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***Flying Operations***

**F-117--AIRCREW EVALUATION CRITERIA**



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(Maj Warren A. Montgomery)

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(Brig Gen David L. Moody)

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This volume implements AFD 11-2, *Aircraft Rules and Procedures*; AFD 11-4, *Aviation Service*; and AFI 11-202V2, *Aircrew Standardization/Evaluation Program*. It applies to all F-117 units. This instruction does not apply to the Air National Guard (ANG) or Air Force Reserve Command (AFRC). MAJCOMs/DRUs/FOAs are to forward proposed MAJCOM/DRU/FOA-level supplements to this volume to HQ USAF/XOOT, through HQ ACC/DOTV, for approval prior to publication IAW AFD 11-2. Copies of MAJCOM/DRU/FOA-level supplements, after approved and published, will be provided by the issuing MAJCOM/DRU/FOA to HQ USAF/XOOT, HQ ACC/DOTV, and the user MAJCOM/DRU/FOA offices of primary responsibility. Field units below MAJCOM/DRU/FOA level will forward copies of their supplements to this volume to their parent MAJCOM/DRU/FOA office of primary responsibility for post publication review. **NOTE:** The terms Direct Reporting Unit (DRU) and Field Operating Agency (FOA) as used in this paragraph refer only to those DRUs/FOAs that report directly to HQ USAF. Keep supplements current by complying with AFI 33-360V1, *Publications Management Program*. See paragraph 1.2. of this volume for guidance on submitting comments and suggesting improvements to this volume.

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## Chapter 1

### GENERAL INFORMATION

**1.1. General.** All evaluations will be conducted IAW the provisions of AFI 11-202V2 and this volume.

**1.2. Recommended Changes/Waivers.** Recommendations for improvements to this volume will be submitted on AF Form 847, **Recommendation for Change of Publication**, through stan/eval channels to HQ ACC/DOTV. Waiver authority for this volume is the HQ ACC/DO. Waivers will be requested from the HQ ACC/DOTV through appropriate channels.

#### **1.3. Procedures:**

1.3.1. Flight Examiners (FE) will use the evaluation criteria contained in **Chapter 3** 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.

1.3.2. Recording devices (Video Tape Recorders (VTR), tape recorders, etc.) should be used, when available, to reconstruct/evaluate the mission.

1.3.3. Unless specified, the examinee or FE may fly in any flight position (to include chase) which will best enable the FE to conduct a thorough evaluation.

1.3.4. The FE will brief the examinee on the purpose of the evaluation and how it will be conducted prior to flight. The examinee will accomplish required flight planning in accordance with the flight position during the evaluation. Higher Headquarters FEs (and unit FEs as determined locally) will be furnished a copy of necessary mission data, and mission materials.

1.3.5. Required areas are shown in **Table 2.1**. When it is impossible to evaluate a required area in flight, it will be evaluated by an alternate method (i.e., in an aircrew training device (ATD)/cockpit procedure trainer (CPT) or by oral examination) in order to complete the evaluation.

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

**1.4. Grading Instructions.** Standards and performance parameters are contained in AFI 11-202V2 and this instruction.

1.4.1. The FE will base tolerances for in-flight parameters on conditions of smooth air and a stable aircraft. Do not consider momentary deviations from tolerances, provided the examinee applies prompt corrective action and such deviations do not jeopardize flying safety. The FE will consider cumulative deviations when determining the overall grade.

1.4.2. When grading criteria specify that airspeed/Angle of Attack (AOA) be evaluated and the flight manual lists only a minimum/maximum/recommended airspeed/AOA for that area, the examinee will brief the desired airspeed/AOA.

1.4.3. The FE 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. Derive the

overall flight evaluation grade from the area grades based on a composite for the observed events and tasks IAW this volume.

1.4.3.1. FEs will use the grading criteria in this volume to determine individual area grades. FE judgment must be exercised when the wording of areas is subjective and when specific situations are not covered.

1.4.3.2. If the examinee receives an unqualified area grade in any of the critical areas identified by this volume, an overall unqualified grade will be assigned.

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

1.4.3.4. The following general criteria apply during all phases of flight except as noted for specific events and instrument final approaches:

**Table 1.1. General Criteria.**

<b>Q</b>	Altitude	+/- 200 feet
	Airspeed	+/- 5%
	Course	+/- 5 degrees/3 NM (whichever is greater)
	TACAN Arc	+/- 2 NM
<b>Q-</b>	Altitude	+/- 300 feet
	Airspeed	+/- 10%
	Course	+/- 10 degrees/5 NM (whichever is greater)
	TACAN Arc	+/- 3 NM
<b>U</b>		Exceeded Q- limits

**1.5. Emergency Procedures Evaluation (EPE).** If available and configured appropriately, an ATD will be used to conduct the requisite EPE. If an ATD is not used, the EPE will be conducted in an appropriate unit training device (UTD) or CPT, in order of preference. If a CPT is not used, the EPE will be given verbally. This evaluation will include areas commensurate with examinee's Ready Aircrew Program training level.

1.5.1. The following items will be included on all emergency procedure evaluations:

1.5.1.1. Aircraft general knowledge.

1.5.1.2. Emergency procedures. Evaluate a minimum of two emergency procedures per phase of flight (i.e., pre-takeoff, takeoff, cruise and landing). All Bold Face will be evaluated.

1.5.1.3. Flight coordination (if applicable).

1.5.1.4. Unusual attitude recoveries will be evaluated during all EPEs. This fulfills the Area 15, Unusual Attitude Recoveries, requirement for all Instrument/Qualification evaluations.

1.5.2. The following additional items will be included on EPEs as a requisite for the instrument and/ or qualification evaluation:

1.5.2.1. AFMAN 11-217, *Instrument Flight Procedures*. Evaluate use of standby/emergency instruments.

1.5.2.2. Alternate/Divert Airfields. Evaluate a minimum of one approach at other than home base.

1.5.3. Mission evaluation scenarios should be tailored to unit tasking. The following additional items should be included on the emergency procedures evaluation given as a requisite to the mission evaluation.

1.5.3.1. Weapons system operation.

1.5.3.2. Evasive action.

1.5.3.3. Weapons delivery and switchology.

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

1.5.4.1. Q. Performance is correct. Quickly recognizes and corrects errors.

1.5.4.2. Q-. Performance is safe, but indicates limited proficiency. Makes errors of omission or commission.

1.5.4.3. U. Performance is unsafe or indicates lack of knowledge or ability.

**1.6. Documentation of Weapons Employment Results.** Weapons employment results will be documented in the Mission Description Section of the AF Form 8, **Certificate of Aircrew Qualification**, for mission evaluations.

