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SECRETARY OF THE AIR FORCE**

**AIR FORCE INSTRUCTION 11-2MC-12W,  
VOLUME 2**



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***Flying Operations***

**MC-12W AIRCREW EVALUATION  
CRITERIA**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction implements Air Force Policy Directive (AFPD) 11-2, *Aircraft Rules and Procedures*; AFPD 11-4, *Aviation Service*; and Air Force Instruction (AFI) 11-202, Volume 2, *Aircrew Standardization/Evaluation Program*. This instruction establishes the procedures and criteria for evaluating crew members performing duties aboard United States Air Force (USAF) MC-12W aircraft. This publication applies to all MC-12W units and to Air National Guard (ANG) personnel who operate MC-12W aircraft. It does not apply to Air Force Reserve Command (AFRC) units. Major Commands (MAJCOMs)/Direct Reporting Units (DRUs)/Field Operating Agencies (FOAs) will forward proposed supplements to this volume to AF/A3O-AT, through headquarters (HQ) ACC/A3CR for approval prior to publication in accordance with (IAW) AFPD 11-2, *Aircraft Rules and Procedures*. Copies of MAJCOM/DRU/FOA-level supplements, after approved and published, will be provided by the issuing MAJCOM/DRU/FOA to AF/A3O-AT, HQ ACC/A3CR, and user MAJCOM/DRU/FOA offices of primary responsibility. Field units below MAJCOM/DRU/FOA level will forward copies of their supplements to this publication to their parent MAJCOM/DRU/FOA office of primary responsibility for post publication review.

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**SUMMARY OF CHANGES**

This document has been substantially revised and must be completely reviewed for positional evaluation criteria standards. Revised **Table 4.1, Pilots Evaluation Area**; revised **Table 4.2 General Aircraft Control Criteria**; revised **Area 46 – Engine Out Landing** standards; revised; **Area 47 – VFR Pattern/Approach** criteria; revised **Area 48 – Landing** criteria; revised **Area 54 – Non-Precision Approach** criteria; revised **Area 66 – Short Field Landing** for future use; revised **Area 73 – NVG Operations** criteria; Reserved **Area 74 NVG -Airland** criteria for future use; revised **Table 5.1**, updated **Sensor Operator Evaluation Areas** and related evaluation criteria; added **Chapter 6 Cryptologic Operator Evaluation** criteria.

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## Chapter 1

### GENERAL INFORMATION

**1.1. General.** All evaluations will be conducted IAW the provisions of AFI 11-202 Volume 2 and this volume.

1.1.1. Cockpit/Crew Resource Management (CRM) skills will be evaluated along with technical skills as outlined in the grading criteria in this chapter. CRM skills are imbedded within the appropriate grading criteria; the use of AF Form 4031, *CRM Skill Criteria Training/Evaluation Form*, is not required.

**1.2. Waivers.**

1.2.1. Unless otherwise specified, HQ USAF/A3O-A is the waiver authority for this instruction. EXCEPTION: MAJCOM/A3 is the waiver authority for individual aircrew requirements, but may not approve blanket or group (two or more aircrew) waivers.

1.2.2. Request waivers through applicable Stan/Eval channels to MAJCOM/A3,(or equivalent). As applicable, MAJCOM/A3s will forward requests to HQ USAF/A3O-A, with an info copy to HQ USAF/A3O-AT.

1.2.3. Waiver authority for supplemental guidance will be as specified in the supplement and approved through higher level coordination authority.

**1.3. Key Words and Definitions.**

1.3.1. “Will” and “Shall” indicate a mandatory requirement.

1.3.2. “Should” is normally used to indicate a preferred, but not mandatory, method of accomplishment.

1.3.3. “May” indicates an acceptable or suggested means of accomplishment.

1.3.4. “Note” indicates operating procedures, techniques, etc., which are considered essential to emphasize.

**1.4. Procedures.**

1.4.1. Stan/Eval Flight Examiners (FEs) will use the evaluation criteria in this instruction for conducting all flight and emergency procedure evaluations. To ensure standard and objective evaluations, flight examiners will be thoroughly familiar with the prescribed evaluation criteria.

1.4.2. All evaluations fall under the Instrument (INSTM), Qualification (QUAL), Mission (MSN), Instructor (INSTR), or spot check (SPOT) criteria in AFI 11-202V2. INSTM applies to pilots only. All evaluation activity will be scheduled to occur on one sortie to the greatest extent possible.

1.4.3. FEs may use video recording (VR) devices to reconstruct/evaluate the mission.

1.4.4. FEs will brief examinees on the evaluation purpose, conduct and the evaluation areas prior to flight. Examinees will accomplish required flight planning for the evaluation IAW

requirements for their crew position. Examinees will furnish FEs a copy of necessary flight logs, target folders, and other required mission materials.

1.4.5. FEs should not occupy a primary crew position during evaluations except when it would afford the best opportunity to conduct INSTR evaluations.

1.4.6. Areas required to complete an evaluation are indicated with an "R" on applicable evaluation criteria tables. When a required area cannot be evaluated in flight, it will be evaluated in an Aircrew Training Device (ATD if available) or by oral examination in order to complete the evaluation. The use of alternate evaluation methods will be documented in the AF Form 8, *Certificate of Aircrew Qualification*, comments section. If an alternate evaluation method was used in a flight evaluation required area, the next evaluation cannot use an alternate method for that area.

1.4.7. FEs will thoroughly debrief all aspects of the flight. The debrief will include the examinee's overall rating, specific deviations, area grades assigned (if other than qualified) and any recommended additional training.

## **1.5. Grading Instructions.**

1.5.1. Standards and performance parameters are contained in AFI 11-202V2 and this instruction.

1.5.2. FEs will compare examinee performance for each area accomplished during the evaluation with the standards provided in this volume and assign an appropriate grade for the area. FEs will derive the overall flight evaluation grade from the area grades based on a composite for the observed events and tasks IAW this volume.

1.5.3. FEs will base tolerances for in-flight parameters on conditions of smooth air and a stable aircraft. Momentary deviations from tolerances will not be considered provided the examinee applies prompt corrective action and such deviations do not jeopardize flying safety. FEs will consider cumulative deviations when determining an overall grade.

1.5.4. When grading criteria specify evaluation of airspeed and the flight manual lists only a minimum/maximum airspeed for that area, the examinee will brief the desired airspeed.

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

1.5.6. An unqualified grade in any of the critical areas identified by this instruction requires an overall unqualified grade.

1.5.7. FE judgment will be the determining factor in arriving at the overall grade.

1.5.8. Grading System. A two-tiered grading system is used to evaluate and document performance. The first tier is comprised of the individual areas/subareas (e.g. debriefing, mission planning, etc.) where a grade of Q, Q- or U is assigned based on established criteria, cumulative grades for each task in an area/subarea on a grade sheet and evaluator judgment. The overall area grade will be the lowest of any sub-area grade awarded. The second tier consists of the overall qualification level itself (Q-1, Q-2 or Q-3) which is determined from the compilation of these individual scores/grades from all the individual areas/subareas.

1.5.8.1. Qualified (Q). Q is the desired level of performance. Satisfactory knowledge of all required information and performed duties within prescribed tolerances.

1.5.8.2. Qualified with discrepancies (Q-). Q- Means qualified to perform the assigned area tasks, but requires debriefing or additional training as determined by the evaluator. Deviations from established standards must not exceed the prescribed Q- tolerances or jeopardize safety.

1.5.8.3. Unqualified (U). Performance outside allowable parameters or deviations from prescribed procedures/tolerances that adversely affected mission accomplishment or compromised safety. An area grade of U requires additional training.

1.5.8.4. Qualification Level 1 (Q-1). The member demonstrated desired performance and knowledge of procedures, equipment and directives within tolerances specified in the grading criteria. This will be awarded when no discrepancies are noted and may be awarded when discrepancies are noted if:

1.5.8.4.1. The discrepancies resulted in no U grades in any area(s)/sub-area(s).

1.5.8.4.2. All discrepancies noted were cleared during the debrief of that evaluation.

1.5.8.4.3. In the judgment of the evaluator, none of the discrepancies preclude awarding an overall Q-1.

1.5.8.5. Qualification Level 2 (Q-2). The member demonstrated the ability to perform duties but:

1.5.8.5.1. There were one or more area(s)/subarea(s) where additional training is required.

1.5.8.5.2. A non-critical area(s)/subarea(s) grade of U was awarded.

1.5.8.5.3. In the judgment of the evaluator, there is justification based on performance in one or more areas/subareas.

1.5.8.6. Qualification Level 3 (Q-3). The member demonstrated an unacceptable level of safety, performance or knowledge. An overall Q-3 will be awarded for an evaluation when:

1.5.8.6.1. An area grade of U is awarded in a critical area.

1.5.8.6.2. In the judgment of the evaluator, there is justification based on performance in one or more areas/subareas.

## **1.6. Emergency Procedures Evaluation (EPE).**

1.6.1. EPE may be administered orally or in an ATD. This evaluation will include areas commensurate with examinee's Ready Aircrew Program (RAP) training level or IAW AFI 11-2MC12W V1 continuation training events.

1.6.2. The following items will be included on all EPEs.

1.6.2.1. Aircraft General Knowledge. Pilots, Sensor Operators (SO), and Cryptologic Operators (CO) will be evaluated on general aircraft and mission systems knowledge as required by their crew position.

1.6.2.2. Emergency Procedures. All aircrew members will be evaluated on emergency procedures knowledge as required by their crew position. Pilots will be evaluated on all MAJCOM approved Critical Action Procedures (CAP) at a minimum.

1.6.2.3. Cockpit/Crew Resource Management (CRM). Crew coordination will be evaluated when applicable.

1.6.2.4. Unusual attitude recoveries will be evaluated on all pilot EPEs.

1.6.3. MSN evaluation scenarios will be tailored to unit tasking and will include areas not normally evaluated in flight. FEs should include the following additional items on the EPE given as a requisite to the MSN evaluation.

1.6.3.1. Basic sensor systems operation.

1.6.4. Unqualified EPE.

1.6.4.1. Examinees receiving an overall unqualified grade will be placed in supervised status until completing recommended additional training and/or successfully accomplishing a reevaluation.

1.6.4.2. Examinees receiving an overall unqualified grade because of unsatisfactory CAP accomplishment will not be permitted to fly in their crew position until a successful reevaluation is accomplished.

1.6.5. The following grading criteria will be used to grade individual items on EPEs.

1.6.5.1. **Q.** Correct performance. Recognizes and corrects errors.

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

1.6.5.3. **U.** Performance is unsafe or indicates lack of knowledge or ability.

1.6.6. Normally an EPE will be conducted separately for the pilot INSTM/QUAL and MSN evaluations. In situations where INSTM/QUAL and MSN evaluation eligibility zones coincide, a single EPE may be administered to fulfill the requisites for the combined INSTM/QUAL/MSN evaluations. The combined EPE must be of sufficient scope and length to ensure all required areas for each evaluation are accomplished.

**1.7. Cockpit/Crew Resource Management.** IAW AFI 11-202V2, CRM skills will be evaluated for all crewmembers during all evaluations in the following areas (AFI 11-290, *Cockpit/Crew Resource Management Training Program*, may be used as a reference).

