledged all required instructions. Thoroughly familiar with communications security requirements, HAVE QUICK and secure voice equipment (if applicable).

4.1.10.2. [P] **Q-.** Occasional deviations from correct procedures required retransmissions or resetting codes. Slow in initiating or missed several required calls. Minor errors or omissions did not significantly detract from situational awareness, threat warning or mission accomplishment. Transmissions contained extraneous matter, were not in proper sequence or used nonstandard terminology. Demonstrated limited knowledge of communications security requirements, HAVE QUICK and secure voice equipment (if applicable).

4.1.10.3. [P] **U.** Incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Omitted numerous required radio calls. Inaccurate or confusing terminology significantly detracted from situational awareness, threat warning or mission accomplishment. Displayed inadequate knowledge of communications security requirements, HAVE QUICK and secure voice equipment (if applicable). Unable to properly authenticate.

4.1.11. **Area 16 — Weapons System/Built In-Test (BIT) Checks.**

4.1.11.1. **Q.** Completed all checks. Thorough knowledge and performance of weapons system checks.

4.1.11.2. **Q-.** Completed most weapons system checks. Limited knowledge of checks. Unsure of systems degradation due to check failure.

4.1.11.3. **U.** Failed to complete weapons system checks. General lack of knowledge on how to perform weapons system checks. Unable to determine systems degradation due to check failures.

4.1.12. **Area 18 - Descent.**

4.1.12.1. **Q.** Performed descent as directed, complied with all restrictions.

4.1.12.2. **Q-.** Performed descent as directed with minor deviations.

4.1.12.3. **U.** Performed descent with major deviations.

4.1.13. **Area 19 — Go-Around.**

4.1.13.1. **Q.** Initiated and performed go-around promptly IAW flight manual and operational procedures and directives.

4.1.13.2. **Q-.** Slow to initiate go-around or procedural steps.

4.1.13.3. **U.** Did not self-initiate go-around when appropriate or directed. Applied incorrect procedures.

4.1.14. **Area 20 — Recovery.**

4.1.14.1. **Q.** Performed recovery IAW applicable procedures using proper techniques. Provided efficient commentary throughout recovery.

4.1.14.2. **Q-.** Performed recovery with minor deviations from established or appropriate procedures. Slow to obtain sensor track and/or contact due to poor technique during sensor assisted trail recovery. Inefficient commentary.

4.1.14.3. **U.** Recovery not performed IAW applicable procedures. Unable to accomplish sensor assisted trail recovery (if applicable) due to poor technique.

4.1.15. **Area 21 — Emergency Traffic Pattern (Prior to configuration).**

4.1.15.1. **Q.** Complied with all TOs, AFTTP 3-3.MQ-9, *Combat Aircraft Fundamentals MQ-9*, and other applicable procedures. Maintained safe maneuvering airspeed/angle of attack (AOA). Flew approach compatible with the situation. Adjusted approach for type of emergency.

4.1.15.2. **Q-.** Minor procedural errors. Erratic airspeed/AOA control. Errors did not detract from safe handling of the situation but were inappropriate for the situation/emergency.

4.1.15.3. **U.** Did not comply with applicable procedures. Erratic airspeed/AOA control compounded problems associated with the emergency. Flew an approach that was incompatible with the simulated emergency. Did not adjust approach for the emergency.

4.1.16. **Area 22 — Emergency Approach/Landing (Configuration through rollout).**

4.1.16.1. **Q.** Used sound judgment and safely landed. Configured at the appropriate position/altitude for the situation and emergency. Flew final, based on recommended procedures, airspeed/AOA and glide path, that was appropriate for the situation and emergency. Smooth, positive control of aircraft. Touchdown point was IAW TO and other guidance and/or permitted safe stopping on available runway. Arrestment gear was safely used (if applicable).

4.1.16.2. **Q-.** Safety not compromised. Configured at a position and altitude which allowed for a safe approach. Could have landed safely, however deviations from recommended procedures, airspeed/AOA and altitudes were not appropriate for the situation or emergency. Unnecessary maneuvering due to minor errors in planning or judgment.

4.1.16.3. **U.** Major deviations from recommended procedures, airspeed/AOA and altitudes. Required excessive maneuvering due to inadequate planning or judgment. Could not have landed safely. Touchdown point was not IAW applicable guidance and did not or would not allow for safe stopping on available runway. Arrestment gear could not have been used. Did not attempt go-around if approach was unsuccessful.

4.1.17. **Area 23 — Visual Flight Rules (VFR) Pattern/Approach.**

4.1.17.1. **Q.** Performed patterns/approaches IAW TO and AFTTP guidance and local directives. Aircraft control was smooth and positive. Accurately aligned with runway. Proper/briefed airspeed.

4.1.17.2. **Q-.** Performed patterns/approaches with minor deviations versus TO and AFTTP guidance and local directives. Aircraft control was not consistently smooth, but safe. Alignment with runway varied. Slow to correct to proper/briefed airspeed.

4.1.17.3. **U.** Approaches not performed IAW TO and AFTTP guidance and local directives. Erratic aircraft control. Large deviations in runway alignment.

4.1.18. **Area 25 — Landing.**

4.1.18.1. Manual Landings for LOS Launch and Recovery Element (LRE) Crews: Listed criteria applicable to normal VFR approaches. Where runway configuration, arresting cable placement or applicable guidance requires an adjustment to the desired touchdown point, a simulated runway threshold should be identified and the grading criteria applied accordingly. At least one landing on the primary nose camera and one with the Multi-Spectral Targeting System (MTS)-infrared (IR) or Electrical Optical (EO) camera will be accomplished. **(T-3)** Accomplish one approach using the nose IR camera which may terminate in a go-around.

4.1.18.1.1. **Q.** Performed landings IAW procedures and techniques outlined in the flight manual, AFTTPs, and local directives. Aircraft control was smooth and positive. Accurate runway alignment.

4.1.18.1.2. **Q-.** Performed landings IAW procedures and techniques outlined in the flight manual, AFTTPs, and local directives with minor deviations, omissions, and/or errors not jeopardizing safety of flight. Rough aircraft control but runway alignment was accomplished.

4.1.18.1.3. **U.** Landing not performed IAW procedures and techniques outlined in the flight manual, and local directives. Runway alignment not properly accomplished

4.1.18.2. Automatic Landings for ATLC Certified MCE and LRE Crews: Listed criteria only applicable to automatic landing approaches. Where runway configuration, arresting cable placement or applicable guidance requires an adjustment to the desired touchdown point, a simulated runway threshold should be identified and the grading criteria applied accordingly. Accomplish at least one automatic landing. Accomplish one approach which terminates in a go-around.

4.1.18.2.1. **Q.** Performed landings IAW procedures and techniques outlined in the flight manual, AFTTPs, and local directives. Building of pattern was correct. Monitoring of automatic approach and landing was appropriate. Intervention was correctly and timely applied.

4.1.18.2.2. **Q-.** Performed landings IAW procedures and techniques outlined in the flight manual, AFTTPs, and local directives. Building of pattern and approach had minor deviations, omissions, and/or errors not jeopardizing safety of flight. Intervention of approach and landing was not accurate or timely, but did not jeopardize safety of flight.