1.6.1. **Air-to-Surface.** Hit or Miss IAW AFI 11-2F-117V1, *F-117--Aircrew Training*, will be entered for each air-to-surface record delivery. For air scored event or for VTR assessed deliveries, FEs will determine weapons employment results. Air scored or VTR assessed deliveries will be annotated with an asterisk. Document results using "Hit/Miss" as in the following example:

Weapons delivery scores using Laser Guided Bomb (LGB) hit criteria were:

<u>Level Cultural</u>	<u>Level Range</u>
<b>Hit*/Hit*</b>	<b>Hit/Miss</b>

\* VTR assessed

1.6.2. **FE Judgment.** FE judgment will be the determining factor in deciding the weapons employment grade. If the examinee 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 Additional Comments Section of the AF Form 8.

**1.7. Publications Check:**

1.7.1. Publications that will be checked during the evaluation are:

1.7.1.1. T.O. 1F-117-1CL-1.

1.7.1.2. T.O. 1F-117-34-1-1CL-1.

1.7.1.3. T.O. 1F-117-1-6CL-1.

1.7.1.4. Local in-flight guide.

1.7.1.5. Units may specify additional publications to be evaluated in the unit supplement to AFI 11-202V2.

**1.8. Records Disposition.** Records will be disposed of IAW AFMAN 37-139, *Records Disposition Schedule*, Table 13-10.

## Chapter 2

### EVALUATION REQUIREMENTS

#### 2.1. General:

2.1.1. All evaluations will follow the guidelines set in AFI 11-202V2. The procedures and flight profiles outlined in this chapter apply to all F-117 units. Evaluation requirements are depicted in **Table 2.1**.

2.1.2. Areas indicated with an "R" are required items for that evaluation. A required area is a specific area that must be evaluated to complete the evaluation. All required areas must be included in the flight evaluation profile. However, if it is impossible to accomplish a required area in-flight, the FE may elect to evaluate the area(s) by an alternate method (i.e., UTD, CPT, orally, etc.), in order to complete the evaluation. 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.

**2.2. Instrument/Qualification Evaluation.** A mission flown according to instrument flight rules (to the maximum extent practical) best fulfills the objective of the instrument/qualification evaluation. To the maximum extent possible, this evaluation will include approaches at airfields other than home or deployed locations. This evaluation may be administered on any compatible training mission with the approval of the unit Chief of Stan/Eval with the commander's concurrence. Minimum ground phase requisites are:

2.2.1. Instrument Refresher Course (IRC) Training (IAW AFMAN 11-210, *Instrument Refresher Course (IRC) Program*).

2.2.2. Instrument examination.

2.2.3. Closed and open-book qualification examinations.

2.2.4. EPE.

2.2.5. Bold Face Written Exam. Answers must contain all Bold Face items in proper sequence. Abbreviations are allowed.

**2.3. Mission Evaluation.** Scenarios that represent unit DOC tasking satisfy the requirements of this evaluation. The profiles will be designed to evaluate the training/flight position/special qualifications as well as basic airmanship of the examinee. Initial mission evaluations will be given in the primary DOC of the unit. Mission evaluations will normally be flown using unit formations and tactics. Examinees will be evaluated in the position of their highest qualification. If briefed, at the FEs discretion, portions may be flown in another position, but the emphasis is to have examinees evaluated at their highest qualification level. Based on the examinee's experience level, a wingman may be required to brief (to include tactics) and/or lead certain phases of the mission, but will not be evaluated using flight lead grading criteria. Evaluations during exercises or deployments are encouraged.

2.3.1. First look navigation and look alike targets are encouraged. Navigation should be of sufficient length relative to unit plans, with timing appropriate to the tasking. Mission profiles should include actual delivery of practice or live ordnance. Ordnance deliveries may be dry if they can be validated. In addition, dry passes are permitted if, in the FE's opinion:

2.3.1.1. Accomplishing an actual delivery would significantly decrease the realism of the sortie.

2.3.1.2. The mission profile is a realistic sortie and allows a thorough evaluation of the examinee, but does not terminate on a range.

2.3.2. Minimum ground phase requisites are:

2.3.2.1. EPE.

2.3.2.2. Bold Face Written Exam. Answers must contain all Bold Face items in proper sequence. Abbreviations are allowed.

**NOTE:**

Basic Mission Capable pilots will only be evaluated on those missions routinely performed. Examinees will only be evaluated on those areas for which they are qualified.

**2.4. Formal Course Evaluation.** Syllabus evaluations will be flown IAW syllabus mission profile guidelines if stated, or on a mission profile developed from syllabus training objectives. Formal course guidelines may be modified, based on local operating considerations or FE judgment, to complete the evaluation. Training objectives and related areas will be graded using the performance criteria in [Chapter 3](#).

**2.5. Instructor Evaluation.** Instructor evaluations will be conducted IAW AFI 11-202V2. Flight evaluations will include a thorough evaluation of the examinee's instructor knowledge and ability. This is a one-time check in which the examinee must demonstrate ability to instruct in some phase of the unit's mission. Except for requirements delineated in [Table 2.1.](#), specific profiles and/or events will be determined by the flight examiner. Subsequent evaluations (for example, Instrument/Qualification, Mission) will include instructor portions during the evaluations.

2.5.1. Flying Training Unit (FTU) instructor mission evaluation profiles will normally be IAW the formal course syllabus for any mission which the instructor pilot (IP) is qualified to instruct. For units whose IPs normally instruct from a chase aircraft, the examinee should fly a portion of the mission in the chase position, if feasible.