1.7.1. Mission planning/briefing.

1.7.2. Crew coordination.

1.7.3. Situational awareness/task management.

1.7.4. Risk management/decision making.

1.7.5. Communication.

1.7.6. Mission debriefing.

**1.8. Examinations.**

1.8.1. Closed Book Examination. All closed book questions will come from the MC-12W Master Question File (MQF) and local/theater procedures. At least ten percent of the questions will be from local/theater procedures (local area MQF is optional).

1.8.2. CAP Written Exam. Consists of MAJCOM approved CAP for applicable aircrew position. The answers will be written from memory in the proper sequence. CAP may be abbreviated when written, but procedural intent must be clear.

1.8.3. Open Book Examination. Questions are derived from flight manuals and governing command directives.

**1.9. Flight Publications Check.** Flight publications that will be checked for currency and proper posting during all flight evaluations.

1.9.1. Pilots. Beechcraft Super King Air 350 Pilot's Operating Handbook (POH) with Intelligence, Surveillance and Reconnaissance (ISR) Modification Supplement and checklist,

1.9.2. SO and CO. ISR Modification Operator Checklist, Mission System User's Manual for HAWKER/Beech King Air B350 (KA B350)

1.9.3. MAJCOM approved FANFOLD checklist.

**1.10. Documentation of Intelligence, Surveillance, and Reconnaissance (ISR) Results.** If compatible with the evaluation profile ISR results will be documented in the Mission Description Section of the AF Form 8. Reasons for unsuccessful attempts must be documented on the AF Form 8.

**Table 1.1. Documenting ISR Results (Example).**

<b>Target/Sensor Acquisition Scores</b>		
	ATTEMPTED	SATISFIED
Planned	1	1
Ad Hoc	1	0

**1.11. Documentation of Laser Designator/Illuminator Employment Results.**

1.11.1. Employment results will be documented in the Mission Description Section of the AF Form 8 for mission evaluations.

1.11.2. Laser Illuminator/Designator Target Marks.

1.11.2.1. Marks will be scored as a "Hit" if they are assessed as usable for marking the designated target, delivered in a timely manner, and delivery used is tactically sound.

1.11.2.2. Marks will be scored as a "Miss" if they are unusable for target marking, untimely, or the deliveries are tactically unsound. Reasons for misses must be annotated on the AF Form 8.

**Table 1.2. Documenting Laser Designator Target Marking (Example).**

<b>Laser Designator Target Marking Scores</b>	
HIT	MISS
1	0

1.11.3. FE Judgment. FE judgment will be the determining factor in deciding the laser designator target marking employment grade. If the examinee's score fails to qualify in any

event(s), the FE may elect to award a higher area grade than warranted by the score(s). The FE will include justification for such an award in the Comments Section of the AF Form 8.

## Chapter 2

### EVALUATION REQUIREMENTS

#### 2.1. General.

2.1.1. Evaluation Procedures. All evaluations will follow the guidelines set in AFI 11-202V2 and this volume. Before the mission briefing, the flight examiner will brief the examinee on specific evaluation areas and, if applicable, will inform the pilot in command of any special requirements. Criteria in the chapter for the appropriate crew position will be used for evaluations. Units may modify evaluation profiles based on local operating considerations or FE judgment to complete the evaluation. Evaluations will be accomplished concurrently (with other crew positions) whenever practical. CRM skills will be evaluated on all evaluations.

#### 2.1.2. Evaluation Requirements.

2.1.2.1. FEs must evaluate all required areas in order to complete the evaluation.

2.1.2.1.1. Use of alternate evaluation methods (ATD / verbal) are authorized and will be documented in the AF Form 8, Comments Section.

2.1.2.1.2. If the FE determines the required item cannot be adequately evaluated by an alternate method, the examinee will require an additional flight to complete the evaluation.

2.1.2.2. An asterisk (\*) indicates critical areas. A grade of U awarded in any critical area requires an overall Q-3 for the evaluation.

2.1.2.3. All observed areas will be graded.

2.1.3. The Pilot Instrument/Qualification Evaluations (as defined in [paragraph 2.2](#) and [paragraph 2.3](#)) and the Mission Evaluation (as defined in [paragraph 2.4](#)) may be combined as a single evaluation. Evaluations flown in this manner must fulfill all INSTM/QUAL and MSN evaluation requirements, including ground phase requisites. This combined evaluation will have a single expiration date IAW AFI 11-202V2.

2.1.4. SOs and COs will be evaluated on a combined QUAL/MSN evaluation.

**2.2. Pilot Instrument Evaluation.** A mission flown according to Instrument Flight Rules (IFR) (to the extent practical) best fulfills the objective of the INSTM evaluation IAW Table 4.1. The instrument flight phase will normally be combined with the qualification flight phase. Units may elect to administer this evaluation on any compatible training mission or combined with the mission evaluation. Minimum ground phase requirements are:

2.2.1. Instrument Refresher Course and Instrument Examination. Pilots are required to complete the Instrument Refresher Course and Instrument Examination IAW AFMAN 11-210, *Instrument Refresher Program (IRP)*. Examination will consist of a minimum of 50 questions. All questions are derived from AFMAN 11-210, *Instrument Refresher Program (IRP)*. Questions may be downloaded from the AF Flight Standards web site.

2.2.2. CAP examination.

**2.3. Qualification Evaluation.** A mission evaluating the examinee's ability to safely and effectively operate the aircraft and associated subsystems. This evaluation encompasses basic aircraft handling and pattern work and basic operation of the sensors. Minimum ground phase requirements are:

- 2.3.1. Closed book examination.
- 2.3.2. Open book examination.
- 2.3.3. EPE.
- 2.3.4. CAP examination.

**2.4. Mission Evaluation.** Mission profiles that represent unit Designed Operational Capability (DOC) tasking or Concept of Employment roles satisfy the requirements of this evaluation. The profiles will be designed to evaluate mission qualifications as well as basic airmanship of Basic Mission Capable (BMC) and Combat Mission Ready (CMR) examinees. Profiles will be designed using current tactics, unit DOC tasking, Concept of Employment roles and Area of Responsibility commitments. Profiles will incorporate all appropriate evaluation requirements in **Table 3.1** MSN evaluations should be flown using the unit's tactics. Exceptions to the minimum number of targets are permitted for specialized missions. Successful acquisition of targets will be based on the requested intelligence information and/or FE judgment. FEs may assign targets in flight if required to complete evaluation profile and mission objectives. Initial MSN evaluations will be given in the primary DOC or Concept of Employment of the unit.

2.4.1. Minimum ground phase requisites are:

- 2.4.1.1. EPE (mission scenarios).
- 2.4.1.2. CAP examination.

2.4.2. Evaluation Profiles. FE judgment may be used to modify evaluation profiles based on local/theater operating considerations.

2.4.2.1. ISR. Units should primarily fly ISR evaluations during daytime to allow tasking of all sensor systems; however, units may fly night evaluations. Pre-planned or ad-hoc targets will be acquired and will satisfy applicable essential elements of information (EEI). FEs may assign targets in flight. The pilot is responsible for positioning the aircraft to allow EEI satisfaction. Targets not acquired due to adverse weather, verified sensor malfunction, or threat reaction will not be graded as misses.

2.4.2.2. Personnel Recovery. Mission flown to support the recovery of US or Allied forces. Performs the role of On-Scene Commander until assigned Combat Search and Recovery personnel arrive.

2.4.2.3. 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:

2.4.2.3.1. Tactical Air Coordination – Mission sortie flown in support of ground forces and air assets (actual or simulated) under the control of a Forward Air Controller (FAC), either air or ground, providing air strike control for the attacks. Mission elements include: Intel scenario and tactical mission planning, execution against actual or simulated threats, simulated or actual weapons employment against

designated targets while under positive control of an air or ground FAC interfacing (actual or simulated) with the Tactical Air Control System (TACS)/Army Air Ground System (AAGS) Command and Control (C2) network, and in-flight report (INFLTREP).

2.4.2.3.2. Overwatch – Coordinate and provide sensor support to ground forces in a simulated strike against lucrative targets identified and validated in specified geographic locations.

2.4.2.3.3. Support to Special Operations Forces – Mission sortie designed to develop proficiency in special mission support. Mission types at this time include Time-Sensitive Targeting (TST). Mission elements include: Intel scenario and tactical mission planning, execution against actual or simulated threats, simulated or actual weapons delivery against a tactical target, and INFLTREP. **Note:** BMC crewmembers will only be evaluated on those missions routinely performed by the examinee. Evaluate only those areas in which they are qualified.

**2.5. Formal Course Evaluation.** Evaluations will be flown IAW syllabus mission profile guidelines or on a mission profile developed from syllabus training objectives. Units may modify formal course guidelines based on local operating considerations or FE judgment to complete the evaluation. Training objectives and related areas will be graded using appropriate performance criteria.

## **2.6. Instructor Evaluations.**

2.6.1. 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 crew specialty. During the initial INSTR evaluation the examinee must demonstrate the ability to instruct in some phase of the unit's mission. The instructional topic/area will be annotated in the comments section of the AF Form 8. Except for requirements delineated in **Table 3.2**, the flight examiner will determine specific profiles and/or events. Subsequent periodic evaluations (for example, INSTM/QUAL, QUAL, or MSN) will include instructor portions during the evaluations.

2.6.1.1. Instructors must demonstrate proficiency by instructing a student (or qualified individual acting as a student). The evaluator may require the examinee to present verbal explanations of equipment operations, procedures, and techniques pertinent to crew duties and responsibilities.

2.6.1.2. During any phase of the flight portion of the evaluation, the evaluator may require the examinee to demonstrate (not instruct) and/or present verbal explanations of system operations and/or procedures. Evaluators must ensure oral questions/instructions are clear, concise, pertinent to the individual's crew duties, and do not interfere with normal mission accomplishment.

2.6.2. FEs may administer a periodic INSTR/MSN evaluation on a Formal Training Unit (FTU) instructor during an FTU training sortie.

2.6.3. Periodic FTU INSTR checks conducted with an FTU student will comply with the student FTU syllabus training requirements.

2.6.4. An instructor receiving an area grade of U or Q- with additional training in any graded area will not perform instructor duties until the required additional training is complete. This restriction will be written into the comments section and the restrictions block will be marked on the AF Form 8. **Table 3.2** and **Chapter 3** contain specific INSTR evaluation requirements.

### Chapter 3

#### ALL EVALUATIONS

**3.1. General.** The criteria in this chapter apply to all crew positions and all evaluations.

**3.2. Objective.** The examinee must satisfactorily demonstrate the ability to perform required duties safely and effectively, including the operation of appropriate aircraft systems, IAW applicable technical orders, instructions, and directives.

#### 3.3. Requirements.

3.3.1. All Crewmembers.

**Table 3.1. lists required areas for all crewmembers and will be evaluated on all evaluations.**

**Table 3.1. Required Evaluation Areas for All Crew Positions.**

Area	Title
1*	Safety
2*	Crew Discipline
3*	Airmanship
4*	Crew Coordination
5	Flight/Mission Planning
6	Knowledge/Communication
7	Task Management
8	In-Flight Checks/Checklist Procedures
9	Risk Management
10	Emergency Procedures
11	Post Mission
12-20	Reserved
* Area is considered "Critical" and as such is pass fail – "Q" or "U".	