4.1.18.2.3. **U.** Landing not performed IAW procedures and techniques outlined in the flight manual, and local directives. Building of pattern was incorrect and jeopardized safety of flight. Monitoring of automatic approach and landing was insufficient; and/or intervention was incorrectly or untimely applied resulting in a dangerous situation developing.

4.1.19. **Area 26 — After Landing.**

4.1.19.1. **Q.** Appropriate after landing checks and aircraft taxi procedures accomplished IAW TO and applicable directives. Completed all required forms accurately.

4.1.19.2. **Q-.** Same as qualified except some deviations or omissions noted in performance of after landing check and/or aircraft taxi procedures in which safety was not jeopardized. Required forms completed with minor errors.

4.1.19.3. **U.** Major deviations or omissions were made in performance of after-landing check or aircraft taxi procedures which could have jeopardized safety. Data recorded inaccurately or omitted.

4.1.20. **Area 28 — Debriefing/Critique.**

4.1.20.1. **Q.** Thoroughly debriefed the mission (or applicable portions) in a timely manner. Correctly analyzed mission results with respect to established objectives. Provided specific, objective, non-threatening positive and negative feedback on team and individual performance. Debriefed deviations. Offered corrective guidance as appropriate. Thoroughly debriefed any breakdowns in de-confliction contracts, roles and responsibilities. Asked for reactions/inputs from other mission participants. Recapped key points and compared mission results with mission objectives.

4.1.20.2. **Q-.** Limited debriefing. Did not thoroughly discuss performance relative to mission objectives. Minor time management problems. Debriefed mission without specific, non-threatening positive and negative feedback on individual and team performance. Did not debrief significant deviations to an acceptable level. Did not consistently seek input from other mission participants. Incomplete or inadequate re-cap of key points and comparison of mission results to mission objectives.

4.1.20.3. **U.** Did not correctly debrief mission deviations or offer corrective guidance. Used excessive time to debrief. Failed to debrief breakdowns in de-confliction contracts, roles and responsibilities. Did not provide non-threatening positive and negative feedback during debriefing. Did not seek input from other mission participants. Did not re-cap key mission points nor compare mission results to mission objectives.

4.1.21. **Area 29 — Knowledge.** Evaluate all applicable sub-areas.

4.1.21.1. Aircraft General.

4.1.21.1.1. **Q.** Demonstrated thorough knowledge of aircraft systems, limitations and performance characteristics.

4.1.21.1.2. **Q-.** Knowledge of aircraft systems, limitations, and performance characteristics were sufficient to perform the mission safely. Demonstrated deficiencies either in depth of knowledge or comprehension.

4.1.21.1.3. **U.** Demonstrated unsatisfactory knowledge of aircraft systems, limitations or performance characteristics.

4.1.21.2. Flight Rules/Procedures.

4.1.21.2.1. **Q.** Thorough knowledge of flight rules and procedures. Demonstrated knowledge of operating procedures and restrictions and where to find them in the correct publications.

4.1.21.2.2. **Q-.** Deficiencies in depth of knowledge. Unsure of some directives and/or had difficulty locating some information in appropriate publications.

4.1.21.2.3. **U.** Inadequate knowledge of flight rules and procedures/could not locate them in the appropriate publication in a timely manner.

4.1.21.3. Weapons/Tactics/Threats.

4.1.21.3.1. **Q.** Thorough knowledge of all aircraft weapons systems, weapons effects, tactics and threats applicable to the unit mission.

4.1.21.3.2. **Q-.** Deficiencies in depth of knowledge or comprehension of weapons systems, weapons effects, tactics and/or threat knowledge which would not preclude successful mission accomplishment.

4.1.21.3.3. **U.** Insufficient knowledge of weapons, tactics and/or threat contributed to ineffective mission accomplishment.

4.1.21.4. Local Area Procedures.

4.1.21.4.1. **Q.** Thorough knowledge of local area procedures.

4.1.21.4.2. **Q-.** Limited knowledge of local area procedures.

4.1.21.4.3. **U.** Inadequate knowledge of local area procedures.

4.1.21.5. Communications.

4.1.21.5.1. **Q.** Complete knowledge of, and compliance with, correct communications procedures. Transmissions concise with proper terminology and acknowledged all required instructions.

4.1.21.5.2. **Q-.** Occasional deviations from procedures that required re-transmissions. Slow in initiating, or missed, several required radio/intercom calls. Transmissions contained extraneous matter, were not in proper sequence, or used non-standard terminology.

4.1.21.5.3. **U.** Incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Omitted numerous radio/intercom calls.

4.1.22. **Area 30 — Airmanship/Situational Awareness (Critical).**

4.1.22.1. **Q.** Executed the assigned mission in an efficient manner. Conducted the flight with a sense of understanding and comprehension. Made appropriate decisions based on available information. Recognized the need for action. Aware of performance of self and other flight members. Aware of on-going mission status. Recognized, verbalized and correctly acted on unexpected events.

4.1.22.2. **U.** Decisions or lack thereof resulted in failure to accomplish the assigned mission. Mis-analyzed flight conditions and/or failed to recognize/understand mission developments, or demonstrated poor judgment to the extent that flight safety could have been compromised. Did not recognize the need for action. Not aware of performance of self and other flight members. Not aware of on-going mission status. Failed to recognize, verbalize and act on unexpected events.

4.1.23. **Area 31 -- Safety (Critical).**

4.1.23.1. **Q.** Aware of, and complied with, all safety factors required for safe aircraft operation and mission accomplishment.

4.1.23.2. **U.** Was not aware of or did not comply with all safety factors required for safe operation or mission accomplishment. Did not adequately clear aircraft flight path. Operated the aircraft in a dangerous manner. A clear lack of judgment hampered or precluded mission accomplishment. Allowed a dangerous situation to develop without taking proper corrective action or notifying other crewmembers.

4.1.24. **Area 32 — Flight Discipline (Critical).**

4.1.24.1. **Q.** Provided required direction/information. Correctly adapted to meet new situational demands. Demonstrated strict professional flight and crew discipline throughout all phases of the mission. Sound judgment enhanced mission accomplishment and was evident in the decision-making process.

4.1.24.2. **U.** Did not provide direction/information when needed. Did not correctly adapt to meet new situational demands. Failed to exhibit strict flight or crew discipline. Violated or ignored rules or instructions.

4.1.25. **Area 35 — Reserved for future use.**

4.1.26. **Area 36 — Task Prioritization.**

4.1.26.1. **Q.** Correctly identified, prioritized and managed tasks based on existing and new information that assured mission success. Used available resources to manage workload, communicated task priorities to other flight members. Asked for assistance when required. Displayed sound knowledge of systems. Effectively identified contingencies and alternatives. Gathered and crosschecked available data before acting. Clearly stated decisions and ensured they were understood. Investigated doubts and concerns of other flight members when necessary.

4.1.26.2. **Q-.** Made minor errors in prioritization, management of tasks, system knowledge which did not affect safe or effective mission accomplishment. Did not completely communicate task priorities to other flight members. Made minor errors in identifying contingencies, gathering data, or communicating a decision which did not affect safe or effective mission accomplishment.