**Table 2.1. Pilot Evaluations.**

AREA	NOTES	AREA TITLE	INST/QUAL	MISSION
<b>GENERAL</b>				
<b>1</b>		PUBLICATION CHECK	R	
<b>2</b>		MISSION PLANNING	R	R
<b>3</b>		BRIEFING (if applicable)	R	R
<b>4</b>		PRETAKEOFF	R	R
<b>5</b>		TAKEOFF	R	
<b>6</b>		DEPARTURE	R	
<b>7</b>		LEVEL OFF	R	
<b>8</b>		CRUISE/NAVIGATION	R	
<b>9</b>		FORMATION		
<b>10</b>		IN-FLIGHT CHECKS	R	

AREA	NOTES	AREA TITLE	INST/QUAL	MISSION
11		FUEL MANAGEMENT	R	R
12		COMM/IFF/SIF	R	R
13	1	AIRWORK/ADV HAND/TAC MANEU- VER	R	
14	2	UNUSUAL ATTITUDE RECOVERIES	R	
15		WEAPONS SYSTEM/BIT CHECKS		
16		AIR REFUELING		
17		DESCENT	R	
18		GO-AROUND		
19		EMERGENCY TRAFFIC PATTERNS	R	
20		EMERGENCY APPROACH/LANDING	R	
21		VFR PATTERN/APPROACH	R	
22		FORMATION APPROACH		
23		LANDING	R	
24		AFTER-LANDING	R	
25		FLIGHT LEADERSHIP (if applicable)	R	R
26		DEBRIEFING/CRITIQUE	R	R
27		KNOWLEDGE	R	R
28	*	AIRMANSHIP	R	R
29	*	SAFETY	R	R
30	*	AIRCREW DISCIPLINE	R	R
31		INSTRUCTOR PERFORMANCE (if applicable)	R	R
32 - 40		NOT USED		
<b>INSTRUMENT</b>				
41		HOLDING		
42		INSTRUMENT PENETRATION	R	
43		INSTRUMENT PATTERNS	R	
44		NONPRECISION APPROACH	R	
45		PRECISION APPROACH (ILS)	R	
46		MISSED APPROACH/CLIMB OUT	R	
47		CIRCLING/SIDE-STEP APPROACH		
48		INSTRUMENT CROSS-CHECK		
49 - 50		NOT USED		
<b>TACTICAL EMPLOYMENT</b>				
<b>A. GENERAL</b>				
51		TACTICAL PLAN		R

AREA	NOTES	AREA TITLE	INST/QUAL	MISSION
52		TACTICAL EXECUTION		R
53		GCI/AWACS/CF INTERFACE		
54		RADIO TRANSMISSIONS		R
55		VISUAL LOOKOUT		R
56		MUTUAL SUPPORT (if applicable)		R
57		TACTICAL NAVIGATION		R
58		INGRESS		R
59		EGRESS		R
60		TIMING		R
61		TRAINING RULES/ROE		R
62		IN-FLIGHT REPORT		R
63		WEAPONS SYSTEM EMPLOYMENT		R
64 - 70		NOT USED		
<b>B. AIR-TO-SURFACE</b>				
71		TARGET ACQUISITION		R
72		WEAPONS EMPLOYMENT		R
73		RANGE PROCEDURES		
74		IR SENSOR OPERATION		
75		LGB DELIVERY PROCEDURES		
76 - 80		NOT USED		

\* Indicates Critical Area

**Notes:**

1. **Airwork/Advanced Handling/Tactical Maneuvering.** This area is required for pilots receiving Instrument/ Qualification evaluations. Units will determine appropriate proficiency maneuvers for type aircraft and/or pilot experience levels. Examples are, but are not limited to:

- a. Aerobatics
- b. Confidence maneuvers
- c. Advanced handling characteristics

2. **Unusual Attitude Recoveries.** Do not perform unusual attitude recoveries in-flight, they will be evaluated during EPEs.

## Chapter 3

### EVALUATION CRITERIA

#### 3.1. General Grading Standards:

3.1.1. The grading criteria in this chapter are divided into three sections: General, Instrument and Tactical Employment. Use all sections for criteria applicable to the events performed on the evaluation.

3.1.2. Where major areas are divided into subareas, only one grade will be assigned to the major areas. Discrepancies on the back of the AF Form 8 will be annotated by subarea.

#### 3.2. General:

##### 3.2.1. Area 1--Publications Check:

3.2.1.1. **Q.** Assigned flight manual publications were current and usable for any of the unit's combat taskings. Contained only minor deviations, omissions, and/or errors.

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

3.2.1.3. **U.** Not up to "Q-" standards. Contained major deviations, omissions, and/or errors.

##### 3.2.2. Area 2--Mission Planning:

3.2.2.1. **Q.** Developed a sound plan to accomplish the mission. Checked all factors applicable to flight in accordance with applicable directives. Aware of alternatives available, if flight cannot be completed as planned. Read and initialed for all items in the Flight Crew Information File (FCIF)/Read Files. Prepared at briefing time.

3.2.2.2. **Q-.** Same as above, except minor error(s) or omission(s) that did not detract from mission effectiveness. Demonstrated limited knowledge of performance capabilities or approved operating procedures/rules in some areas.

3.2.2.3. **U.** Made major error(s) or omission(s) that would have prevented a safe or effective mission. Displayed faulty knowledge of operating data or procedures. Did not review or initial FCIF/Read Files. Not prepared at briefing time.

##### 3.2.3. Area 3--Briefing:

###### 3.2.3.1. Organization:

3.2.3.1.1. **Q.** Well organized and presented in a logical sequence. Concluded briefing in time to allow for element and preflight of personal equipment, aircraft and ordnance.

3.2.3.1.2. **Q-.** Events out of sequence, hard to follow, some redundancy.

3.2.3.1.3. **U.** Confusing presentation. Did not allow time for element/crew briefing (if applicable) and preflight of personal equipment, aircraft and ordnance.

###### 3.2.3.2. Presentation:

3.2.3.2.1. **Q.** Presented briefing in a professional manner. Effective use of training aids. Flight members clearly understood mission requirements.

3.2.3.2.2. **Q-.** Did not make effective use of available training aids. Dwelled on non-essential mission items.

3.2.3.2.3. **U.** Did not use training aids. Redundant throughout briefing. Lost interest of flight members. Presentation created doubts or confusion.

**3.2.3.3. Mission Coverage:**

3.2.3.3.1. **Q.** Established objectives for the mission. Presented all training events and effective technique discussion for accomplishing the mission.

3.2.3.3.2. **Q-.** Omitted some minor training events. Limited discussion of techniques.

3.2.3.3.3. **U.** Did not establish objectives for the mission. Omitted major training events or did not discuss techniques.

**3.2.3.4. Flight Member Consideration:**

3.2.3.4.1. **Q.** Considered the abilities of all flight members. Briefed corrective action from previous mission and probable problem areas when appropriate.

3.2.3.4.2. **Q-.** Did not consider all flight members' abilities. Did not identify probable problem areas.

3.2.3.4.3. **U.** Ignored flight members' abilities and past problem areas.

**3.2.4. Area 4--Pre-Takeoff:**

3.2.4.1. **Q.** Established and adhered to station, start engine, taxi and takeoff times to assure thorough preflight, check of personal equipment, crew briefing, etc. Accurately determined readiness of aircraft for flight. Performed all checks and procedures prior to takeoff in accordance with approved checklists and applicable directives.