3.3.2. Instructors.

**Table 3.2. lists required instructor evaluation areas for all crew positions.**

**Table 3.2. Required Instructor Evaluation Areas for All Crew Positions.**

Area	Title
21	Mission Preparation
22	Briefings/Critique
23	Instructional Ability
24	Knowledge of Publications/Procedures
25	Demonstration of Procedures
26	Training/Evaluation Forms Preparation
27-30	Reserved

**3.4. General Grading Criteria – All Crew Positions.** This section provides the grading criteria for evaluation areas listed in **Table 3.1** Criteria marked (P) are for Pilots only. Criteria marked (SO/CO) are for Sensor Operators/Cryptologic Operators only.

**3.4.1. Area 1 – Safety (Critical).**

3.4.1.1. **Q.** Was aware of and complied with all safety factors required for safe aircraft operation and mission accomplishment. Sound judgment enhanced mission accomplishment and was evident in the decision making process.

3.4.1.2. **U.** Not aware of or did not comply with all safety factors required for safe aircraft operation or mission accomplishment. A clear lack of judgment hampered or precluded mission accomplishment. Failed to recognize or allowed a dangerous situation to develop without taking proper corrective action or notifying other crewmembers.

**3.4.2. Area 2 – Crew Discipline (Critical).**

3.4.2.1. **Q.** Demonstrated strict professional flight and crew discipline throughout all phases of the mission. Aware of on-going mission status. Recognized, verbalized, and acted on unexpected events. Provided direction and information when needed.

3.4.2.2. **U.** Failed to exhibit strict flight and crew discipline. Violated or ignored rules or instructions. Not aware of on-going mission status. Failed to recognize, verbalize, or act on unexpected events. Did not provide direction or information when needed.

**3.4.3. Area 3 – Airmanship (Critical).**

3.4.3.1. **Q.** Executed the assigned mission in a timely, efficient manner. Demonstrated situational awareness throughout the mission and conducted the flight with a sense of understanding and comprehension. Aware of performance of self and other flight members.

3.4.3.2. **U.** Decisions or lack thereof resulted in failure to accomplish the assigned mission. Demonstrated poor judgment to the extent that the mission or safety was compromised. Not aware of performance of self and other flight members.

**3.4.4. Area 4 – Crew Coordination (Critical).**

3.4.4.1. **Q.** Coordinated effectively with other crewmembers without misunderstanding, confusion, or undue delay. Provided direction/information when needed. Adapted to meet new situational demands and focused attention on the task. Asked for inputs and made positive statements to motivate crewmembers.

3.4.4.2. **U.** Breakdown in coordination with other crewmembers 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 made no effort to make positive statements to motivate crewmembers.

**3.4.5. Area 5 – Flight/Mission Planning.**

3.4.5.1. **Q.** (P) Clearly understood mission objectives and developed a sound plan to accomplish the mission. Checked factors applicable to flight (for example, weather,

Notices to Airmen (NOTAMS), performance data, fuel requirements, maps, etc.) IAW applicable directives. Aware of alternatives available if flight could not be completed as planned. Solicited feedback to check understanding of mission requirements to include initiating contact with support user or intelligence processing , exploitation and dissemination (PED) cell (as required) to clarify tasking of EEIs. Thoroughly critiqued mission and collection plans to identify potential problem areas. Read, understood, and initialed all items in the Flight Crew Information File (FCIF)/Read Files. Was prepared for the mission at crew/mission briefing time.

3.4.5.2. **Q.** (SO/CO) Reviewed applicable target information and checked factors affecting imagery/signals collection (for example, target characteristics, environmental factors, required EEI, etc.). Provided feedback to ensure understanding of imagery/signals requirements to include initiating contact with supported user or PED cell (as required) to clarify tasking or EEIs. Thoroughly critiqued collection plan to identify potential problem areas. Read, understood, and initialed all items in the FCIF/Read Files. Was prepared for the mission at crew/mission briefing time.

3.4.5.3. **Q-.** Demonstrated limited knowledge of performance capabilities or approved operating procedures and rules in some areas. Partially defined the mission overview and goals. Solicited some feedback to check understanding of mission requirements and possible contingencies. Incompletely critiqued plans to identify potential problem areas. Made minor errors or omissions that did not detract from mission effectiveness.

3.4.5.4. **U.** Made major errors or omissions that would have prevented a safe or effective mission. Displayed faulty knowledge of operating data or procedures. Did not define the mission overview and goals. Did not solicit feedback to check understanding of mission requirements. Did not critique plans to identify potential problem areas. Failed to check or understand possible contingencies. Did not review or initial FCIF. Not prepared at crew/mission briefing.

#### 3.4.6. Area 6 – Knowledge/Communication.

##### 3.4.6.1. General.

3.4.6.1.1. **Q.** Thorough knowledge of applicable systems limitations and communication capabilities/ performance characteristics.

3.4.6.1.2. **Q-.** Knowledge of systems, limitations, and performance characteristics sufficient to perform the mission safely. Deficiencies either in depth of knowledge or comprehension.

3.4.6.1.3. **U.** Unsatisfactory knowledge of systems, limitations, or performance characteristics.

##### 3.4.6.2. Flight Rules/Regulations/Procedures.

3.4.6.2.1. **Q.** Prepared and completed mission in compliance with existing instructions and directives. Demonstrated knowledge of operating procedures and restrictions and where they are referenced within the correct publications.

3.4.6.2.2. **Q-.** Minor deviations to established procedures. Unsure of some directives and/or had difficulty locating some information in appropriate publications. Any instances of non-compliance did not jeopardize safety.

3.4.6.2.3. **U.** Unaware of established procedures and/or could not reference them in the appropriate publication in a timely manner. Failed to comply with a procedure that could have jeopardized safety or mission success.

3.4.6.3. Local Area Procedures.

3.4.6.3.1. **Q.** Thorough knowledge of local procedures.

3.4.6.3.2. **Q-.** Limited knowledge of local procedures.

3.4.6.3.3. **U.** Inadequate knowledge of local procedures.

3.4.6.4. Communications.

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

3.4.6.4.2. **Q-.** Occasional deviations from procedures that required retransmissions. Slow in initiating, or missed several required radio/intercom calls. Transmissions contained extraneous information, were not in proper sequence, or used nonstandard terminology.

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

3.4.7. Area 7 – Task Management.

3.4.7.1. **Q.** Correctly prioritized tasks. Used available resources to manage workload and avoided the creation of self-imposed workload or stress. Clearly communicated and acknowledged workload and task distribution. Clearly stated problems and used facts to develop solutions. Provided adequate time for completion of tasks and prepared for expected or contingency situations.

3.4.7.2. **Q-.** Did not consistently or correctly prioritize tasks. Did not correctly use or apply available resources to manage workload. Did not clearly communicate or slow to recognize workload and task distribution. Did not consistently provide adequate time for completion of task and/or not prepared for expected or contingency situations.

3.4.7.3. **U.** Unable to correctly prioritize tasks, use available resources to manage workload or avoid self-imposed workload/stress. Failed to communicate or acknowledge workload and task distribution. Did not provide adequate time for completion of tasks and/or unprepared for expected or contingency situations.

3.4.8. Area 8 – In-flight Checks/Checklist Procedures.

3.4.8.1. In-flight Checks.

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

3.4.8.1.2. **Q-.** Performed all checks except for minor deviations or omissions during checks. Did not detract from mission accomplishment.

3.4.8.1.3. **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.

3.4.8.2. Checklist Procedures.

3.4.8.2.1. **Q.** Efficient location and application of the appropriate checklist. Able to complete the checklist in a timely manner.

3.4.8.2.2. **Q-.** Slow to locate or apply the appropriate checklist. Slow to complete the checklist.

3.4.8.2.3. **U.** Unable to locate the appropriate checklist, used incorrect checklist, or consistently omitted checklist items. Excessive delay in completing checklist or did not complete checklist prior to the event.

#### 3.4.9. Area 9 – Risk Management.

3.4.9.1. **Q.** Crewmember appropriately assessed and mitigated risk in the decision-making process. Crewmember identified, planned, briefed and executed alternative mission activity in response to in-flight contingencies in a timely manner after appropriately weighing the risks versus the mission priority.

3.4.9.2. **Q-.** Crewmember was slow to or made minor errors in assessing and mitigating risk in the decision-making process. Crewmember was slow to identify, plan brief, or execute alternative mission activities in response to contingencies. Acted indecisively at times.

3.4.9.3. **U.** Crewmember failed to assess and mitigate risk in the decision-making process. Failed to make or participate in crew decisions or withheld information that would have corrected an unsafe situation. Crewmember incorrectly weighed risk versus mission priority. If pilot in command, failed to establish proper balance between command authority and crewmember participation.

3.4.10. **Area 10 – Emergency Procedures.** Actions taken in response to actual or simulated emergencies that occur during the flight check (in flight or on the ground) will be evaluated until the FE declares the evaluation of the emergency procedure terminated.

3.4.10.1. **Q.** Displayed correct, immediate response to CAP and non-CAP emergency situations. Effectively used checklist to apply the appropriate actions.

3.4.10.2. **Q-.** Response to CAP emergencies 100% correct. Response to certain areas of non-CAP emergencies or follow-on steps to CAP procedures was slow/confused. Used the checklist/flight manual when appropriate, but slow to locate required data.

3.4.10.3. **U.** Incorrect response for CAP emergency. Unable to analyze problems or take corrective action. Did not use checklist/flight manual or lacked acceptable familiarity with their arrangement or contents.

#### 3.4.11. Area 11 – Post Mission.

##### 3.4.11.1. Debriefing/Critique.

3.4.11.1.1. **Q.** Thoroughly debriefed the mission (or applicable portions). Compared mission results with established initial objectives. Debriefed deviations and offered corrective guidance as appropriate.

3.4.11.1.2. **Q-.** Debrief covered the mission highlights but was not specific enough. Did not thoroughly discuss performance in relation to mission objectives. Did not debrief all deviations.

3.4.11.1.3. **U.** Did not debrief mission deviations or offer corrective guidance. Feedback not given or given poorly. Attempted to hide mistakes. Not open to feedback or reactions/inputs from others.

3.4.12. Areas 12-20 – Reserved.

**3.5. Instructor Grading Criteria – All Crew Positions.** This section provides the grading criteria for evaluation areas listed in [Table 3.2](#)

**3.5.1. Area 21 – Mission Preparation.**

3.5.1.1. **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.

3.5.1.2. **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.

3.5.1.3. **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.

**3.5.2. Area 22 – Briefings/Critique.**

3.5.2.1. **Q.** Briefings were well organized, accurate, and thorough. Training grade reflected the actual performance of the student relative to the standard.

3.5.2.2. **Q-.** Minor errors or omissions in briefings and/or critique did not affect safety or adversely affect student progress. Occasionally unclear in analysis of events or maneuvers.