4.1.26.3. **U.** Incorrectly prioritized or managed tasks. Displayed lack of systems knowledge causing task overload that seriously degraded mission accomplishment or safety of flight. Failed to communicate task priorities to other flight members. Failed to ask for assistance when overloaded. Improperly or ineffectively identified contingencies, gathered data, or communicated a decision that seriously degraded mission accomplishment or safety of flight.

4.1.27. **Area 37 — Cockpit/Crew Resource Management (CRM).**

4.1.27.1. **Q.** Effectively employed available resources to mitigate identified and/or emerging risks during the mission. Provided direction/information when needed.

4.1.27.2. **Q-.** Created confusion or delays that hindered mission accomplishment. Slow to provide direction/information when needed. Hesitant to adapt to meet new situational demands and focus crew attention on the task. Inadequate CRM degraded crew problem solving and hampered any shift in crew dynamics.

4.1.27.3. **U.** Breakdown in crew coordination precluded mission accomplishment or jeopardized safety. Created confusion or delays that could have endangered the aircraft or prevented mission accomplishment. Did not provide direction/information when needed. Did not adapt to meet new situational demands and focus attention on the task. Did not ask for inputs and neglected any shift in crew dynamics necessary to achieve/maintain safe, effective operations.

4.1.28. **Area 38 — Takeoff and Landing Data.**

4.1.28.1. **Q.** Accurately computed and checked all required takeoff and landing data. Complete understanding of abort considerations, runway condition, and impact of weather on takeoff and landing operations. All distances computed to within ± 500 feet and all speeds ± 5 knots.

4.1.28.2. **Q-.** Computed and checked required takeoff data with minor omissions or errors, which did not detract from mission accomplishment or safety. Limited understanding of abort considerations, runway condition, and impact of weather on takeoff and landing operations. Computed distances within ± 800 feet and speeds ± 8 knots.

4.1.28.3. **U.** Major errors or omissions which compromise safety. Faulty or improper knowledge of takeoff and landing data. Computed distances and speeds tolerances greater than Q- parameters.

4.1.29. **Area 43 — Reserved for Future Use.**

4.1.30. **Area 53 — Risk Management/Decision Making.**

4.1.30.1. **Q.** Appropriately identified contingencies and alternatives. Gathered and cross-checked available data in a timely manner, and provided rationale for decisions.

4.1.30.2. **Q-.** Occasionally identified contingencies and alternatives. Did not always gather and cross check available data before deciding or provide rationale for decisions. Acted indecisively at times.

4.1.30.3. **U.** Failed to identify contingencies or alternatives. Made no effort to gather and cross check available data before deciding, did not state decisions, provide rationale for decisions or get acknowledgment. If pilot in command, failed to establish proper balance between command authority and crewmember participation or acted indecisively.

4.1.31. **Area 800 — Reserved for Future Use**

4.1.32. **Area 801 — Aircraft Operation.** This area includes applicable aircraft systems operation as prescribed in the flight manual and other governing directives. Also include the

individual's system knowledge and proper operating procedures, analysis of equipment malfunctions, and use of proper corrective action.

4.1.32.1. **Q.** Operated aircraft according to procedures and checklists contained in the flight manual and governing directives.

4.1.32.2. **Q-.** Operated aircraft with some deviations, omissions, and/or errors from procedures required by the flight manual or governing directives.

4.1.32.3. **U.** Poor understanding or application of systems knowledge and/or operating procedures. Would have damaged aircraft if allowed to continue uncorrected.

4.2. Aircrew Evaluation Criteria — Instrument.

4.2.1. **Area 34 — Instrument Interpretation.**

4.2.1.1. **Q.** Demonstrated satisfactory knowledge of basic instrument procedures, in-flight penetration and approach procedures. Quickly analyzed flight instruments.

4.2.1.2. **Q-.** Demonstrated limited knowledge of instrument procedures. Slow to interpret instruments.

4.2.1.3. **U.** Displayed faulty or insufficient knowledge of instrument procedures. Unable to properly interpret instruments.

4.2.2. **Area 62 — Instrument Penetration/Enroute Descent Holding (Mission altitude to pattern altitude).**

4.2.2.1. [P] **Q.** Performed the penetration/enroute descent IAW applicable flight manuals. Complied with all restrictions. Made smooth and timely corrections.

4.2.2.2. [P] **Q-.** Performed the penetration/enroute descent with minor deviations. Complied with most restrictions. Slow to make corrections.

4.2.2.3. [P] **U.** Performed the penetration/enroute descent with major deviations. Erratic corrections.

4.2.3. **Area 67 — Climb Out.**

4.2.3.1. **Q.** Executed climb out procedures IAW flight manuals and local operating directives.

4.2.3.2. **Q-.** Executed climb out with minor deviations to applicable flight manuals and local operating directives.

4.2.3.3. **U.** Executed climb out with major deviations or did not comply with applicable flight manuals and local operating directives.

4.2.4. **Area 69 — Instrument Cross-Check.**

4.2.4.1. **Q.** Effective instrument cross-check. Smooth and positive aircraft control throughout flight. Meets "Q" criteria listed in General Criteria, applicable special events or instrument final approaches.

4.2.4.2. **Q-.** Slow instrument cross-check. Aircraft control occasionally abrupt to compensate for recognition of errors. Meets "Q-" criteria listed in General Criteria, applicable special events or instrument final approaches.

4.2.4.3. **U.** Inadequate instrument cross-check. Erratic aircraft control. Exceeded Q-limits.

4.2.5. **Area 70 — Engine-Out Pattern (Emergency Landing Procedure).**

4.2.5.1. **Q.** Performed engine-out pattern IAW applicable directives. Used sound judgment. Configured at the appropriate position/altitude. Smooth positive control of aircraft. Able to prioritize actions to safely recover the aircraft. Maintained aircraft control within appropriate standards.

4.2.5.2. **Q-.** Performed engine-out pattern with minor deviations, omissions, and/or errors from applicable directives. Configured at a position and altitude, which allowed for a safe approach. Minor deviations from recommended procedures and altitudes. Unnecessary maneuvering due to minor errors in planning or judgment; however, did not jeopardize the safe recovery of the aircraft.

4.2.5.3. **U.** Judgment unsafe. Did not comply with applicable procedures. Performed emergency procedures with major deviations, omissions, and/or errors from recommended procedures and altitudes. Unable to safely recover the aircraft.

4.3. Aircrew Evaluation Criteria — Tactical Employment.

4.3.1. **General.**

4.3.1.1. **Area 81 — Tactical/Mission Plan.**

4.3.1.1.1. **Q.** Realistic, well-developed plan that encompassed mission objectives, threats and capabilities of all flight members. Addressed contingencies in development of plan.

4.3.1.1.2. **Q-.** Minor omissions in the plan resulted in less than optimum achievement of objectives and detracted from mission effectiveness. Planned tactics resulted in unnecessary difficulty.

4.3.1.1.3. **U.** Major errors in the plan precluded accomplishment of the stated objectives.