3.2.4.2. **Q-.** Same as above except for minor procedural deviations which did not detract from mission effectiveness.

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

**3.2.5. Area 5--Takeoff:**

3.2.5.1. **Q.** Maintained smooth aircraft control throughout takeoff. Performed takeoff in accordance with flight manual procedures and techniques.

3.2.5.2. **Q-.** Minor flight manual procedural or technique deviations. Control was rough or erratic.

3.2.5.3. **U.** Takeoff potentially dangerous. Exceeded aircraft/systems limitations. Raised gear too early. Failed to establish proper climb attitude. Over-controlled aircraft resulting in excessive deviations from intended flight path.

**3.2.6. Area 6--Departure:**

**3.2.6.1. Instrument/VFR:**

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

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

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

**3.2.6.2. Trail Departure:**

3.2.6.2.1. **Q.** Trail departure accomplished using proper procedures and techniques. Provided efficient commentary throughout departure and/or rendezvous.

3.2.6.2.2. **Q-.** Minor deviations from established or appropriate procedures.

3.2.6.2.3. **U.** Unable to accomplish trail departure or rendezvous. Gross overshoot or excessively slow rendezvous caused by poor technique or procedure. Missed rendezvous.

**3.2.7. Area 7--Level-Off:**

3.2.7.1. **Q.** Levelled off smoothly. Promptly established proper cruise airspeed.

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

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

**3.2.8. Area 8--Cruise/Navigation:**

3.2.8.1. **Q.** Demonstrated satisfactory capability to navigate using all available means. Used appropriate navigation procedures. Ensured nav aids were properly tuned, identified, and monitored. Complied with clearance instructions. Aware of position at all times. Remained within the confines of assigned airspace. Fix-to-Fix within +/- 3 NM.

3.2.8.2. **Q-.** Minor errors in procedures/use of navigation equipment. Some deviations in tuning, identifying, and monitoring nav aids. Slow to comply with clearance instructions. Had some difficulty in establishing exact position and course. Fix-to-Fix within +/- 5 NM.

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

**3.2.9. Area 9--Formation:****3.2.9.1. Flight Lead:**

3.2.9.1.1. **Q.** Established and maintained appropriate formations utilizing published and briefed procedures. Maintained positive control of flight/element. Smooth on the controls and considered wingman. Planned ahead and made timely decisions. Ensured that wingman flew proper position. Effectively applied Cockpit/Crew Resource Management (CRM) skills throughout mission. (Further guidance on CRM and be obtained from AFI 11-290, *Cockpit/Crew Resource Management Training Program*, and AF Form 4031, **Cockpit/Crew Resource Management Skills Criteria**.)

3.2.9.1.2. **Q-.** Made minor deviations from published and/or briefed procedures. Demonstrated limited flight management. Occasionally rough on the controls. Maneuvered exces-

sively, making it difficult for wingman to maintain position. Did not always plan ahead and/or hesitant in making decisions. Made minor mistakes applying CRM skills, but did not negatively impact mission accomplishment.

3.2.9.1.3. **U.** Formation flight not accomplished in accordance with published and/or briefed procedures. Did not establish appropriate formations. Continually rough on the controls. Maneuvered erratically causing wingman to break out or overrun formation. Provided little consideration for wingman. Indecisive. Failed to ensure wingman maintained proper position. Displayed little or no CRM skills, significantly impacting mission accomplishment.

### 3.2.9.2. **Wingman:**

3.2.9.2.1. **Q.** Maintained position in accordance with published and briefed procedures with only momentary deviations. Demonstrated smooth and immediate position corrections. Maintained safe separation and complied with leader's instructions. Rejoin was smooth and timely. Effectively applied CRM skills throughout mission. (Further guidance on CRM and be obtained from AFI 11-290, *Cockpit/Crew Resource Management Training Program*, and AF Form 4031, **Cockpit/Crew Resource Management Skills Criteria**).

3.2.9.2.2. **Q-.** Made minor deviations to published procedures. Slow to comply with leader's instructions. Varied position considerably. Over controlled. Slow to rejoin. Made minor mistakes applying CRM skills, but did not negatively impact mission accomplishment.

3.2.9.2.3. **U.** Formation flight not accomplished in accordance with published and/or briefed procedures. Did not comply with leader's instructions. Unable to maintain a formation position. Made abrupt position corrections. Did not maintain safe separation. Rejoin was unsafe. Displayed little or no CRM skills, significantly impacting mission accomplishment.

### 3.2.10. **Area 10--In-flight Checks:**

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

3.2.10.2. **Q-.** Same as qualified, except for minor deviations or omissions during checks. Did not detract from mission accomplishment.

3.2.10.3. **U.** Major deviations/omissions which detracted from mission accomplishment.

### 3.2.11. **Area 11--Fuel Management:**

3.2.11.1. **Q.** Actively monitored fuel throughout the mission. Complied with all established fuel requirements. Adhered to briefed Joker/Bingo calls.

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

3.2.11.3. **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.

### 3.2.12. **Area 12--Comm/IFF/SIF:**

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

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

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

**3.2.13. Area 13--Airwork/Advanced Handling/Tactical Maneuvering:**

3.2.13.1. **Q.** Aircraft control during maneuvers was positive and smooth. Maneuvers performed IAW directives and appropriate to the tactical situation/environment. Adhered to established procedures.

3.2.13.2. **Q-** Aircraft control during maneuvers not always smooth and positive, but adequate. Minor procedure deviations or lack of full consideration for the tactical situation.

3.2.13.3. **U.** Aircraft control erratic. Aircraft handling caused unsatisfactory accomplishment of maneuvers. Exceeded Q- criteria. Failed to consider the tactical situation. Temporary loss of aircraft control.

**3.2.14. Area 14--Unusual Attitude Recoveries:**

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

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

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

**3.2.15. Area 15--Weapons System/BIT Checks:**

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

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

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

**3.2.16. Area 16--Air Refueling:**

**3.2.16.1. Air Refueling Rendezvous:**

3.2.16.1.1. **Q.** Rendezvous effectively accomplished using proper procedures. Demonstrated effective use of radio communications. Used proper communication procedures for briefed Emission Control (EMCON) level.

3.2.16.1.2. **Q-**. Rendezvous delayed by improper techniques, procedures or radio communications.

3.2.16.1.3. **U**. Displayed lack of knowledge or familiarity with procedures to the extent that air refueling was or could have been jeopardized. Failed rendezvous as a result of improper procedures. Gross overshoot, spent excessive time in trail or safety of flight jeopardized due to poor judgment.