3.5.2.3. **U.** Briefings were marginal or non-existent. Did not review student past performance. Failed to adequately critique student or analyze the mission. Analysis of events or maneuvers was incomplete, inaccurate or confusing. Overlooked or omitted major discrepancies. Training grade did not reflect actual performance of student.

**3.5.3. Area 23 – Instructional Ability.**

3.5.3.1. **Q.** Demonstrated the ability to communicate effectively. Clearly defined all mission requirements and any required additional training/corrective action. Provided appropriate guidance when necessary. Identified and corrected potentially unsafe maneuvers/situations. Instruction was accurate, effective and timely.

3.5.3.2. **Q-.** Accomplished the above tasks with minor discrepancies that did not affect safety or adversely affect student progress. Problems in communication or analysis degraded effectiveness of instruction/evaluation.

3.5.3.3. **U.** Unable to effectively communicate or provide timely feedback to the student. Did not provide corrective action when necessary. Made no attempt to instruct. Unable to perform, teach, or assess techniques, procedures, systems use, or tactics. Did not plan ahead or anticipate student problems. Did not identify unsafe maneuvers/situations in a

timely manner. Did not remain aware of situation at all times. Demonstrated inadequate ability to instruct/evaluate. Did not contact user or PED cell to clarify taskings.

3.5.4. Area 24 – Knowledge of Publications/Procedures.

3.5.4.1. **Q.** Possessed a high level of knowledge of all applicable systems, techniques, and missions to be performed. Possessed a high level of knowledge of all applicable publications and procedures, and understood how to apply both to enhance mission accomplishment.

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

3.5.4.3. **U.** Knowledge of publications or procedures was inadequate. Could not apply knowledge obtained from publications. Lack of knowledge in certain areas seriously detracted from instructor effectiveness.

3.5.5. Area 25 – Demonstration of Procedures.

3.5.5.1. **Q.** Performed required maneuvers/operations within prescribed parameters. Effectively demonstrated procedures and techniques. Provided concise, meaningful in-flight commentary.

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

3.5.5.3. **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.

3.5.6. Area 26 – Training/Evaluation Forms Preparation.

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

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

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

3.5.7. **Areas 27-30 – Reserved.**

## Chapter 4

### PILOT EVALUATION CRITERIA

#### 4.1. Evaluation Standards.

4.1.1. Pilot evaluation areas ([Table 4.1](#)) and grading criteria in this chapter are divided into three sections: General, Instrument, and Mission Employment. Use all sections for criteria applicable to the events performed on the evaluation.

4.1.2. Where major areas include sub areas, only one grade will be assigned to the major areas. Discrepancies will be annotated on the back of the AF Form 8 by sub area.

**Table 4.1. Pilot Evaluation Areas.**

Area	Notes	Title	Qual	Instm	Msn
<b>I. General</b>					
31		Briefing	R	R	R
33	4	Takeoff	R	R	
34	4	Departure	R	R	
35		Level Off	R	R	
36		Cruise/Navigation	R	R	R
37		Fuel Management	R	R	R
38		Aircrew Discipline	R	R	R
39		Comm/IFF/SIF	R	R	R
40	1	Unusual Attitude Recoveries		R	
41		Descent		R	
42		Go Around	R		
43	4	Engine-Out Pattern	R		
44	4	Engine-Out Go-Around	R		
45	4	Simulated Engine Failure After Takeoff	R		
46	4,5	Engine-Out Landing	R		
47	7	Visual Flight Rules (VFR) Pattern/Approach	R		
48	4	Landing	R	R	
48a	4	Full-Flap Landing	R		R
48b	4	Partial-Flap Landing	R		
48c	4	No-Flap Landing	R		
<b>II. Instrument</b>					
51	4	Holding or Procedure Turn		R	
52	4	Instrument Patterns		R	
53	4	Penetration/Enroute Descent		R	
54	2,4	Non-Precision Approach		R	
55	2,4	Precision Approach		R	
56	4	Missed Approach/Climb Out		R	
57	4	Circling/Side-Step Approach		R	
58	4	Instrument Cross Check		R	

59-60		Reserved			
<b>III. Mission Employment</b>					
<b>III.A. General</b>					
61		Tactical Plan			R
62		Threat Analysis/Avoidance			R
63		Mission Execution			R
64	4	Tactical Departure			R
65	4	Tactical Arrival			R
66	4,6	Short-Field Landing Procedures			R
67		Tactical Navigation			R
68		Ingress			R
69		Egress			R
70		Timing			R
71		Training Rules/Rules of Engagement (ROE)			R
72		Aircraft Positioning			R
73	5	Night Vision Goggles (NVG) Operations (Usage/Limitations)			R
74	6	NVG Air Land			R
<b>Notes:</b> 1. Unusual Attitude Recovery will only be evaluated in an ATD or verbally evaluated if an ATD is not available. 2. Minimum of one precision and one non-precision approach required to complete evaluation provided capability exists. 3. IAW AFI 11-214, MAJCOM and Wing supplements. 4. May be evaluated in an ATD. 5. Pilots certified for NVG Operations will be evaluated for usage as mission aids. 6. Not currently evaluated but for future use. 7. Not required if tactical arrival is evaluated.					

#### 4.2. General.

4.2.1. Basic aircraft control. General aircraft control criteria are listed in [Table 4.2](#)

**Table 4.2. General Aircraft Control Criteria (unless specified in specific maneuver criteria).**

Grading Criteria	Evaluation Criteria	Limits
Q	Altitude	±100 feet
	Airspeed	+10/-5 Knots Indicated Airspeed (KIAS)

	Course	±5 degrees/3 Nautical Miles (NM) (whichever is greater)
	Arc	±1 NM
Q-	Altitude	±200 feet
	Airspeed	+15/-10 KIAS
	Course	±10 degrees/5 NM (whichever is greater)
	Arc	±2 NM
U		Exceeded Q- limits

#### 4.2.2. Area 31 – Briefing.

##### 4.2.2.1. Organization/Presentation.

4.2.2.1.1. **Q.** Well organized and presented in a logical sequence. Presented briefing in a professional manner. Effective use of training aids. Concluded briefing in time to allow for pre-flight of equipment and aircraft.

4.2.2.1.2. **Q-.** Events out of sequence, hard to follow, some redundancy. Did not make effective use of available training aids. Briefing rushed in order to allow for preflight of equipment and aircraft.

4.2.2.1.3. **U.** Confusing presentation. Did not allow time for crew briefing and preflight of equipment and aircraft. Did not use training aids. Redundant throughout briefing. Lost attention of flight members. Terminated briefing early in order to preflight equipment or aircraft.

##### 4.2.2.2. Mission Objectives.

4.2.2.2.1. **Q.** Clearly defined the mission objectives.

4.2.2.2.2. **Q-.** Partially defined the mission overview and/or objectives and goals undefined and poorly quantified.

4.2.2.2.3. **U.** Did not establish objectives for the mission.

##### 4.2.2.3. Crewmember Consideration.

4.2.2.3.1. **Q.** Considered the abilities of all crewmembers. Briefed corrective action from previous mission and anticipated problem areas when appropriate.

4.2.2.3.2. **Q-.** Did not consider all crewmembers' abilities. Did not identify anticipated problem areas. Did not effectively establish or maintain team concept or environment for open communications.

4.2.2.3.3. **U.** Ignored other crewmembers' abilities and past problem areas. Failed to establish and maintain team concept and environment for open communication.

#### 4.2.3. Area 32 – Reserved.

#### 4.2.4. Area 33 – Takeoff.

4.2.4.1. **Q.** Maintained smooth aircraft control throughout takeoff.

4.2.4.2. **Q-.** Minor flight manual procedural deviations. Some under or over control at liftoff.

4.2.4.3. **U.** Takeoff potentially dangerous. Required evaluator intervention to prevent aircraft/systems limitations from being exceeded and/or intervention was required to prevent an unsafe situation.

4.2.5. Area 34 – Departure (IFR/VFR).

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

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

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

4.2.6. Area 35 – Level Off.

4.2.6.1. **Q.** Leveled off smoothly. Promptly established proper cruise airspeed.

4.2.6.2. **Q-.** Level off was erratic. Slow in establishing proper cruise airspeed.

4.2.6.3. **U.** Level off was erratic. Exceeded Q- limits. Excessive delay or failed to establish proper cruise airspeed. Failed to reset altimeter, as required.

4.2.7. Area 36 – Cruise/Navigation.

4.2.7.1. **Q.** Demonstrated satisfactory capability to navigate using all available means. Used appropriate procedures. Complied with clearance instructions. Aware of position at all times. Remained within the confines of assigned airspace (i.e., military operating area, restricted area, etc.).

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

4.2.7.3. **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. Often unable to remain within the confines of assigned airspace or FE prompting required to maintain assigned airspace.

4.2.8. Area 37 – Fuel Management.

4.2.8.1. **Q.** Actively monitored fuel throughout the mission. Complied with all established fuel requirements.

4.2.8.2. **Q-.** Errors in fuel management procedures, which did not preclude mission accomplishment.

4.2.8.3. **U.** Failed to monitor fuel status or comply with established fuel requirements. Poor fuel management precluded mission accomplishment. Did not adhere to briefed fuel requirements.

4.2.9. **Area 38 – Aircraft Operation.** This area includes applicable aircraft systems operation as prescribed in the flight manual and other governing directives. The individual's system knowledge and proper operating procedures, analysis of equipment malfunctions, and use of proper corrective action will also be included.

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

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

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

4.2.10. Area 39 – Communications (COMM)/Identification Friend or Foe (IFF)/Selective Identification Feature (SIF).

4.2.10.1. **Q**. Complete knowledge of, and compliance with, correct COMM/IFF/SIF procedures. Transmissions over radio and intercom were concise, accurate, and used proper terminology. Complied with and acknowledged all required instructions. Thoroughly familiar with communications security requirements, HAVE QUICK, and secure voice equipment (if applicable). Correctly authenticated.

4.2.10.2. **Q-**. Occasional deviations from correct procedures. Minor errors or omissions did not significantly detract from situational awareness, threat warning or mission accomplishment. Demonstrated limited knowledge of communications security requirements, HAVE QUICK and secure voice equipment (if applicable).

4.2.10.3. **U**. Incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Unable to properly authenticate.

4.2.11. Area 40 – Unusual Attitude Recoveries (accomplished in ATD or verbal evaluation if ATD unavailable).

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

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

4.2.11.3. **U**. Unable to determine attitude. Used improper recovery procedures.

4.2.12. Area 41 – Descent.

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

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

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

4.2.13. Area 42 – Go-Around.

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

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

4.2.13.3. **U**. Did not self-initiate go-around when appropriate. Techniques unsafe or applied incorrect procedures. Erratic aircraft control. Large deviations in runway alignment.

4.2.14. Area 43 – Engine-Out Traffic Pattern.

4.2.14.1. **Q**. Performed emergency procedures 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.

4.2.14.2. **Q-**. Performed emergency 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 jeopardize the safe recovery of the aircraft.

4.2.14.3. **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 which required FE intervention for safety of flight considerations.

4.2.15. Area 44 – Engine Out Go-Around.

4.2.15.1. **Q**. Initiated and performed go-around promptly in accordance with flight manual and operational procedures and directives.