4.3.1.2. **Area 83 — Tactical/Mission Execution.**

4.3.1.2.1. **Q.** Applied tactics consistent with the threat, current directives, and good judgment. Executed the plan and achieved mission goals. Quickly adapted to changing environment. Maintained situational awareness.

4.3.1.2.2. **Q-.** Minor deviations from tactical plan which did not result in an ineffective mission. Slow to adapt to changing environment. Low situational awareness.

4.3.1.2.3. **U.** Unable to accomplish the mission due to major errors of commission or omission during execution of the plan. Situational awareness lost.

4.3.1.3. **Area 85 — Tactical Communications.**

4.3.1.3.1. **Q.** External communications (e.g., radio, multi-user Internet Relay Chat (mIRC)) were concise, accurate and effectively used to direct maneuvers or describe the tactical situation.

4.3.1.3.2. **Q-.** Minor terminology errors or omissions occurred, but did not significantly detract from situational awareness, mutual support or mission accomplishment. Extraneous comments over primary or secondary external communication methods presented minor distractions.

4.3.1.3.3. **U.** External communications over primary/secondary external communication methods were inadequate or excessive. Inaccurate or confusing terminology significantly detracted from mutual support, situational awareness or mission accomplishment.

4.3.1.4. **Area 88 — Tactical Navigation.**

4.3.1.4.1. **Q.** Navigated to desired destination and remained geographically oriented during the tactical portion of the mission. Altitude and route of flight reflected consideration for enemy threats. Maintained terrain awareness. Complied with established altitude minimums. Adhered to airspace restrictions.

4.3.1.4.2. **Q-.** Deviations from planned route of flight were recognized and corrected. Maintained terrain awareness. Altitude control contributed to exposure to threats for brief periods.

4.3.1.4.3. **U.** Failed to locate desired destination. Deviations from planned route of flight exposed flight to threats. Violated airspace restrictions or altitude minimums. Poor airspeed/altitude control contributed to disorientation. Inadequate terrain awareness.

4.3.1.5. **Area 89 — Ingress.**

4.3.1.5.1. **Q.** Aware of all known/simulated threats and defenses. Employed effective use of evasive maneuvers, and/or route and altitude selection.

4.3.1.5.2. **Q-.** Ignored some of the known/simulated threats and defenses. Improper use of evasive maneuvers, and/or route and altitude selection resulted in unnecessary exposure.

4.3.1.5.3. **U.** Failed to honor known/simulated threats and defenses significantly reducing survivability. Failed to employ effective evasive maneuvers, and/or route or altitude threat de-confliction.

4.3.1.6. **Area 90 — Egress.**

4.3.1.6.1. **Q.** Effectively used evasive maneuvers to complete an expeditious egress from the target area.

4.3.1.6.2. **Q-.** Egress contributed to unnecessary exposure to threats and delayed departure from target area.

4.3.1.6.3. **U.** Egress caused excessive exposure to threats.

4.3.1.7. **Area 92 — Mission Timing.** Evaluate all briefed mission timings (time at target, Fuel, Emitters, Navigation, Communication, and Engage [FENCE] checks, etc.). The FE may make allowances in timing for non-aircrew-caused delays or widen specific timing criterion if the aircraft had to maneuver extensively along the ingress route due to safety restrictions and/or weather.

4.3.1.7.1. **Q.** Effectively met mission timings.

4.3.1.7.2. **Q-.** Met most mission timings.

4.3.1.7.3. **U.** Unable to meet mission timings.

4.3.1.8. **Area 93 — Training Rules/Rules of Engagement (ROE).**

4.3.1.8.1. **Q.** Adhered to and knowledgeable of all training rules/ROE.

4.3.1.8.2. **Q-.** Minor deviations. Made timely and positive corrections. Did not jeopardize safety of flight.

4.3.1.8.3. **U.** Significant deviations indicating a lack of knowledge of training rules/ROE. Jeopardized safety of flight.

4.3.1.9. **Area 94 — Threat Reactions.**

4.3.1.9.1. **Q.** Threat reactions were timely and correct. Accomplished appropriate countermeasures and performed maneuvers to counter threat.

4.3.1.9.2. **Q-.** Threat reactions were slow or inconsistent. Slow to accomplish appropriate countermeasures or perform maneuvers to counter threat.

4.3.1.9.3. **U.** Numerous threat reactions were omitted or incorrect. Failed to accomplish countermeasures or perform maneuvers to counter threat.

4.3.1.10. **Area 95 — In-Flight Report.**

4.3.1.10.1. **Q.** Gave accurate, precise in-flight reports in correct format.

4.3.1.10.2. **Q-.** Deviated from established procedures/format. Completed reports.

4.3.1.10.3. **U.** Failed to make in-flight reports. Unfamiliar with in-flight reporting procedures.

4.3.1.11. **Area 100 — Sensor/Payload Management.**

4.3.1.11.1. [SO] **Q.** Demonstrated thorough knowledge and ability to timely and correctly manipulate the MTS payload settings, sensor, laser designator, and laser target marker to meet all mission requirements.

4.3.1.11.2. [SO] **Q-.** Demonstrated limited knowledge. Minor errors in manipulating the MTS payload settings, sensor, laser designator, or laser target marker. Did not impede mission accomplishment.

4.3.1.11.3. [SO] **U.** Demonstrated unsatisfactory knowledge. Major errors in procedures or equipment use. Could not use appropriate settings.

4.3.2. **Air-to-Surface.**

4.3.2.1. **Area 131 — Target Acquisition/ Tracking.**

4.3.2.1.1. Target Acquisition

4.3.2.1.1.1. [SO] **Q.** Acquired all planned and ad hoc targets efficiently and quickly. Targets accurately positioned within field of view (FOV) and not terrain/culturally masked.

4.3.2.1.1.2. [SO] **Q-.** Acquired all planned and ad hoc targets, timeliness was slow and ineffective at times without affecting mission effectiveness. Targets not always optimally positioned within FOV. Shadowing or terrain/cultural masking obscured portions of the target.

4.3.2.1.1.3. [SO] **U.** Acquired less than 60% of planned and ad hoc targets, target acquisition had direct negative impact on mission execution. Unable to keep target in FOV in order to prosecute mission. Excessive terrain/cultural masking.

4.3.2.1.2. Target Tracking. For the purposes of this manual, Target Tracking may be accomplished manually or with software tracking capability.

4.3.2.1.2.1. [SO] **Q.** Acquired and tracked mobile target, holding target in field of view to satisfy mission requirements. Target remained within the optimal field of view for entire tracking period to discern necessary activity as (dictated by mission needs).

4.3.2.1.2.2. [SO] **Q-.** Acquired and tracked mobile target, holding target in field of view to satisfy mission requirements. Target briefly exited field of view due to SO-induced system settings or minor deviations from optimal field of view.

4.3.2.1.2.3. [SO] **U.** Acquired, but unable to track mobile target. SO-induced system settings or field of view change resulted in target loss or prolonged inability to discern necessary activity. Allowed target to exit field of view three or more times. During target track, lost and unable to reacquire target.