**3.2.16.2. Air Refueling Procedures/Techniques:**

3.2.16.2.1. **Q**. Expeditiously established and maintained proper position. Used proper procedures. Aircraft control was positive and smooth. Refueled without pilot-induced disconnects.

3.2.16.2.2. **Q-**. Slow to recognize and apply needed corrections to establish and maintain proper position. Aircraft control was not always positive and smooth, but adequate. Accomplished published/directed procedures with deviations or omissions that did not affect the successful completion of air refueling. Performance caused no more than one pilot-induced disconnect.

3.2.16.2.3. **U**. Erratic in the pre-contact/refueling position. Made deviations or omissions that affected flight safety and/or the successful completion of the air refueling. Used unacceptable procedures. Excessive time to hookup delayed mission accomplishment. Performance caused more than one pilot-induced disconnect and/or delayed mission accomplishment.

**3.2.17. Area 17--Descent:**

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

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

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

**3.2.18. Area 18--Go-Around:**

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

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

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

**3.2.19. Area 19--Emergency Traffic Pattern:** (Prior to configuration. Includes simulated single engine, varied flap settings, as appropriate.)

3.2.19.1. **Q**. Complied with all flight manual and operational procedures. Maintained safe maneuvering airspeed/AOA. Flew approach compatible with the situation. Adjusted approach for type emergency simulated.

3.2.19.2. **Q-**. Minor procedural errors. Erratic airspeed/ AOA control. Errors did not detract from safe handling of the situation.

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

**3.2.20. Area 20 (P)--Emergency Approach/Landing (Configuration through Rollout):**

3.2.20.1. **Q.** Used sound judgment. Configured at the appropriate position/altitude. Flew final based on recommended procedures, airspeed/AOA and glidepath. Smooth, positive control of aircraft. Could have landed safely. Set parameters for ejection if necessary. Touchdown point was IAW applicable guidance and permitted safe stopping in available runway.

3.2.20.2. **Q-.** Safety not compromised. Configured at a position and altitude which allowed for a safe approach. Could have landed safely with the following deviations:

3.2.20.2.1. Minor deviations from recommended procedures, airspeed/AOA and altitudes.

3.2.20.2.2. Unnecessary maneuvering due to minor errors in planning or judgment.

3.2.20.2.3. Major deviations from recommended procedures, airspeed/AOA and altitudes. Required excessive maneuvering due to inadequate planning or judgment. Could not have landed safely. Touchdown point was not IAW applicable guidance and did not or would not allow for safe stopping on available runway. Did not set parameters for ejection if approach was unsuccessful.

**3.2.21. Area 21--VFR Pattern/Approach:**

3.2.21.1. **Q.** Performed patterns/approaches IAW procedures and techniques outlined in the flight manual, operational procedures and local directives. Aircraft control was smooth and positive. Accurately aligned with runway. Maintained proper/briefed airspeed/AOA. Airspeed -5/+10 knots.

3.2.21.2. **Q-.** Performed patterns/approaches with minor deviations to procedures and techniques 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/AOA. Airspeed -5/+15 knots.

3.2.21.3. **U.** Approaches not performed IAW procedures and techniques outlined in the flight manual, operational procedures and local directives. Erratic aircraft control. Large deviations in runway alignment. Exceeded Q- parameters.

**3.2.22. Area 22--Formation Approach:****3.2.22.1. Flight Lead:**

3.2.22.1.1. **Q.** Smooth on controls and considered wingman. Flew approach as published/directed.

3.2.22.1.2. **Q-.** Occasionally rough on the controls. Not unsafe, but made it difficult for wingman to maintain position. Some procedural deviations. Slow to comply with published procedures.

3.2.22.1.3. **U.** Did not monitor wingman's position or configuration. Rough on the controls. No consideration for wingman. Placed wingman in a position from which a safe landing could not be made. Major deviations in procedures. Did not fly approach as published/directed.

**3.2.22.2. Wingman:**

3.2.22.2.1. **Q.** Maintained position with only momentary deviations. Smooth and immediate corrections. Maintained safe separation and complied with procedures and leader's instructions.

3.2.22.2.2. **Q-.** Varied position considerably. Overcontrolled.

3.2.22.2.3. **U.** Abrupt position corrections. Did not maintain appropriate separation. Unsafe wing position and/or procedural deviations.

3.2.23. **Area 23--Landing.** Applicable to normal VFR approaches. Where runway configuration, arresting cable placement or flight manual limitations require an adjustment to the desired touchdown point, a simulated runway threshold will be identified and the grading criteria applied accordingly. For instrument approaches, the examinee should utilize a normal glideslope from either the decision height or from a point where visual acquisition of the runway environment is made.

3.2.23.1. **Q.** Performed landings IAW procedures and techniques outlined in the flight manual, operational procedures and local directives. Touchdown Point - 150' to 1000' from the runway threshold.

3.2.23.2. **Q-.** Performed landings with minor deviations to procedures and techniques outlined in the flight manual, operational procedures and local directives. Touchdown Point - 0' to 149' or 1001' to 1500' from the runway threshold.

3.2.23.3. **U.** Landing not performed IAW procedures and techniques outlined in the flight manual, operational procedures and local directives. Touchdown Point exceeded Q- criteria.

3.2.24. **Area 24--After-Landing:**

3.2.24.1. **Q.** Appropriate after-landing checks and aircraft taxi procedures accomplished in accordance with the flight manual and applicable directives. Completed all required forms accurately.

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

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

3.2.25. **Area 25--Flight Leadership:**

3.2.25.1. **Q.** Positively directed the flight during accomplishment of the mission and made timely comments to correct discrepancies when required. Made sound and timely in-flight decisions.

3.2.25.2. **Q-.** In-flight decisions delayed mission accomplishment or degraded training benefit.

3.2.25.3. **U.** Did not accomplish the mission or failed to correct in-flight discrepancies. In-flight decisions jeopardized mission accomplishment.

3.2.26. **Area 26--Debriefing/Critique:**

3.2.26.1. **Q.** Thoroughly debriefed the mission (or applicable portions). Compared mission results with initial objectives that were established for the mission. Debriefed deviations. Offered corrective guidance as appropriate.

3.2.26.2. **Q-**. Limited debriefing. Did not thoroughly discuss performance in relationship to mission objectives. Did not debrief all deviations.

3.2.26.3. **U**. Did not debrief mission deviations or offer corrective guidance.

3.2.27. **Area 27--Knowledge:** (Evaluate all applicable subareas.)

3.2.27.1. **Aircraft General:**

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

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

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

3.2.27.2. **Emergency Procedures:**

3.2.27.2.1. **Q**. Displayed correct, immediate response to Bold Face and non-Bold Face emergency situations. Effectively used checklist.