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

4.2.15.3. **U**. Did not self-initiate go-around when appropriate or directed. Techniques inappropriate or applied incorrect procedures.

4.2.16. Area 45 – Simulated Engine Failure After Takeoff.

4.2.16.1. **Q**. Applied flight manual procedures in a timely manner.

4.2.16.2. **Q-**. Slow to identify situation and/or improperly applied flight controls, but was able to control aircraft within safe flying parameters without assistance.

4.2.16.3. **U**. Applied flight manual procedures in an untimely manner. Attempted to place aircraft in unsafe condition by misapplication of flight controls. Actions required evaluator intervention to ensure safe operation.

4.2.17. **Area 46 – Engine Out Landing**. Includes simulated engine out varied flap settings, as appropriate.

4.2.17.1. **Q**. Complied with all flight manual and operational procedures. Maintained safe maneuvering airspeed. Flew approach compatible with the situation. Adjusted approach for type emergency simulated. Airspeed crossing the threshold was  $V_{ref} + \frac{1}{2}$  the gust factor (not to exceed 10 knots), plus corrections for flap settings or other abnormal situations, +10/-0 knots.

4.2.17.2. **Q-**. Minor procedural errors. Erratic airspeed control. Errors did not detract from safe handling of the situation. Airspeed crossing the threshold was  $V_{ref} + \frac{1}{2}$  the gust factor (not to exceed 10 knots), plus corrections for flap settings or other abnormal situations, +15/-0 knots.

4.2.17.3. **U**. Did not comply with applicable procedures. Erratic airspeed control compounded problems associated with the emergency. Flew an approach which was incompatible with the simulated emergency. Did not adjust approach for simulated emergency. Exceeded Q- parameters.

4.2.18. Area 47 – VFR Pattern/Approach.

4.2.18.1. **Q.** Performed patterns/approaches IAW procedures outlined in the flight manual, operational procedures, and local directives. Aircraft control was smooth and positive. Accurately aligned with runway. Maintained proper/briefed airspeed (Vyse minimum).

4.2.18.2. **Q-.** Performed patterns/approaches with minor deviations to procedures outlined in the flight manual, operational procedures, and local directives. Aircraft control was not consistently smooth, but safe. Alignment with runway varied. Slow to correct to proper/briefed airspeed (Vyse minimum).

4.2.18.3. **U.** Approaches not performed IAW procedures outlined in the flight manual, operational procedures, and local directives. Erratic aircraft control. Large deviations in runway alignment.

#### 4.2.19. **Area 48 – Landing.**

4.2.19.1. Flight examiners must apply landing criteria judiciously to allow for the unique characteristics of each type of landing.

4.2.19.2. For instrument approaches, the examinee should utilize a normal glide slope from either the decision height or from a point where visual acquisition of the runway environment is made.

4.2.19.3. Intended Landing Point.

4.2.19.3.1. For Instrument approaches, the intended landing point will be the Runway Point of Intercept (RPI) for Instrument Landing System (ILS) approach or Visual Approach Slope Indicator (VASI)/Precision Approach Path Indicator (PAPI), if available.

4.2.19.3.2. For VFR approaches, the intending landing point will be between 500 – 1000 ft from the threshold.

4.2.19.3.3. If no glidepath guidance is available, use 1000 ft from the threshold as the intended landing point.

4.2.19.3.4. Where runway configuration, arresting cable placement, or flight manual limitations require an adjustment to the normal intended landing point, a simulated runway threshold will be identified and the grading criteria applied accordingly to the adjusted intended landing point.

4.2.19.4. See [paragraph 4.4.15.4](#) for short field landing criteria.

#### 4.2.20. Areas 48a, 48b and 48c – Full Flap/Partial Flap/No Flap Landing.

4.2.20.1. **Q.** Used sound judgment. Performed landing as published/directed IAW procedures and techniques outlined in the flight manual, operational procedures and local directives. Configured at the appropriate position/altitude. Flew final IAW flight manual procedures, at pre-briefed airspeed (Vyse minimum) and glide path. Smooth and positive aircraft control throughout the roundout and flare. Touched down with no crab. Complied with flight manual procedures for the use of brakes and reverse thrust. Met the following criteria:

- 4.2.20.1.1. Airspeed crossing the threshold was  $V_{ref} + \frac{1}{2}$  the gust factor (not to exceed 10 knots), plus corrections for flap settings or other abnormal situations, +10/-0 knots.
- 4.2.20.1.2. Touchdown point was +1000/-300 feet of intended landing point as detailed in [paragraph 4.2.19.3](#)
- 4.2.20.1.3. Touched down and maintained not more than  $\pm 15$  feet of runway centerline.
- 4.2.20.2. **Q-**. Safety not compromised. Performed landing with minor deviations to procedures and techniques as published/directed in the flight manual, operational procedures and local directives. Configured at a position and altitude which allowed for a safe approach. Minor deviations from flight manual procedures, airspeed and altitudes. Unnecessary maneuvering due to minor errors in planning or judgment. Slow to comply with flight manual procedures for the use of brakes and reverse thrust. Exceeded Q criteria but not the following:
- 4.2.20.2.1. Airspeed crossing the threshold was  $V_{ref} + \frac{1}{2}$  the gust factor (not to exceed 10 knots), plus corrections for flap settings or other abnormal situations, +15/-0 knots and was slightly high or low but no compromise of safety.
- 4.2.20.2.2. Touchdown point was +2000/-1000 feet of intended landing point as detailed in [paragraph 4.2.19.3](#), not prior to runway threshold.
- 4.2.20.2.3. Touched down and maintained not more than  $\pm 25$  feet of runway centerline.
- 4.2.20.3. **U**. Landing not performed as published/directed IAW procedures and techniques outlined in the flight manual, operational procedures and local directives. Exceeded “Q-“ criteria. Major deviations from flight manual procedures, airspeed and altitudes. Required excessive maneuvering due to inadequate planning or judgment. Touched down excessively crabbed. Failed to comply with flight manual procedures for the use of brakes and reverse thrust.
- 4.2.21. Area 49 – After Landing.
- 4.2.21.1. **Q**. Appropriate after landing checks and aircraft taxi procedures accomplished IAW the flight manual and applicable directives. Completed all required forms accurately.
- 4.2.21.2. **Q-**. Same as qualified except some deviations or omissions noted in performance of after landing checks and/or aircraft taxi procedures in which the examinee did not jeopardize safety.
- 4.2.21.3. **U**. Made major deviations or omissions in performance of after landing checks or aircraft taxi procedures, which could have jeopardized safety.

4.2.22. Area 50 – Reserved.

### 4.3. Instrument.

4.3.1. **Area 51 – Holding or Procedure Turn.**

4.3.1.1. **Q.** Performed entry and holding in accordance with published procedures and directives. Holding pattern limits exceeded by not more than:

4.3.1.1.1. VHF Omni Directional Range (VOR) Leg timing:  $\pm 15$  seconds.

4.3.1.1.2. VOR/Distance Measuring Equipment (DME):  $\pm 1$  NM.

4.3.1.1.3. Area Navigation (RNAV)/Global Positioning System (GPS):  $\pm 1$  NM.

4.3.1.2. **Q-.** Performed entry and holding procedures with minor deviations. Holding pattern limit exceeded by not more than.

4.3.1.2.1. VOR Leg timing:  $\pm 30$  seconds.

4.3.1.2.2. VOR/DME:  $\pm 2$  NM.

4.3.1.2.3. RNAV/GPS:  $\pm 2$  NM.

4.3.1.3. **U.** Holding was not in accordance with technical orders, directives, or published procedures. Exceeded Q- holding pattern limits.

4.3.2. Area 52 – Instrument Patterns (Prior to Final Approach Fix).

4.3.2.1. **Q.** Performed procedures as published or directed and IAW flight manual. Smooth and timely response to controller instruction.

4.3.2.2. **Q-.** Performed procedures with minor deviations. Slow to respond to controller instruction.

4.3.2.3. **U.** Performed procedures with major deviations/erratic corrections. Failed to comply with controller instruction.

4.3.3. **Area 53 – Penetration/Enroute Descent (Initial Approach Fix to Final Approach Fix/ Descent Point).**

4.3.3.1. **Q.** Performed the penetration/enroute descent and approach as published/directed and IAW applicable flight manuals. Complied with all restrictions. Made smooth and timely corrections.

4.3.3.2. **Q-.** Performed the penetration/enroute descent and approach with minor deviations. Complied with most restrictions. Slow to make corrections.

4.3.3.3. **U.** Performed the penetration/enroute descent and approach with major deviations. Erratic, improper, or no corrections.

4.3.4. **Area 54 – Non-Precision Approach.**

4.3.4.1. **Q.** Approach was IAW published procedures. Used appropriate descent rate to arrive at minimum decision altitude (MDA) at or before visual descent point (VDP). Position permitted a safe landing. Maintained proper, briefed airspeed. Smooth and timely response to controller's instructions (for Airport Surveillance Radar (ASR) approach).

4.3.4.1.1. Airspeed:  $+10/-5$  KIAS.

4.3.4.1.2. Heading:  $\pm 5$  degrees.

4.3.4.1.3. Course:  $\pm 5$  degrees at missed approach point (MAP).

4.3.4.1.4. Minimum Descent Altitude/step down: +100/-0 feet.

4.3.4.1.5. Identify MAP: Before passing 0.5NM past (with DME) or 10 sec past (without DME)

4.3.4.2. **Q-**. Performed approach with minor deviations. Arrived at MDA at or before the MAP, but past the VDP. Initiated approach/go around or appropriate. Slow to respond to controllers instructions and make corrections.

4.3.4.2.1. Heading:  $\pm 10$  degrees.

4.3.4.2.2. Course:  $\pm 10$  degrees at MAP.

4.3.4.2.3. Minimum Descent Altitude: +150/-50 feet.

4.3.4.2.4. MAP/step-down altitude(s): +150/-50.

4.3.4.2.5. Identify MAP before passing .5 NM past (with DME) or 20 sec past without DME.

4.3.4.2.6. Airspeed: +15/-5.

4.3.4.2.7. Localizer: Within two dots deflection.

4.3.4.3. **U**. Approach not IAW flight manual, directives or published procedures. Maintained steady state flight below the MDA, even though the -50 foot limit was not exceeded. Could not land safely from approach and did not initiate missed approach/go-around when appropriate or directed. Exceeded Q- criteria.

4.3.5. **Area 55 – Precision Approach (Precision Approach Radar (PAR), ILS, or Radar). Note:** Use the following criteria as general tolerances for airspeed, altitude, heading, glide slope, and azimuth. Airspeed tolerances are based on computed or briefed approach speed.

4.3.5.1. **Q**. Performed procedures as directed and IAW flight manual. Smooth and timely response to controller instruction. Complied with decision height. Position permitted a safe landing. Maintained proper/briefed airspeed. Maintained glide path with only minor deviations.