4.3.2.2. **Area 132 — Air-to-Surface (A-S) Weapons Employment.**

4.3.2.2.1. [P] **Weapons Delivery Timing.** The FE may make allowances in timing for non-aircrew-caused delays or widen specific timing criterion if the aircraft had to maneuver extensively along the ingress route due to safety restrictions and/or weather. Weapons ruled valid/invalid per AFTTP 3-1.Shot/Kill may be confirmed through the use of weaponeering software. Evaluate all time-on-target restrictions as follows.

4.3.2.2.1.1. **Q.** $\pm$ 15 seconds, $\pm$ 1 kilometer (km) of desired/calculated release zone for AGMs and +/-30 seconds, $\pm$ .5 NM desired release/calculated point for inertially aided munitions (IAMs)/LGBs.

4.3.2.2.1.2. **Q-.** $\pm$ 30 seconds within +/- 2 km of desired/calculated release zone for AGMs and $\pm$1 minute, $\pm$ 1 NM of desired/calculated release point for IAMs/LGBs.

4.3.2.2.1.3. **U.** Exceeded Q- parameters.

4.3.2.2.2. **Weapons Attack Delivery Procedures.** Accomplish at least one type of employment (AGM or guided bomb unit (GBU), etc.)**.** MQ-9 crews should strive to accomplish all available types during an evaluation. If mission or software/hardware parameters prevent accomplishing both, document the reason on AF Form 8 in the Additional Comments section. Validate delivery procedures IAW AFTTP 3-1.Shot/Kill criteria. Use FE judgment/weaponeering software to validate attack(s).

4.3.2.2.2.1. **Q.** Demonstrated complete knowledge of weapons attack procedures, attack parameters, weapons effects, and weapons computations (if applicable) for

the events performed. Followed all current procedures and guidance during weapons delivery. At least 50% of total attacks assessed as valid at release [P], impact [SO], and effects [P and/or SO].

4.3.2.2.2.2. **Q-.** Minor errors in weapons attack procedures degraded weapons effectiveness, demonstrated minor lack of weapons attack knowledge. At least 50% of total attacks assessed as valid at release [P], impact [SO], and effects [P and/or SO].

4.3.2.2.2.3. **U.** Major errors in weapons attack procedures. Less than 50% of total weapons attacks assessed as valid at release [P], impact [SO], and effects [P and/or SO]. Demonstrated inadequate knowledge of weapons attack procedures, attack parameters, weapons effects, or weapons computations (if applicable) for the events performed.

4.3.2.3. **Area 133 — Range/Airspace Procedures.**

4.3.2.3.1. **Q.** Used proper procedures for entering and exiting the range. Range operations followed established procedures.

4.3.2.3.2. **Q-.** Minor deviations from established procedures for range entry, exit or operations.

4.3.2.3.3. **U.** Major deviations from established procedures for range entry, exit or operations.

4.3.2.4. **Area 134 — Air-to-Surface (A-S) Sensor Operation [S].** At least one type of employment (AGM or GBU, etc.) must be accomplished. **(T-2)** MQ-9 crews should strive to accomplish all available types during an evaluation. If mission or software/hardware parameters prevent accomplishing both, document the reason on AF Form 8 in the Additional Comments section. Validate impact criteria IAW AFTTP 3-1.Shot/Kill. Use FE judgment/weaponeering software to validate attack(s).

4.3.2.4.1. **Q.** At least 50% of all weapons attacks, to include buddy lase scenarios and target marking were valid at impact and/or met the intent of the attack.

4.3.2.4.2. **Q-.** At least 50% of total weapons attacks were valid at impact. Minor errors in target marking procedures that did not detract from overall mission effectiveness.

4.3.2.4.3. **U.** Less than 50% of total weapons attacks were valid at impact. Multiple errors resulted in degraded weapons effects and hindered overall mission success.

4.3.2.5. **Area 139 — Dynamic Targeting.**

4.3.2.5.1. **Q.** Effective coordination with outside agencies and contract execution within the flight resulted in prompt employment IAW the ROE, given restrictions or tactical situation.

4.3.2.5.2. **Q-.** Made minor errors during contract execution or slow/confused coordination with outside agencies resulted in delayed employment IAW the ROE, given restrictions or tactical situation.

4.3.2.5.3. **U.** Major errors during contract execution or ineffective coordination with outside agencies resulted in employment outside the ROE, given restrictions or tactical situation.

4.3.3. **Electronic Warfare.**

4.3.3.1. **Area 161 — Degraded/Denied Global Positioning System (GPS).**

4.3.3.1.1. **Q.** Properly adapted to degradation or loss of GPS. Mission accomplishment not affected.

4.3.3.1.2. **Q-.** Slow to adapt to or recognize degradation or loss of GPS systems. Mission accomplishment not affected.

4.3.3.1.3. **U.** Unable to adapt to degradation or loss of GPS systems. Mission accomplishment affected.

4.3.3.2. **Area 162 — Degraded/Denied Communications.**

4.3.3.2.1. **Q.** Properly adapted to degradation or loss of COMM. Mission accomplishment not affected.

4.3.3.2.2. **Q-.** Slow to adapt to or recognize degradation or loss of COMM systems. Mission accomplishment not affected.

4.3.3.2.3. **U.** Unable to adapt to degradation or loss of COMM systems. Mission accomplishment affected.

4.3.3.3. **Area 162 — Degraded/Denied Datalink.**

4.3.3.3.1. **Q.** Properly adapted to degradation or loss of Datalink. Mission accomplishment not affected.

4.3.3.3.2. **Q-.** Slow to adapt to or recognize degradation or loss of Datalink systems. Mission accomplishment not affected.

4.3.3.3.3. **U.** Unable to adapt to degradation or loss of Datalink systems. Mission accomplishment affected.

4.3.3.4. **Area 164 — Datalink Operation.** Mission dependent and applies to Ku-band, C-Band, or both.

4.3.3.4.1. **Q.** All systems manipulation demonstrated thorough comprehension and execution of the datalink capabilities and limitations, accounting for Ku delay as required.

4.3.3.4.2. **Q-.** Systems manipulation demonstrated sound understanding of systems/datalinks, but was slow to execute. Induced short duration lost link situation most other aircrew would likely avoid. Resolved situation. Lost link profile was correctly set and would have resulted in aircraft executing a viable lost link profile.

4.3.3.4.3. **U.** Induced errors due to lack of systems/datalinks knowledge. Required corrective input from evaluator to avoid mission delays, lost link situation, and/or unsafe situation.

4.3.4. **Area 172 — Imagery Quality.**

4.3.4.1. [SO] **Q.** SO manipulated the appropriate camera based on target scene. Overall quality of scene content allowed successful prosecution of all assigned/attempted targets IAW mission requirements.

4.3.4.2. [SO] **Q-.** Quality of scene content was degraded by SO-induced factors, but still permitted mission requirements to be achieved.

4.3.4.3. [SO] **U.** Mission requirements could not be satisfied due to poor quality of scene content induced by the SO. Degraded mission prosecution through use of wrong camera.

4.3.5. **Area 174 — Target Analysis [S].**

4.3.5.1. **Q.** Accurately identified key features of target including status and meaning of activity.

4.3.5.2. **Q-.** Could identify most but not all key features of target including status and/or level of activity.