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

3.2.27.2.3. **U**. Incorrect response for Bold Face emergency. Unable to analyze problems or take corrective action. Did not use checklist, or lacks acceptable familiarity with its arrangement or contents.

3.2.27.3. **Flight Rules/Procedures:**

3.2.27.3.1. **Q**. Thorough knowledge of flight rules and procedures.

3.2.27.3.2. **Q-**. Deficiencies in depth of knowledge.

3.2.27.3.3. **U**. Inadequate knowledge of flight rules and procedures.

3.2.27.4. **Weapon/Tactics/Threat:**

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

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

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

3.2.27.5. **Local Area Procedures:**

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

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

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

**3.2.27.6. Plans/Alert Procedures:**

3.2.27.6.1. **Q.** Adequate knowledge of plans applicable to the unit mission. Thoroughly familiar with alert procedures and contingencies.

3.2.27.6.2. **Q-.** Deficiencies in depth of knowledge or comprehension of plans or alert procedures applicable to the unit.

3.2.27.6.3. **U.** Knowledge of plans/alert procedures insufficient to ensure effective mission accomplishment.

**3.2.27.7. Authentication Procedures:**

3.2.27.7.1. **Q.** Performed authentication with no errors.

3.2.27.7.2. **Q-.** Minor errors in authentication.

3.2.27.7.3. **U.** Unable to authenticate or authenticated incorrectly.

**3.2.28. Area 28--Airmanship (Critical):**

3.2.28.1. **Q.** Executed the assigned mission in a timely, efficient manner. Conducted the flight with a sense of understanding and comprehension.

3.2.28.2. **U.** Decisions or lack thereof resulted in failure to accomplish the assigned mission. Demonstrated poor judgment to the extent that safety could have been compromised.

**3.2.29. Area 29--Safety (Critical):**

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

3.2.29.2. **U.** Was not aware of or did not comply with all safety factors required for safe operation or mission accomplishment. Did not adequately clear. Operated the aircraft in a dangerous manner.

**3.2.30. Area 30--Aircrew Discipline (Critical):**

3.2.30.1. **Q.** Demonstrated strict professional flight and crew discipline throughout all phases of the mission.

3.2.30.2. **U.** Failed to exhibit strict flight or crew discipline. Violated or ignored rules or instructions.

**3.2.31. Area 31--Instructor Performance:****3.2.31.1. Briefing/Debriefing:**

3.2.31.1.1. **Q.** Presented a comprehensive, instructional briefing/debriefing which encompassed all mission events. Made excellent use of training aids. Excellent analysis of all events/maneuvers. Clearly defined objectives.

3.2.31.1.2. **Q-.** Minor errors or omissions in briefing/debriefing or mission critique. Occasionally unclear in analysis of events or maneuvers.

3.2.31.1.3. **U.** Major errors or omissions in briefing/debriefing. Analysis of events or maneuvers was incomplete, inaccurate or confusing. Did not use training aids/reference material

effectively. Briefing/debriefing below the caliber of that expected of instructors. Failed to define mission objectives.

#### 3.2.31.2. **Demonstration of Maneuvers:**

##### **NOTE:**

For instructor evaluations where the IP normally instructs from a chase aircraft, the examinee will fly a portion of the mission in the chase position.

3.2.31.2.1. **Q.** Performed required maneuvers within prescribed parameters. Provided concise, meaningful in-flight commentary. Demonstrated excellent instructor proficiency.

3.2.31.2.2. **Q-.** Performed required maneuvers with minor deviations from prescribed parameters. In-flight commentary was sometimes unclear.

3.2.31.2.3. **U.** Was unable to properly perform required maneuvers. Made major procedural errors. Did not provide in-flight commentary. Demonstrated below-average instructor proficiency.

#### 3.2.31.3. **Instructor Knowledge:**

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

3.2.31.3.2. **Q-.** Deficiencies in depth of knowledge, comprehension of procedures, requirements, aircraft systems/performance characteristics, mission or tactics.

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

#### 3.2.31.4. **Ability to Instruct:**

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

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

3.2.31.4.3. **U.** Demonstrated inadequate ability to instruct/evaluate. Unable to perform, teach or assess techniques, procedures, systems use or tactics. Did not remain aware of aircraft/mission situation at all times.

#### 3.2.31.5. **Training/Evaluation Forms Preparation:**

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

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

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

3.2.32. **Areas 32 - 40.** Not used.

### 3.3. Instrument:

#### 3.3.1. Area 41--Holding:

3.3.1.1. **Q.** Performed entry and holding IAW published procedures and directives. Holding pattern limit exceeded by not more than:

3.3.1.1.1. VOR  $\pm$  15 seconds.

3.3.1.1.2. TACAN  $\pm$  2 NM.

3.3.1.2. **Q-.** Holding pattern limit exceeded by not more than:

3.3.1.2.1. VOR  $\pm$  20 seconds.

3.3.1.2.2. TACAN  $\pm$  3 NM.

3.3.1.3. **U.** Holding was not IAW published procedures and directives. Exceeded criteria for Q- or holding pattern limits.

#### 3.3.2. Area 42--Instrument Penetration (Initial Approach Fix to Final Approach Fix/Descent Point):

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

3.3.2.2. **Q-.** Performed the penetration and approach with minor deviations. Complied with all restrictions. Slow to make corrections.

3.3.2.3. **U.** Performed the penetration and approach with major deviations. Erratic corrections.

#### 3.3.3. Area 43. Instrument Patterns (Down-wind/Base Leg):

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

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

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

#### 3.3.4. Area 44--Non-Precision Approach:

3.3.4.1. **Q.** Adhered to all published/directed procedures and restrictions. Used appropriate descent rate to arrive at MDA at or before VDP/MAP. Position would have permitted a safe landing. Maintained proper/briefed AOA.

3.3.4.1.1. Airspeed +10/-5 kts.

3.3.4.1.2. Heading  $\pm$ 5 degrees (ASR).

3.3.4.1.3. Course  $\pm$ 5 degrees at MAP.

3.3.4.1.4. Localizer less than one dot deflection.

3.3.4.1.5. Minimum Descent Altitude +100/-0 feet.

3.3.4.2. **Q-** Performed approach with minor deviations. Arrived at MDA at or before the MAP, but past the VDP. Position would have permitted a safe landing. Slow to correct to proper/ briefed AOA.