4.3.5.1.1. Airspeed: +10/-5 KIAS.

4.3.5.1.2. Heading:  $\pm 5$  degrees of controller instruction (PAR).

4.3.5.1.3. Glide slope/azimuth within one dot (ILS).

4.3.5.2. **Q-**. Performed procedures with minor deviations. Slow to respond to controller's instructions. Position permitted a safe landing. Slow respond to controllers instructions to correct to proper/briefed airspeed or after runway was in sight examinee momentarily deviated below glide path but corrected for a safe landing (“duck under”).

4.3.5.2.1. Improper glide path control.

4.3.5.2.2. Airspeed: +15/-5 KIAS.

4.3.5.2.3. Heading:  $\pm 10$  degrees of controller instruction (PAR).

4.3.5.2.4. Azimuth within two dots (ILS).

4.3.5.2.5. Glide Slope one dot low, two dots high (ILS), or after runway was in sight examinee momentarily deviated below glide path but corrected for a safe landing.

4.3.5.3. **U.** Performed procedures with major deviations. Erratic corrections. Did not respond to controller instruction. Exceeded Q- limits. Did not comply with decision height and/or position did not permit a safe landing. Erratic glide path control.

4.3.5.4. **PAR.**

4.3.5.4.1. **Q.** Approach was IAW flight manual, directives and published procedures. Smooth and timely response to controller's instructions. Established initial glide path and maintained glide slope with minor deviations. Complied with decision height. Position would have permitted a safe landing. Elevation did not exceed slightly above or slightly below glide path.

4.3.5.4.2. **Q-.** Performed approach with minor deviations. Slow to respond to controller's instructions and make corrections. Position would have permitted a safe landing. Elevation did not exceed well above or well below glide path. Initiated missed approach as directed or at decision height +50/-0 feet, if applicable.

4.3.5.4.3. **U.** Approach not IAW flight manual, directives or published procedures. Erratic course and glide slope corrections. Did not make corrections or react to controller's instructions. Did not comply with decision height and/or position would not have permitted a safe landing. Exceeded Q- limits.

4.3.5.5. **ILS.**

4.3.5.5.1. **Q.** Approach was IAW flight manual, directives, and published procedures. Smooth and timely corrections to azimuth and glide slope. Complied with decision height and position permitted a safe landing.

4.3.5.5.2. **Q-.** Performed procedures with minor deviations. Slow to make corrections or initiate procedures. Slow to comply with decision height. Position would have permitted a safe landing. Initiated missed approach at decision height +50/-0 feet, if applicable.

4.3.5.5.3. **U.** Approach not IAW flight manual, directives, or published procedures. Erratic course/glide slope corrections. Did not comply with decision height or position would not have permitted a safe landing. Exceeded Q- criteria.

4.3.6. Area 56 – Missed Approach/Climb Out.

4.3.6.1. **Q.** Executed missed approach/climb out as published/directed. Completed all procedures IAW flight manual.

4.3.6.2. **Q-.** Executed missed approach/climb out with minor deviations. Slow to comply with published procedures, controller instructions, or flight manual procedures.

4.3.6.3. **U.** Executed missed approach/climb out with major deviations or did not comply with applicable directives.

4.3.7. Area 57 – Circling/Side-Step Approach.

4.3.7.1. **Q.** Performed circling/side-step approach IAW applicable flight manual procedures and techniques and AFMAN 11-217V1 & V3, *Instrument Flight Procedures*.

Aircraft control was positive and smooth. Proper runway alignment. Airspeed: +10/-5 KIAS.

4.3.7.2. **Q-**. Performed circling/side-step approach with minor deviations to applicable flight manual procedures and techniques and AFMAN 11-217V1 & V3. Aircraft control was not consistently smooth, but safe. Runway alignment varied, but go-around not required. Airspeed: +15/-5 KIAS.

4.3.7.3. **U**. Circling/side-step approach not performed IAW applicable flight manual procedures and techniques and AFMAN 11-217V1 & V3. Erratic aircraft control. Large deviations in runway alignment required go-around.

#### 4.3.8. Area 58 – Instrument Cross Check.

4.3.8.1. **Q**. Effective instrument cross check. Smooth and positive aircraft control throughout flight. Met "Q" criteria for applicable special events, or instrument final approaches.

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

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

#### 4.3.9. Areas 59 – 60 – Reserved.

### 4.4. Mission Employment.

#### 4.4.1. General.

##### 4.4.1.1. Area 61 – Tactical Plan.

4.4.1.1.1. **Q**. Well developed plan that included consideration of mission objectives and potential threats. Appropriately identified contingencies and alternatives.

4.4.1.1.2. **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.

4.4.1.1.3. **U**. Major errors in the plan precluded accomplishment of the stated objectives. Failed to identify any contingencies or alternatives.

##### 4.4.1.2. Area 62 – Threat Analysis/Avoidance.

4.4.1.2.1. **Q**. Able to plot threats in flight and formulate a plan of action to avoid lethal range of given threat system. Executed the proper evasive maneuver in a timely manner when given an immediate threat. Adequately analyzed and degraded all threats ensuring effective mission accomplishment. Aware of appropriate tactics to avoid threats and exposure.

4.4.1.2.2. **Q-**. Made minor errors in plotting and avoiding the lethal range of a given threat system. Slow to execute the proper evasive maneuver. Minor errors in threat analysis or tactics selection.

4.4.1.2.3. **U.** Insufficient knowledge of tactics and threats contributed to ineffective mission accomplishment.

**4.4.1.3. Area 63 – Mission Execution.**

4.4.1.3.1. **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.

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

4.4.1.3.3. **U.** Unable to accomplish the mission due to major errors of commission or omission during execution. Situational awareness lost, aircraft put in undue/unnecessary risk.

**4.4.1.4. Area 64 – Tactical Departure.**

4.4.1.4.1. **Q.** Followed procedures as briefed and IAW flight manual, directives, or published procedures. Displayed smooth, positive control throughout the departure. Gave proper consideration to threat location and adjusted departure accordingly. Constantly cleared area of intended flight.

4.4.1.4.2. **Q-.** Performed departure with minor deviations to published procedures. Aircraft control was not consistently positive and smooth.

4.4.1.4.3. **U.** Departure not performed IAW flight manual, directives, or published procedures. Displayed erratic aircraft control. Failed to consider threat location or proximity and/or maneuvering could have placed the aircraft within the lethal range of a given threat system. Did not clear the area of intended flight or ensure proper terrain clearance.

**4.4.1.5. Area 65 – Tactical Arrival.**

4.4.1.5.1. **Q.** Followed procedures as briefed and IAW flight manual, directives, or published procedures. Displayed smooth, positive control throughout the departure. Gave proper consideration to threat location and adjusted arrival accordingly. Constantly cleared area of intended flight.

4.4.1.5.2. **Q-.** Performed arrival with minor deviations to published procedures. Aircraft control was not consistently positive and smooth.

4.4.1.5.3. **U.** Arrival not performed IAW flight manual, directives, or published procedures. Displayed erratic aircraft control. Failed to consider threat location or proximity and/or maneuvering could have placed the aircraft within the lethal range of a given threat system. Did not clear the area of intended flight or ensure proper terrain clearance.

**4.4.1.6. Area 66 – Short Field Landing (not currently evaluated / reserved for future use).** If a short field is not available, pilots will be evaluated using Short-Field landing procedures on normal runways.

4.4.1.6.1. **Q.** Adhered to published procedures. Maintained smooth approach path. Used proper aim points with positive corrections, as necessary. Touched down on centerline within the zone IAW AFI 11-2MC-12V3 without excessive bouncing or crab. Maintained runway centerline during rollout. Stopped at pre-briefed location or exited the runway at pre-briefed location. Airspeed: Vref  $\pm$ 2 KIAS.

4.4.1.6.2. **Q-.** Minor deviations to published procedures. Aim point/aircraft alignment wandered or corrections were not smooth or timely. Landed in zone but had excessive bouncing or crab. Airspeed: Vref +10/-5 KIAS.

4.4.1.6.3. **U.** Touchdown short of the landing zone. Exceeded Q- airspeed criteria. Touchdown beyond the landing zone and did not execute a go-around. Touchdown short of the landing zone. Touchdown/rollout was more than 10 feet from centerline. Failed to stop at pre-briefed location or exit the runway at pre-briefed location.

#### 4.4.1.7. Area 67 – Tactical Navigation.

4.4.1.7.1. **Q.** Maintained awareness of position, terrain, and operational requirements. Met operational timeline requirements for the supported operation. Used appropriate navigational procedures. Ensured navigational aids were properly tuned, identified, and monitored, or programmed correct flight plan or changes in airframe flight management system (GPS, FMS, etc.). Complied with clearance instructions. Complied with established altitude requirements. Adhered to airspace restrictions including buffer zones, restrictive fire plans, fire support coordination lines, friendly artillery fans, kill boxes, ingress/egress corridors, and other airspace restrictions.

4.4.1.7.2. **Q-.** Minor errors maintaining awareness of position, terrain, and operational requirements. Minor deviations to operational timeline requirements that did not impede the supported operation. Minor errors in procedures or use of navigation equipment. Some deviations in tuning, identifying, and monitoring navigational aids or changing information in flight management system (FMS), GPS, etc. Slow to comply with clearance instructions. Had some difficulty in establishing exact position and course. Slow to adjust for deviations in time and course. Altitude control contributed to exposure to threats for brief periods.

4.4.1.7.3. **U.** Major errors in procedures/use of navigation equipment. Significant deviations from operational timeline requirements that adversely affected the supported mission. Did not ensure navaids were tuned, identified and monitored or programmed incorrect flight plan or changes in airframe FMS, GPS, etc. 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. Failed to locate desired destination. Deviations from planned route of flight or altitude exposed flight to threats. Violated airspace restrictions or altitude minimums. Inadequate terrain awareness and/or clearance. Exceeded Q- criteria.

#### 4.4.1.8. Area 68 – Ingress.

4.4.1.8.1. **Q.** Aware of all known/simulated threats and defenses. Employed effective use of route and altitude selection.

4.4.1.8.2. **Q-**. Ignored some of the known/simulated threats and defenses. Improper use of route and altitude selection resulted in unnecessary exposure.

4.4.1.8.3. **U**. Failed to honor known/simulated threats and defenses significantly reducing survivability.

4.4.1.9. Area 69 – Egress.

4.4.1.9.1. **Q**. Aware of all known/simulated threats and defenses. Employed effective use of route and altitude selection to complete an expeditious egress from the target area.

4.4.1.9.2. **Q-**. Ignored some of the known/simulated threats and defenses. Egress contributed to unnecessary exposure to threats and delayed departure from target area.

4.4.1.9.3. **U**. Failed to honor known/simulated threats and defenses significantly reducing survivability. Egress caused excessive exposure to threats.

4.4.1.10. **Area 70 – Timing**. The FE may make adjustments in timing for non-crew-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.

4.4.1.10.1. **Sensor/Mission Timing**. All briefed mission timings (time at target, fence checks, etc.) will be evaluated.

4.4.1.10.1.1. **Q**. Effectively met mission timings.

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

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

4.4.1.11. Area 71 – Training Rules/Rules of Engagement (ROE).

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

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

4.4.1.11.3. **U**. Significant deviations indicating a lack of knowledge of training rules/ROE and their application.