4.3.5.3. **U.** Could not identify key features or determine status of target.

4.3.6. **Area 182 — Tactical Air Control System (TACS) Coordination.**

4.3.6.1. [P] **Q.** Effected timely coordination with all appropriate agencies to include strike clearance.

4.3.6.2. [P] **Q-.** Coordinated with all appropriate agencies; however, not in a timely, effective manner. Delays caused by untimely coordination did not affect mission accomplishment. Strike clearance was received prior to initiating the attack.

4.3.6.3. [P] **U.** Did not coordinate with all appropriate agencies. Delivered weapons without strike clearance. Delays caused by untimely coordination rendered the mission ineffective.

4.3.7. **Area 227 — Post Mission (Forms/Reports/Logs).**

4.3.7.1. **Q.** All required forms and/or flight plans were complete, accurate, readable, accomplished on time and IAW applicable directives.

4.3.7.2. **Q-.** Minor errors on forms and/or flight plans did not affect conduct of the flight/mission. Incorrectly or incompletely reported some information due to minor errors, omissions, and/or deviations.

4.3.7.3. **U.** Did not accomplish required forms and/or flight plans. Omitted or incorrectly reported significant information due to major errors, omissions, and/or deviations.

4.3.8. **Area 802 — Aircraft Positioning.**

4.3.8.1. [P] **Q.** Aircraft position provided optimal view of the target, able to meet stated desired effect, satisfy EEIs, or deconfliction with participating aircraft or ground players. All run-in restrictions were met as dictated by unit standards/directives or joint publications (to include final attack heading, weapon heading, laser to target line, etc).

4.3.8.2. [P] **Q-.** Aircraft position afforded less than optimal view of the target, impacted ability to meet stated desired effect, satisfy EEIs, or deconfliction with participating aircraft or ground players. Aircraft position resulted in being outside of restricted run-in requirement on at least one attack.

4.3.8.3. [P] **U.** Aircraft position did not allow an adequate ability to achieve mission effects and/or was outside run-in requirements on two or more attacks.

4.4. Aircrew Evaluation Criteria – Instructor.

4.4.1. **Area 33 — Instructor Ability (if applicable).**

4.4.1.1. **Mission Planning.**

4.4.1.1.1. **Q.** Thoroughly reviewed student's training folder. Ascertained student's present level of training. Assisted student in pre-mission planning and allowed student time for questions. Correctly prioritized training events. Ensured student understood mission training objectives.

4.4.1.1.2. **Q-.** Did not thoroughly review student's training folder or correctly ascertain student's present level of training. Poorly prioritized training events. Training plan/scenario made poor use of time.

4.4.1.1.3. **U.** Did not review student's training folder. Did not ascertain student's present level of training. Did not assist student with pre-mission planning or did not allow time for questions. Did not prioritize training events. Failed to give student a clear idea of mission training objectives, methods, and sequence of events.

4.4.1.2. **Ability to Instruct.**

4.4.1.2.1. **Q.** Demonstrated excellent instructor/evaluator ability. Clearly defined all mission requirements and any required additional training/corrective action. Instruction/evaluation was accurate, effective and timely. Was completely aware of aircraft/mission situation at all times.

4.4.1.2.2. **Q-.** Problems in communication or analysis degraded effectiveness of instruction/evaluation.

4.4.1.2.3. **U.** Demonstrated inadequate ability to instruct/evaluate. Unable to perform, teach or assess techniques, procedures, systems use or tactics. Did not remain aware of aircraft/mission situation at all times. Did not provide corrective action when necessary. Did not identify unsafe maneuvers/situations in a timely manner.

4.4.2. **Area 47 — Instructor Briefing/Debriefing.**

4.4.2.1. **Q.** Presented a comprehensive, instructional briefing/debriefing which encompassed all mission events. Made excellent use of training aids. Accurate and complete analysis of all events/maneuvers. Clearly defined objectives. Gave positive and negative performance feedback at appropriate times—feedback was specific, objective, based on observable behavior, and given constructively. Re-capped key points/compared mission's results with objectives. When appropriate, took the initiative and time to share operational knowledge and experience.

4.4.2.2. **Q-.** Minor errors or omissions in briefing/debriefing or mission critique. Occasionally unclear in analysis of events or maneuvers. Some feedback given, but was not always given at appropriate times and not always a positive learning experience for the entire formation. Debrief covered the mission highlights but was not specific enough.

4.4.2.3. **U.** Major errors or omissions in briefing/debriefing. Analysis of events or maneuvers was incomplete, inaccurate or confusing. Did not use training aids/reference material effectively. Briefing/debriefing below the caliber of that expected of instructors. Failed to define mission objectives. Feedback not given or given poorly. Attempted to hide mistakes. Elected not to conduct flight debrief.

4.4.3. **Area 50 — Training/Evaluation Forms Preparation.**

4.4.3.1. **Q.** Completed appropriate training/evaluation records accurately. Adequately assessed and recorded performance. Comments were clear and pertinent.

4.4.3.2. **Q-.** Minor errors or omissions in training/evaluation records. Comments were incomplete or slightly unclear.

4.4.3.3. **U.** Did not complete required forms or records. Comments were invalid, unclear, or did not accurately document performance.

4.4.4. **Area 55 — Instructor Knowledge.**

4.4.4.1. **Q.** Demonstrated in-depth knowledge of procedures, requirements, aircraft systems/performance characteristics, mission and tactics beyond that expected of non-instructors.

4.4.4.2. **Q-.** Deficiencies in depth of knowledge, comprehension of procedures, requirements, aircraft systems/performance characteristics, mission or tactics. Minor errors in knowledge of above areas did not affect safety or adversely affect student progress.

4.4.4.3. **U.** Unfamiliar with procedures, requirements, aircraft systems/performance characteristics, mission or tactics. Lack of knowledge in certain areas seriously detracted from instructor effectiveness.

4.4.5. **Area 56 — Demonstration of Procedures.**

4.4.5.1. **Q.** Performed required maneuvers/operations within prescribed parameters. Effectively demonstrated procedures and techniques. When appropriate, provided concise, meaningful in-flight commentary to student or simulated student that facilitated instruction on the topic at hand.

4.4.5.2. **Q-.** Minor discrepancies in the above criteria did not affect safety or adversely affect student progress.

4.4.5.3. **U.** Did not demonstrate correct procedure or techniques. Was unable to properly perform required maneuvers/operations. Made major procedural errors. Did not provide in-flight commentary

4.5. Emergency Procedures Evaluation (EPE) Criteria.

4.5.1. **General.**

4.5.1.1. **Area 15 — Unusual Attitude Recoveries.**

4.5.1.1.1. **Q.** Smooth, positive recovery to level flight with correct recovery procedures.

4.5.1.1.2. **Q-.** Slow to analyze attitude, or erratic in recovery to level flight. Correct recovery procedures used.

4.5.1.1.3. **U.** Unable to determine attitude. Improper recovery procedures were used.

4.5.1.2. **Area 29 — Knowledge.** Reference **paragraph 4.1.21**.

4.5.1.3. **Area 37 — Cockpit/Crew Resource Management.** Reference **paragraph 4.1.27**.