3.3.4.2.1. Airspeed +15/-5 kts.

3.3.4.2.2. Heading  $\pm 10$  degrees (ASR).

3.3.4.2.3. Course  $\pm 10$  degrees at MAP.

3.3.4.2.4. Localizer within two dots deflection.

3.3.4.2.5. Minimum Descent Altitude +150/-50 feet.

3.3.4.3. **U.** Did not comply with published/directed procedures or restrictions. Exceeded Q- limits. Maintained steady state flight below the MDA, even though the -50 foot limit was not exceeded. Could not land safely from the approach.

**NOTE:**

The -50 foot tolerance applies only to momentary excursions.

**3.3.5. Area 45--Precision Approach (ILS):**

3.3.5.1. **Q.** Performed procedures as published and IAW applicable flight manual. Smooth and timely corrections to azimuth and glide slope. Complied with decision height and position would have permitted a safe landing. Maintained proper/briefed AOA.

3.3.5.1.1. Airspeed +10/-5 kts.

3.3.5.1.2. Glide Slope/Azimuth within one dot.

3.3.5.2. **Q-** Performed procedures with minor deviations. Slow to make corrections or initiate procedures. Position would have permitted a safe landing. Slow to correct to proper/briefed AOA.

3.3.5.2.1. Airspeed +15/-5 kts.

3.3.5.2.2. Glide Slope within one dot low/two dots high.

3.3.5.2.3. Azimuth within two dots.

3.3.5.2.4. Initiated missed approach (if applicable) at decision height, +50/-0 ft.

3.3.5.3. **U.** Performed procedures with major deviations. Erratic corrections. Exceeded Q- limits. Did not comply with decision height or position at DH would not have permitted a safe landing.

**3.3.6. Area 46--Missed Approach/Climb Out:**

3.3.6.1. **Q.** Executed missed approach/climbout as published directed. Completed all procedures IAW applicable flight manual.

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

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

**3.3.7. Area 47--Circling/Side-Step Approach:**

3.3.7.1. **Q.** Performed circling/side-step approach in accordance with procedures and techniques outlined in the flight manual and AFMAN 11-217. Aircraft control was positive and smooth. Proper runway alignment.

3.3.7.2. **Q-.** Performed circling/side-step approach with minor deviations to procedures and techniques outlined in the flight manual and AFMAN 11-217. Aircraft control was not consistently smooth, but safe. Runway alignment varied, but go-around not required.

3.3.7.3. **U.** Circling/side-step approach not performed in accordance with procedures and techniques outlined in the flight manual and AFMAN 11-217. Erratic aircraft control. Large deviations in runway alignment required go-around.

**3.3.8. Area 48--Instrument Cross Check:**

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

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

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

3.3.9. **Areas 49 - 50.** Not used.

**3.4. Tactical Employment:****3.4.1. A--General:****3.4.1.1. Area 51--Tactical Plan:**

3.4.1.1.1. **Q.** Well-developed plan that included consideration of mission objectives, the threat and capabilities of all flight members. Addressed contingencies in development of plan.

3.4.1.1.2. **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.

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

**3.4.1.2. Area 52--Tactical Execution:**

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

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

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

**3.4.1.3. Area 53--GCI/AWACS/Composite Force Interface:**

3.4.1.3.1. **Q.** Effectively planned for and used GCI/AWACS to enhance mission and achieve objectives. No confusion between GCI/AWACS and fighters.

3.4.1.3.2. **Q-.** Minor confusion between GCI/AWACS and fighters. Less than optimum use of GCI/AWACS which did not affect the fighter's offensive advantage.

3.4.1.3.3. **U.** Inadequate or incorrect use of GCI/AWACS resulted in loss of offensive potential.

**3.4.1.4. Area 54--Radio Transmission - Usage and Discipline:**

3.4.1.4.1. **Q.** Radio communications (both inter- and intra-cockpit) were concise, accurate and effectively used to direct maneuvers or describe the tactical situation.

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

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

**3.4.1.5. Area 55--Visual Lookout:**

3.4.1.5.1. **Q.** Demonstrated thorough knowledge and effective application of visual lookout techniques for all phases of flight.

3.4.1.5.2. **Q-.** Demonstrated limited knowledge of visual lookout techniques. Did not establish lookout responsibilities for all phases of flight. Slow to acquire threats to flight or targets to be attacked.

3.4.1.5.3. **U.** Demonstrated unsatisfactory knowledge and/or application of visual lookout responsibilities. Allowed threat to penetrate to short range undetected.

**3.4.1.6. Area 56--Mutual Support:**

3.4.1.6.1. **Q.** Maintained mutual support during entire engagement thus sustaining an offensive posture and/or negating all attacks. Adhered to all engaged and support responsibilities.

3.4.1.6.2. **Q-.** Mutual support occasionally broke down resulting in temporary confusion or the loss of an offensive advantage. Demonstrated limited knowledge of engaged and support responsibilities.

3.4.1.6.3. **U.** Mutual support broke down resulting in the flight being put in a defensive position from which all attacks were not negated. Demonstrated inadequate knowledge of engaged and support responsibilities.

**3.4.1.7. Area 57--Tactical Navigation:**

**3.4.1.7.1. General:**

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

**NOTE:**

Airspace restrictions include buffer zones, restrictive fire plans, fire support coordination lines, friendly artillery fans, ingress/egress corridors and other airspace restrictions.

3.4.1.7.1.2. **Q-**. Deviations from planned route of flight were recognized and corrected. Maintained terrain awareness. Altitude control contributed to exposure to threats for brief periods. Did not optimize terrain masking (if applicable).

3.4.1.7.1.3. **U**. Failed to locate desired destination. Deviations from planned route of flight exposed flight to threats. Violated airspace restrictions or altitude minimums. Poor airspeed/altitude control contributed to disorientation. Inadequate terrain awareness. Did not use terrain masking (if applicable).

**3.4.1.7.2. High Altitude:**

3.4.1.7.2.1. **Q**. Used proper procedures/DR techniques. Maintained course within 3NM. Properly used available aids to navigation. Maintained altitude consistent with mission requirements/restrictions.

3.4.1.7.2.2. **Q-**. Errors in procedures/techniques. Maintained course within 6NM. Minor errors in use of available navigation aids. Minor deviations from planned altitude.

3.4.1.7.2.3. **U**. Unable to use DR or appropriate navigation aids. Exceeded Q- tolerances.

**3.4.1.7.3. Medium Altitude:**

3.4.1.7.3.1. **Q**. Demonstrated satisfactory capability to adjust for deviations in time and course; only minor corrections required.

3.4.1.7.3.2. **Q-**. Medium level course and airspeed control resulted in large corrections. Minor error in procedures/use of navigation equipment.