4.4.1.12. Area 72 – Aircraft Positioning.

4.4.1.12.1. **Q**. Maneuvered to clearly observe the target/attain EEIs, meet detection concern during all phases of the target prosecution.

4.4.1.12.2. **Q-**. Observation position afforded less than optimal view of the target or deconfliction with participating aircraft. Occasionally out of position to attain EEIs or meet detection concern

4.4.1.12.3. **U**. Observation position did not allow an adequate view of the target. Observation position was inappropriate for attaining EEIs and/or meeting detection concern.

4.4.1.13. **Area 73 – NVG Operations**. Operational use of NVGs at cruise/mission altitudes to aide in mission execution/support.

- 4.4.1.13.1. **Q.** Correctly described the use/limitations of NVGs. Properly pre-flighted, handled, and used NVGs during the flight.
- 4.4.1.13.2. **Q-** Made minor omissions or deviations in describing the use/limitations of NVGs. Did not properly preflight, handle, or use NVGs during the flight, but caused no damage to equipment. Mission success not negatively affected.
- 4.4.1.13.3. **U.** Procedures for using NVGs were incorrect. Demonstrated improper use or adjustment of/on NVG equipment. Mission unsuccessful as a result of improper NVG usage.
- 4.4.1.14. **Area 74 – NVG Air Land (not currently evaluated / reserved for future use).** Use of NVG during ground operations, takeoff, approach, landing and go-around. NVG Air Land areas are currently not evaluated and the section remains to enable air land aspects when approved. In the future they will be evaluated utilizing special qualification criteria.
- 4.4.1.14.1. NVG Air Land areas:
- 4.4.1.14.1.1. **Area 33 – Takeoff**
- 4.4.1.14.1.2. **Area 48 – Landing**
- 4.4.1.14.1.3. **Area 42 – Go-Around.**
- 4.4.1.14.2. **Q.** Takeoff, landing, and missed approach criteria previously listed were not exceeded. Displayed satisfactory knowledge of NVG Air Land procedures. Thoroughly analyzed departure/landing runway and surrounding terrain.
- 4.4.1.14.3. **Q-** Minor deviations in knowledge or published procedures. Errors did not affect safety or mission accomplishment.
- 4.4.1.14.4. **U.** Procedures not IAW flight manual, directives, or published procedures. Unable to analyze NVG air-land constraints or verbalize concerns posed by terrain or other factors. Could not describe or apply above terms. Displayed unsatisfactory knowledge of NVG air-land procedures. Major errors impacting safety and mission accomplishment.
- 4.4.1.15. **Area 75 – Sensor Operation/Tactics:**
- 4.4.1.15.1. **Q.** Correctly operated the sensor to acquire the target. Used optimal sensors and settings to maximize mission objectives. Was able to properly tune the sensor display to permit observation operations.
- 4.4.1.15.2. **Q-** Poor tuning of sensor hindered target identification degrading observation operations. Did not thoroughly understand tuning procedures.
- 4.4.1.15.3. **U-** Improper tuning of sensor prevented target identification. Poor use of level/gain controls created an unusable picture. Did not understand basic tuning controls and their function.
- 4.4.1.16. **Area 76. Surveillance Target Acquisition:**
- 4.4.1.16.1. **Q.** Successfully acquired and maintained in the FOV all assigned/attempted targets IAW mission requirements.

4.4.1.16.2. **Q-** Acquired greater than 50 percent of the assigned/attempted targets, but not able to maintain targets in FOV. Minimal mission degradation.

4.4.1.16.3. **U.** Acquired 50 percent or less of assigned/attempted targets. Was not able to maintain acquired targets in the FOV. Unable to accomplish mission.

**4.4.1.17. Area 77. Photo Target Acquisition:**

4.4.1.17.1. **Q** Successfully acquired all assigned/attempted targets IAW mission requirements. Targets positioned within central 50 percent of camera footprint.

4.4.1.17.2. **Q-** Target positioned outside central 50 percent but within central 80 percent of camera footprint. Photo should have been better but self-induced factor caused accurate interpretation beyond central 80 percent of photograph. Acquired greater than 50 percent of the assigned/attempted targets.

4.4.1.17.3. **U.** Target not completely within camera footprint. Self-induced factor caused target to be partially or completely out of frame. Acquired 50 percent or less of assigned/attempted targets.

**4.4.1.18. Area 78 – Radios/Mission Data Transmission.**

4.4.1.18.1. **Q.** Radio/Data communications (both internal and external) were concise, accurate, and effectively used to direct maneuvers or describe the tactical situation.

4.4.1.18.2. **Q-** Minor terminology errors or omission occurred, but did not significantly detract from awareness of situation, mutual support, or mission accomplishment. Extraneous comments over primary or secondary radios presented minor distractions.

4.4.1.18.3. **U.** Radio/Data communications over primary/secondary radios were inadequate or excessive. Inaccurate or confusing terminology significantly detracted from mutual support, awareness of situation, or mission accomplishment.

**4.4.1.19. Area 79 – Sensor Employment.**

4.4.1.19.1. **Q.** Demonstrated complete knowledge of sensors operating procedures, and sensor operating parameters for the events performed.

4.4.1.19.2. **Q-** Minor errors in knowledge of sensor procedures/parameters or weapons sensor capability to support the events performed.

4.4.1.19.3. **U.** Demonstrated inadequate knowledge of sensor procedures or parameters, to support the events performed.

## Chapter 5

### SENSOR OPERATOR EVALUATION CRITERIA

#### 5.1. Evaluation Standards.

5.1.1. SO QUAL/MSN evaluation areas ([Table 5.1](#)) and grading criteria in this chapter are divided into two sections: General and Mission Employment. Use all sections for criteria applicable to the events performed on the evaluation.

5.1.2. Where major areas include sub areas, only one grade will be assigned to the major areas. Discrepancies will be annotated on the back of the AF Form 8 by sub area.

**Table 5.1. Sensor Operator Evaluation Areas.**

Area	Notes	Title
		<b>I. General</b>
101		Briefing
102		Image Quality
103		KuSS Operation
104		Payload Operation
		<b>II. Mission Employment</b>
111		Sensor Operations/Tactics
112		Image Quality
113		Target Analysis
114		Target Marking
115		Target Assessment

#### 5.2. General.

##### 5.2.1. Area 101 – Briefing.

5.2.1.1. **Q.** Well organized and presented in a logical sequence. Established specific objectives for each of the targets.

5.2.1.2. **Q-.** Poorly organized or incomplete briefing. Target objectives undefined and poorly quantified. Omitted some minor training events.

5.2.1.3. **U.** Confusing presentation or did not brief targets.

##### 5.2.2. Area 102 – Imagery Quality.

5.2.2.1. **Q.** Demonstrated satisfactory capability to collect imagery using all available sensors.

5.2.2.2. **Q-.** Minor errors in procedures or equipment use during imagery collection. Slow to use appropriate settings (specify in AF Form 8).

5.2.2.3. **U.** Major errors in procedures or equipment use during imagery collection. Could not use appropriate settings (specify in AF Form 8).

##### 5.2.3. Area 103 – KuSS- Operation.

5.2.3.1. **Q.** Demonstrated satisfactory capability to configure and collect using KuSS mode.

5.2.3.2. **Q-.** Minor errors or omissions in using approved checklists/procedures to configure SO station and collect during Ku operations.

5.2.3.3. **U.** Major errors or omissions in using approved checklists/procedures to configure SO station and collect Ku operations.

#### 5.2.4. **Area 104 – Payload Operation.**

5.2.4.1. **Q.** Demonstrated satisfactory capability to collect imagery using all available sensors.

5.2.4.2. **Q-.** Minor errors in procedures or equipment use during imagery collection. Slow to use appropriate settings (specify in AF Form 8).

5.2.4.3. **U.** Major errors in procedures or equipment use during imagery collection. Could not use appropriate settings (specify in AF Form 8).

5.2.5. Areas 105-110 – RESERVED. Reserved for future use.

### 5.3. **Mission Employment.**

#### 5.3.1. **Sensor Operations.**

5.3.1.1. Area 111 – Sensor Operations /Tactics.

5.3.1.1.1. **Q.** Correctly operated the sensor to acquire and exploit the target.

5.3.1.1.2. **Q-.** Poor operation of sensor hindered target identification, acquisition or exploitation of the target.

5.3.1.1.3. **U.** Could not direct sensors to acquire or exploit targets.

#### 5.3.1.2. **Area 112 – Imagery Quality.**

5.3.1.2.1. **Q.** Imagery Quality allowed successful interpretation of all assigned/attempted targets IAW mission requirements.

5.3.1.2.2. **Q-.** Image quality was degraded by aircrew-induced factors, but still permitted interpretation.

5.3.1.2.3. **U.** Aircrew induced factors caused poor image resulting in non-fulfillment of EEIs.

5.3.1.3. Area 113 – Target Analysis.

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

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

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

5.3.1.4. Area 114 – Target Marking.

5.3.1.4.1. **Q.** Accomplished accurate and timely marking.

5.3.1.4.2. **Q-** Minor procedural errors degraded laser target marking effectiveness/weapon employment.

5.3.1.4.3. **U.** Improper laser marking procedures resulted in unsuccessful point outs or weapons delivery.

5.3.1.5. Area 115 – Target Assessment.

5.3.1.5.1. **Q.** Accurately assessed level of damage and could determine overall post-strike status of target as damaged or destroyed.

5.3.1.5.2. **Q-** Assessment was inaccurate, confusing, or incomplete.

5.3.1.5.3. **U.** Could not assess level of damage or determine post-strike status of target.

## Chapter 6

### CRYPTOLOGIC OPERATOR EVALUATIONS

#### 6.1. Evaluation Standards.

6.1.1. This chapter provides CO QUAL/MSN required evaluation areas ([Table 6.1](#)) and grading criteria.

6.1.1.1. **Initial/Requalification.** Required events include complete equipment preflight; a flight profile that includes a realistic scenario of a tactical mission in which the CO provides input; and post-flight procedures. Any mission in an actual threat environment will satisfy same requirements.

6.1.1.2. **Periodic QUAL/MSN.** Requirements for periodic evaluations are the same as initial/requalification evaluations.

6.1.2. Where major areas include sub areas, only one grade will be assigned to the major areas. Discrepancies will be annotated on the back of the AF Form 8 by sub area.

**Table 6.1. Cryptologic Operator Evaluation Areas.**

Area	Notes	Title
201	1	Control of Classified Material
202	3	Air to Air & Air to Ground Communications Operation
203	3	Mission Management
204	1	Target Knowledge
205	1	Target Analysis
206	1	Target Reporting
207	1	Equipment Operations
208	1	Mission Operations
209-249		Reserved for future use

**6.2. CO QUAL/MSN Criteria.** The following subparagraphs contain grading criteria for the areas listed in [Table 6.1](#)

6.2.1. **Area 201 – Control of Classified**

#### **Material.**

6.2.1.1. **Q.** Acquired, inventoried, maintained positive control, and/or demonstrated the proper use and storage of classified material, equipment, and information. Satisfactory knowledge of all procedures, including destruction.