4.5.1.4. **Area 301 — Emergency Procedures/Aircraft Malfunctions (General).**

4.5.1.4.1. **Q.** Correctly maintained aircraft control, analyzed the emergency situation and took proper action. Displayed correct, immediate response to emergency situations.

4.5.1.4.2. **Q-.** Analyzation/response to certain emergencies were slow/confused. Slow to take the proper action and/or in maintaining aircraft control that did not impact safety of flight.

4.5.1.4.3. **U.** Unable to maintain aircraft control, analyze malfunctions/emergencies, and/or take proper action in a timely manner.

4.5.1.5. **Area 302 — Checklist Usage.**

4.5.1.5.1. **Q.** Effectively located/used proper checklists in a timely manner. Effectively communicated with other flight members or crew members (if applicable) without misunderstanding.

4.5.1.5.2. **Q-.** Used the checklist when appropriate, but slow to locate/complete required data and implement guidance. Minor steps omitted that did not affect safety of flight. Communicated with other flight members or crew members (if applicable) with minor exceptions.

4.5.1.5.3. **U.** Failed to follow checklist procedures or used incorrect checklist. Unable to locate checklist and/or lacked acceptable familiarity with its arrangement or contents. Constantly omitted checklist steps. Failed to communicate checklist execution with other flight members or crew members (if applicable).

4.5.1.6. **Area 305 — Weapons System Operation.**

4.5.1.6.1. **Q.** Displayed thorough knowledge of aircraft weapons systems capabilities, limitations and backups or workarounds in event of malfunctions.

4.5.1.6.2. **Q-.** Displayed deficiencies in depth of knowledge or comprehension of aircraft weapons systems capabilities, limitations and backups or workarounds in event of malfunctions which would not preclude successful mission accomplishment.

4.5.1.6.3. **U.** Displayed insufficient knowledge or comprehension of aircraft weapons systems capabilities, limitations and backups or workarounds in event of malfunctions which could preclude successful mission accomplishment.

4.5.1.7. **Area 306 — Weapons Employment.**

4.5.1.7.1. **Q.** Displayed thorough knowledge of aircraft weapons systems effects, tactics, and switchology, when employing weapons in degraded modes of operation.

4.5.1.7.2. **Q-.** Displayed deficiencies in depth of knowledge or comprehension of aircraft weapons systems effects, tactics, and switchology, when employing weapons in degraded modes of operation, which would not preclude successful mission accomplishment.

4.5.1.7.3. **U.** Displayed insufficient knowledge or comprehension of aircraft weapons systems effects, tactics, and switchology, when employing weapons in degraded modes of operation, which could preclude successful mission accomplishment.

4.5.2. **Pre-Takeoff.** The following items are graded using the same criteria as Area 301 **paragraph 4.5.1.4**:

4.5.2.1. **Area 321 — Hydraulic Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

4.5.2.2. **Area 331 — Electrical Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

4.5.2.3. **Area 341 — Fuel Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

4.5.2.4. **Area 361 — Engine Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

4.5.2.5. **Area 371 — Link Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

4.5.2.6. **Area 381 — Weapons Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

4.5.2.7. **Area 391 —Autopilot Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

4.5.2.8. **Area 401 — Brakes/Landing Gear Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

4.5.2.9. **Area 411 — Emergency Procedures/Aircraft Malfunctions (Pre-Takeoff).**

4.5.3. **Takeoff.** The following items are graded using the same criteria as Area 301 **paragraph 4.5.1.4**:

4.5.3.1. **Area 421 — Hydraulic Emergency Procedures/Aircraft Malfunctions (Takeoff).**

4.5.3.2. **Area 431 — Electrical Emergency Procedures/Aircraft Malfunctions (Takeoff).**

4.5.3.3. **Area 441 — Fuel Emergency Procedures/Aircraft Malfunctions (Takeoff).**

4.5.3.4. **Area 461 — Engine /Aircraft Malfunctions (Takeoff).**

4.5.3.5. **Area 463 — Abort.**

4.5.3.6. **Area 471 — Link Emergency Procedures/Aircraft Malfunctions (Takeoff).**

4.5.3.7. **Area 481 — Weapons Emergency Procedures/Aircraft Malfunctions (Takeoff).**

4.5.3.8. **Area 491 — Autopilot Emergency Procedures/Aircraft Malfunctions (Takeoff).**

4.5.3.9. **Area 501 — Brakes/Landing Gear/ Emergency Procedures/Aircraft Malfunctions (Takeoff).**

4.5.3.10. **Area 511 — Emergency Procedures/Aircraft Malfunctions (Takeoff).**

4.5.4. **In-Flight.** The following items are graded using the same criteria as Area 301 **paragraph 4.5.1.4**:

4.5.4.1. **Area 531 — Electrical Emergency Procedures/Aircraft Malfunctions (In-Flight).**

4.5.4.2. **Area 541 — Fuel Emergency Procedures/Aircraft Malfunctions (In-Flight).**

4.5.4.3. **Area 561 — Engine/ Aircraft Malfunctions (In-Flight).**

4.5.4.4. **Area 571 — Link Emergency Procedures/Aircraft Malfunctions (In-Flight).**

4.5.4.5. **Area 581 — Weapons Emergency Procedures/Aircraft Malfunctions (In-Flight).**

4.5.4.6. **Area 591 — Autopilot Emergency Procedures/Aircraft Malfunctions (In-Flight).**

4.5.4.7. **Area 601 — Brakes/Landing Gear Emergency Procedures/Aircraft Malfunctions (In-Flight).**

4.5.4.8. **Area 611 — Emergency Procedures/Aircraft Malfunctions (In-Flight).**

4.5.4.9. **Area 808 — SATCOM FORCED LANDING PROCEDURES (N/A - FOR LOS L/R QUALIFIED AIRCREW).** Scenario for evaluation must take the forced landing to the ground.

4.5.4.9.1. **Q.** Performed forced landing procedures IAW applicable directives. Used sound judgment. Configured at the appropriate position/altitude. Smooth positive control of aircraft. Able to prioritize actions to recover aircraft to desired location. Maintained aircraft control within appropriate standards.

4.5.4.9.2. **Q-.** Performed forced landing procedures with minor deviations, omissions, and/or errors from applicable directives. Configured at a position and altitude, which allowed for a safe approach. Minor deviations from recommended procedures and altitudes. Unnecessary maneuvering due to minor errors in planning or judgment; however, did not further jeopardize the recovery of the aircraft.

4.5.4.9.3. **U.** Judgment unsafe. Did not comply with applicable procedures. Performed forced landing procedures with major deviations, omissions, and/or errors from recommended procedures and altitudes. Unable to recover aircraft at the desired location.

4.5.5. **Landing.** The following items are graded using the same criteria as Area 301 **paragraph 4.5.1.4**:

4.5.5.1. **Area 641 — Electrical Emergency Procedures/Aircraft Malfunctions (Landing).**

4.5.5.2. **Area 651 — Fuel Emergency Procedures/Aircraft Malfunctions (Landing).**

4.5.5.3. **Area 671 — Engine/Aircraft Malfunctions (Landing).**

4.5.5.4. **Area 681 — Link Emergency Procedures/Aircraft Malfunctions (Landing).**

4.5.5.5. **Area 691 — Weapons Emergency Procedures/Aircraft Malfunctions (Landing).**

4.5.5.6. **Area 701 — Autopilot Emergency Procedures/Aircraft Malfunctions (Landing).**

4.5.5.7. **Area 711 — Brakes/Landing Gear Emergency Procedures/Aircraft Malfunctions (Landing).**

4.5.5.8. **Area 721 — Emergency Procedures/Aircraft Malfunctions (Landing).**

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

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure*, 3 May 2022

AFMAN 11-202V2, *Aircrew Standardization and Evaluation Program*, 30 August 2021

AFMAN 11-202V3, *Flight Operations*, 10 January 2022

AFMAN 11-2MQ-9V1, *MQ-9 Aircrew Training*, 12 January 2023

AFI 33-322, *Records Management and Informaiton Governance Program*, 28 July 2021

AFMAN 11-214, *Air Operations Rules and Procedures,* 29 November 2022

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

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

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

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

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

DAFMAN 90-161, *Publishing Process and Procedures*, 15 April 2022

Adopted Forms

AF Form 8, *Certificate of Aircrew Qualification*

AF Form 4348, *USAF Aircrew Certifications*

DAF Form 847, *Recommendation for Change of Publication*

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

Abbreviations and Acronyms

ACC—Air Combat Command

AF—Air Force

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFTTP—Air Force Tactics, Techniques, and Procedures

AGM—Air-to-Ground Munition

AI—Air Interdiction

ANG—Air National Guard

AOA—Angle of Attack

AOMSW—Air Operations in Maritime Surface Warfare

A-S—Air-to-Surface

ATD—Aircrew Training Device

ATLC—Automatic Takeoff and Landing Capability

BIT—Built-in Test

BMC—Basic Mission Capable

CAP—Critical Action Procedure

CC—Commander

COMM—Communications

CRM—Cockpit/Crew Resource Management

CMR—Combat Mission Ready

DAF—Department of the Air Force

DAFMAN—Department of the Air Force Manual

DOC—Designed Operational Capability

DNIF—Duties Not Involving Flying

DRU—Direct Reporting Unit

DT—Dynamic Targeting

EEI(s)—Essential Element of Information (can be singular or plural)

EO—Electrical Optical

EP(s)—Emergency Procedure(s)

EPE(s)—Emergency Procedures Evaluation(s)

FAC—Forward Air Controller

FE—Flight Examiner

FENCE—Fuel, Emitter, Navigation, Communication, and Engage

FOA—Field Operating Agency

FOV—Field of View

FTU—Formal Training Unit

GBU—Guided Bomb Unit

GCS—Ground Control Station

IAM—Inertially Aided Munition

IAW—In Accordance With

IFF—Identification, Friend or Foe

INFLTREP—In-flight Report

INIT—Initial

INSTM—Instrument

INSTR—Instructor

IP—Instructor Pilot

IR—Infrared

ISO—Instructor Sensor Operator

JTAC—Joint Terminal Attack Controller

KIAS—Knots Indicated Airspeed

km—Kilometer

LGB—Laser-Guided Bomb

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 Xs

LRE—Launch and Recovery Element

MAJCOM—Major Command

MCE—Mission Control Element

MDS—Mission Design Series

mIRC—Multi-User Internet Relay Chat

MQF—Master Question File

MSN—Mission

MTS—Multi-Spectral Targeting System

N/A—Not Applicable

NM—Nautical Mile

OG/CC—Operations Group Commander

OPR—Office of Primary Responsibility

PGM—Precision-Guided Munition

QUAL—Qualification

ROE—Rules of Engagement

SA—Strategic Attack

SAT—Surface Attack Tactics

SCAR—Strike Coordination and Reconnaissance

SEAD—Suppression of Enemy Air Defenses

SIF—Selective Identification Feature

SO—Sensor Operator

SQ/CC—Squadron Commander

Stan/Eval—Office of Standardization and Evaluations

TACS—Tactical Air Control System

TO—Technical Order

USAF—United States Air Force

VFR—Visual Flight Rules

WIC—Weapons Instructor Course

Office Symbols

ACC/A3TV—Air Combat Command Standardization and Evaluation Branch

AF/A3T—Air Force Training and Readiness Directorate

AFFSA/XOF—Air Force Flight Safety Standards Agency Flight Directives Division

Terms

Aircrew Training Device—An approved training device for the MQ-9. It can include an Operational Flight Trainer, Part Task Trainer, Ground Control Station, or any other approved device that allows crewmembers to practice tasks without requiring an actual aircraft.

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 Mission Capable—The status of an crew member who has satisfactorily completed Mission Qualification Training prescribed for full qualification to perform the basic unit operational missions but does not maintain CMR status. Crew accomplishes training required to remain familiarized in all, and may be qualified and proficient in some, of the primary missions of their weapon system and unit. These crew members may also maintain special capabilities.

Combat Mission Ready—The status of an crew member who has satisfactorily completed Mission Qualification Training prescribed for full qualification to perform the basic unit operational missions and maintains qualification and proficiency in these missions.

Cockpit/Crew Resource Management—The effective use of all available resources--people, weapon systems, facilities, equipment, and environment -- by individuals or crews to safely and efficiently accomplish an assigned mission or task.

Crew Swap—The changing of aircraft control from one crewmember to another crewmember.

Deviation—Performing an action not in compliance with current procedures, directives, or regulations. Do not consider performing action(s) out of sequence due to unusual or extenuating circumstances a deviation. In some cases, momentary deviations may be acceptable; however, consider cumulative momentary deviations in determining the overall qualification level. **Minor**: Did not detract from mission accomplishment, adversely affect use of equipment, or violate safety. **Major**: Detracted from mission accomplishment, adversely affected use of equipment, or violated safety.

Emergency Procedures Evaluation—An evaluation of crew knowledge and responsiveness to critical and non-critical EPs conducted verbally by a FE in an ATD.

Error—Departure from standard procedures. Performing incorrect actions or recording incorrect information. **Minor**: Did not detract from mission accomplishment, adversely affect use of equipment, or violate safety. **Major**: Detracted from mission accomplishment, adversely affected use of equipment, or violated safety.

Launch and Recovery (L/R)—Describes 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 racks and associated systems, a communications interface, and a ground data terminal. Operations may entail LOS operations for manual or automatic control.

Line of Sight Launch and Recovery (LOS L/R)—Describes 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 GCS (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 Qualification Training—Training required to achieve a basic level of competence in unit's primary tasked missions. This training is a prerequisite for CMR or BMC status.

Omission—To leave out a required action or annotation. **Minor**: Did not detract from mission accomplishment, adversely affect use of equipment, or violate safety. **Major**: Detracted from mission accomplishment, adversely affected use of equipment, or violated safety.

Operational Flight Trainer—A training device that dynamically simulates the flight characteristics of the designated aircraft to train crew members in normal cockpit procedures, instrument flight procedures, emergency procedures, and limited combat mission execution. Trainer combines safety of flight operation and some warfighting tasks, and provides skill integration training.

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.