6.2.1.2. **Q-.** Difficulty acquiring, inventorying, maintaining positive control and/or demonstrating the proper use of classified material, equipment, and information. Adequate knowledge of procedures, but needs improvement.

6.2.1.3. **U.** Failed to acquire, inventory, maintain positive control and/or demonstrate the proper use of classified material, equipment, and information. Unsatisfactory knowledge of procedures.

6.2.2. Area 202 – Air to Air & Air to Ground Communications Operation.

6.2.2.1. **Q.** Demonstrated proper radio communications procedures to include using appropriate ALSA standard terminology as applicable to operator's mission area.

Demonstrated ability to use different pieces of communications suite both internal and external to the airframe as appropriate to the mission objectives. Satisfactory knowledge of communications suite equipment hardware and software operations.

6.2.2.2. **Q-**. Had difficulty demonstrating proper radio communications procedures or misused ALSA standard terminology for operator's mission area. Had difficulty demonstrating ability to use different pieces of communications suite both internal and external to the airframe as appropriate to the mission objectives. Minor lapses of knowledge of communications suite equipment hardware and software operations did not detract from mission success.

6.2.2.3. **U**. Failed to demonstrate proper radio communications procedures or did not know standard ALSA terminology for operator's mission area. Could not demonstrate how to use different communications suite either internal or external to the airframe to meet mission objectives. Lacked knowledge of Communications suite equipment hardware and software operations that detracted from mission success.

### 6.2.3. Area 203 – Mission Management.

6.2.3.1. **Q**. Correctly prioritized mission objectives. Used available resources to manage workload and avoided the creation of self-imposed workload or stress. Clearly communicated and acknowledged workload and task distribution. Clearly stated problems and used facts to come up with solution. Provided adequate time for completion of tasks and prepared for expected or contingency situations.

6.2.3.2. **Q-**. Did not consistently or correctly prioritize mission objectives. Did not always use available resources to manage workload. Did not always clearly communicate or acknowledge workload and task distribution. Did not consistently provide adequate time for completion of task and/or not always prepared for expected or contingency situations.

6.2.3.3. **U**. Unable to correctly prioritize mission objectives, use available resources to manage workload or avoid self-imposed workload/stress. Failed to communicate or acknowledge workload and task distribution. Did not provide adequate time for completion of tasks and/or unprepared for expected or contingency situations.

### 6.2.4. Area 204 – Target Knowledge.

6.2.4.1. **Q**. Demonstrated knowledge of characteristics, procedures, and capabilities associated with targets applicable to the operator's mission area. Demonstrated knowledge of internal exploitation equipment capabilities/limitations to threats. Satisfactory overall target knowledge.

6.2.4.2. **Q-**. Demonstrated adequate knowledge of characteristics, procedures, and capabilities associated with targets applicable to the operator's mission area, but needs improvement. Demonstrated only basic knowledge of internal exploitation equipment capabilities/limitations to threats. Adequate overall threat knowledge, but needs improvement.

6.2.4.3. **U**. Demonstrated insufficient knowledge of characteristics, procedures, and capabilities associated with target to the aircraft as applicable to the operator's mission

area. Demonstrated a lack of knowledge of exploitation equipment capabilities/limitations to threats. Unsatisfactory overall threat knowledge.

6.2.5. Area 205 – Target Analysis.

6.2.5.1. **Q.** Demonstrated ability to prioritize equipment resources against targets based on location and other aspects of the mission system.

6.2.5.2. **Q-.** Had difficulty prioritizing equipment resources against targets based on location and level of threat.

6.2.5.3. **U.** Failed to prioritize equipment resources against targets based on location and level of threat.

6.2.6. Area 206 – Target Reporting.

6.2.6.1. **Q.** Demonstrated ability to relay appropriate situational awareness and/or target-related information affecting the mission to the appropriate crewmember in a timely manner. Target calls excluded extraneous information and met acceptable standards for clarity and brevity. Demonstrated ability to extract Essential Elements of Information (EIs) (essential elements of information) and intelligence pertinent to technical reporting.

6.2.6.2. **Q-.** Demonstrated ability to relay appropriate situational awareness or target-related information affecting the mission to the appropriate crewmember, but needs improvement in timeliness, clarity, and/or brevity. Target calls included some extraneous information not pertinent to the aircraft and/or mission, but the overall mission was not impacted. Difficulty extracting EIs (essential elements of information) and intelligence pertinent to technical reporting.

6.2.6.3. **U.** Failed to relay appropriate situational awareness or target-related information affecting the mission to the appropriate crewmember in a timely manner. Threat calls included extraneous information and fell below acceptable standards for clarity and brevity. Inadequate threat reporting negatively impacted the mission. Failed to extract EIs (essential elements of information) and intelligence pertinent to technical reporting.

6.2.7. **Area 207 – Equipment Operations.**

6.2.7.1. **Q.** Demonstrated satisfactory knowledge of aircraft exploitation systems. Familiar with nomenclature and basic operation and capabilities/limitations of aircraft system components against specific threats. Able to describe impact of equipment outages on mission objectives.

6.2.7.2. **Q-.** Demonstrated adequate knowledge of aircraft exploitation systems but needs improvement. Needed assistance with nomenclature and basic operation and capabilities/limitations of aircraft defensive system components against specific threats. Difficulty describing impact of equipment outages on mission objectives.

6.2.7.3. **U.** Failed to demonstrate adequate knowledge of aircraft exploitation systems. Unfamiliar with nomenclature and basic operation and capabilities/limitations of aircraft defensive system components against specific threats. Failed to describe impact of equipment outages on mission objectives.

6.2.8. Area 208 – Mission Operations.

6.2.8.1. **Q.** Able to explain external support provided to MC-12W tactical operations. Able to explain basic mission employment doctrine of MC-12W operations.

6.2.8.2. **Q-.** Had difficulty explaining external support to MC-12W tactical operations. Had difficulty explaining basic mission employment doctrine of MC-12W operations and needed improvement.

6.2.8.3. **U.** Failed to explain external support provided to MC-12W tactical operations. Failed to explain basic mission employment doctrine of MC-12W operations.

6.2.9. **Areas 209-249 – Reserved.**

## Chapter 7

### INFORMATION COLLECTION AND RECORDS

**7.1. Information Collections.** No information collections are created by this publication.

**7.2. Records.** The program records created as a result of the processes prescribed in this publication are maintained in accordance with AFMAN 33-363 and disposed of in accordance with the AF RDS located at <https://www.my.af.mil/afrims/afrims/afrims/rims.cfm>.

HERBERT J. CARLISLE, Lt Gen, USAF  
DCS, Operations, Plans and Requirements

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

AFPD 11-2, *Aircraft Rules and Procedures*, 14 January 2005  
AFPD 11-4, *Aviation Service*, 1 September 2004  
AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, 13 Sep 2010  
AFI 11-214, *Air Operations Rules and Procedures*, 22 Dec 2005  
AFI 11-290, *Cockpit/Crew Resource Management Training Program*, 11 Apr 2001  
AFI 11-2MC-12W V1, *MC-12W – Aircrew Training*, 5 Jun 2009  
AFI 11-2MC-12W V3, *MC-12W – Operations Procedures*, 11 Aug 2009  
AFI 33-360, *Publications and Forms Management*, 18 May 2006  
AFMAN 11-210, *Instrument Refresher Course Program (IRP)*, 3 Feb 2005  
AFMAN 11-217V1, *Instrument Flight Procedures*, 3 Jan 2005  
AFMAN 11-217V3, *Supplemental Flight Information*, 23 Feb 2009  
AFI 11-401, *Aviation Management*, 10 Dec 2010  
AFMAN 33-363, *Management of Records*, 1 March 2008  
AF RDS in AFRIMS, <https://www.my.af.mil/afrims/afrims/afrims/rims.cfm>  
Privacy Act (PA) of 1974 and 5 U.S.C. &522a

***Adopted Forms***

AF Form 8, *Certificate of Aircrew Qualification*, 8 Dec 2006  
AF Form 847, *Recommendation for Change of Publication*, 27 Sep 2009

***Abbreviations and Acronyms***

**AAGS**—Army Air Ground Support  
**ACC**—Air Combat Command  
**AFI**—Air Force Instruction  
**AFPD**—Air Force Policy Directive  
**AFRC**—Air Force Reserve Command  
**ANG**—Air National Guard  
**ARMS**—Aviation Resource Management System  
**A-S**—Air-to-Surface  
**ASR**—Airport Surveillance Radar  
**ATD**—Aircrew Training Device

**BMC**—Basic Mission Capable  
**C2**—Command and Control  
**CAP**—Critical Action Procedure  
**CC**—Commander  
**CMR**—Combat Mission Ready  
**CO**—Cryptologic Operator  
**COMM**—Communications  
**CRM**—Cockpit/Crew Resource Management  
**DME**—Distance Measuring Equipment  
**DOC**—Designed Operational Capability  
**DRU**—Direct Reporting Unit  
**EI**—Essential Elements of Information  
**EP**—Emergency Procedure  
**EPE**—Emergency Procedures Evaluation  
**FCIF**—Flight Crew Information File  
**FE**—Flight Examiner  
**FMS**—Flight Management System  
**FTU**—Formal Training Unit  
**GPS**—Global Positioning System  
**HQ**—Headquarters  
**IAW**—In Accordance With  
**IFF**—Identification Friend or Foe  
**IFR**—Instrument Flight Rules  
**INFLTREP**—In-Flight Report  
**INSTM**—Instrument  
**INSTR**—Instructor  
**ILS**—Instrument Landing System  
**ISR**—Intelligence, Surveillance and Reconnaissance  
**KIAS**—Knots Indicated Airspeed  
**MAJCOM**—Major Command  
**MAP**—Missed Approach Point  
**MDA**—Minimum Descent Altitude

**MQF**—Master Question File  
**MSN**—Mission  
**NM**—Nautical Miles  
**NOTAMS**—Notices to Airmen  
**NVG**—Night Vision Goggles  
**OG**—Operations Group  
**OPR**—Office of Primary Responsibility  
**P**—Pilot  
**PA**—Privacy Act  
**PAPI**—Precision Approach Path Indicator  
**PAR**—Precision Approach Radar  
**PED**—Procession Exploration and Dissemination Cell  
**QUAL**—Qualification  
**RAP**—Ready Aircrew Program  
**RDS**—Records Disposition Schedule  
**RNAV**—Area Navigation  
**ROE**—Rules of Engagement  
**RPI**—Runway Point of Intercept  
**SIF**—Selective Identification Feature  
**SO**—Sensor Operator  
**Stan/Eval**—Standardization/Evaluation  
**TACS**—Tactical Air Control System  
**TST**—Time-Sensitive Targeting  
**USAF**—United States Air Force  
**VASI**—Visual Approach Path Indicator  
**VDP**—Visual Descent Point  
**VFR**—Visual Flight Rules  
**VOR**—VHF Omni Directional Range  
**VR**—Video Recording

### *Terms*

**Aircrew Training Device**—An approved training device for the MC-12. 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.

**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.

**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.

**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.

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

**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.

**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 war fighting tasks, and provides skill integration training.

**Squadron Supervisor**—Squadron Commander, Operations Officer, Assistant Operations Officers, or Flight Commanders.