3.4.1.7.3.3. **U**. Failed to recognize checkpoints or adjust for deviations in course. Major errors in procedures/use of navigation equipment.

**3.4.1.8. Area 58--Ingress:**

3.4.1.8.1. **Q**. Aware of all known/simulated threats and defenses. Employed effective use of terrain masking and/or route and altitude selection.

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

3.4.1.8.3. **U**. Failed to honor known/simulated threats and defenses significantly reducing survivability. Failed to employ effective terrain masking and/or route or altitude threat deconfliction.

**3.4.1.9. Area 59--Egress:**

3.4.1.9.1. **Q**. Effectively used evasive maneuvers and terrain masking to complete an expeditious egress from the target area. Flight/element join-up was accomplished as soon as possible without undue exposure to enemy defenses.

3.4.1.9.2. **Q-**. Egress contributed to unnecessary exposure to threats and delayed flight join-up and departure from target area.

3.4.1.9.3. **U.** Egress caused excessive exposure to threats. Flight/element join-up was not accomplished or resulted in excessive exposure to threats.

3.4.1.10. **Area 60--Timing.** Time will be based on pre-planned TOT (ordnance impact). Adjustments in TOT will be made for non-aircrew-caused delays. In the case of "no spot", timing will be adjusted to a bomb. If range clearance is delayed, time at a pre-planned IP may be substituted for TOT. The FE may widen this timing criterion if the examinee was forced to maneuver extensively along the ingress route due to simulated enemy air or ground defense reactions and/or weather.

3.4.1.10.1. **Q.**  $\pm 15$  seconds of assigned TOT.

3.4.1.10.2. **Q-.** Greater than  $\pm 15$  seconds, but less than  $\pm 1$  minute of assigned TOT.

3.4.1.10.3. **U.** Exceeded Q- parameters. Failed to cover TOT due to inadequate planning or use of resources.

3.4.1.11. **Area 61--Training Rules/ROE:**

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

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

3.4.1.11.3. **U.** Significant deviations indicating a lack of knowledge of training rules/ROE.

3.4.1.12. **Area 62--In-flight Report:**

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

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

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

3.4.1.13. **Area 63--Weapons System Employment:**

3.4.1.13.1. **Q.** Correctly utilized the weapon system to deliver the desired ordnance (actual or simulated). Executed all required procedures to successfully employ the weapon.

3.4.1.13.2. **Q-.** Late to prepare the weapon system to deliver the desired ordnance. Minor procedural errors degraded weapons employment.

**NOTE:**

A successful reattack following a dry pass caused by minor procedural errors during the delivery is an example of degraded weapons employment.

3.4.1.13.3. **U.** Did not correctly prepare the weapon system to deliver the desired ordnance. Improper procedures during the attack resulted in unsuccessful weapons delivery.

3.4.1.14. **Areas 64 - 70.** Not used.

3.4.2. **B--Air-to-Surface:**

3.4.2.1. **Area 71--Target Acquisition:**

3.4.2.1.1. **Q.** Target acquired on the first attack or, if missed due to difficult target identification features, a successful reattack was accomplished. For multiple target scenarios, all targets were acquired on the first attack or with a successful reattack.

3.4.2.1.2. **Q-.** Late to acquire the target, degraded the initial attack or reattack. For multiple target scenarios, 50 percent or more of the targets were acquired on the first attack but poor attack procedures resulted in a target not being acquired on an attack.

3.4.2.1.3. **U.** Target was not acquired. For multiple target scenarios, less than 50 percent of the targets were acquired on the first attack or with a successful reattack.

**NOTE:**

A successful reattack is defined as being within parameters to effectively employ the planned weapons against the target.

**3.4.2.2. Area 72--Weapons Employment:**

**3.4.2.2.1. Single Event:**

3.4.2.2.1.1. **Q.** Demonstrated complete knowledge of weapons delivery procedures and attack parameters. Correctly met release parameters and tracked target for the events performed. At least 50% of all bombs were within hit criteria.

3.4.2.2.1.2. **Q-.** Minor errors in knowledge of weapons delivery procedures and attack parameters. Deviated from release parameters or poor tracking resulted in less than desired weapons effect for the events flown. At least 50% of all bombs were within hit criteria.

3.4.2.2.1.3. **U.** Demonstrated inadequate knowledge of weapons delivery procedures and attack parameters. Improper release parameters or target tracking caused the weapon to miss for the events flown. Less than 50% of all bombs were within hit criteria.

**NOTES:**

1. Simulated/Actual Releases. Hit/Miss criteria assessed by the FE based on VTR film.
2. The FE will assess simulated/actual weapons effect (Hit/Miss) based on VTR film. Additionally, VTR film may be referenced to void unexplained weapons delivery misses (e.g., systems).

**3.4.2.3. Area 73--Range Procedures:**

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

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

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

**3.4.2.4. Area 74--IR Sensor Operation:**

3.4.2.4.1. **Q.** Correctly operated the sensor to acquire the target. Was able to properly tune the sensor display to permit weapons delivery.

3.4.2.4.2. **Q-.** Poor tuning of sensor hindered target identification degrading weapons delivery. Did not thoroughly understand tuning procedures.

3.4.2.4.3. **U.** Improper tuning of sensor prevented target identification or weapons delivery. Poor use of level/gain controls created an unusable picture. Did not understand basic tuning controls and their function.

**3.4.2.5. Area 75--Laser Guided Bomb (LGB) Delivery Procedures (Actual and Simulated):**

3.4.2.5.1. **Q.** Correctly released the LGB at the planned delivery parameters. Used proper lasing procedures to optimally guide the LGB. Followed all current procedures and guidance during the LGB delivery and recovery.

3.4.2.5.2. **Q-.** Minor errors in release or tracking which may have degraded weapons effectiveness. Lasing procedures degraded weapon effectiveness.

3.4.2.5.3. **U.** Improper release parameters resulted in the LGB being delivered outside weapon/seeker limits. Used improper lasing procedures which caused the weapon to miss the target. Major errors in execution of LGB delivery and/or recovery procedures.

3.4.2.6. **Areas 76 - 80.** Not used.

MARVIN R. ESMOND, Lt General, USAF  
DCS, Air and Space Operations

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

AFPD 11-2, *Aircraft Rules and Procedures*

AFPD 11-4, *Aviation Service*

AFI 11-2F-117V1, *F-117 Aircrew Training*

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

AFMAN 11-210, *Instrument Refresher Course (IRC) Program*

AFMAN 11-217, *Instrument Flight Procedures*

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

AFI 33-360V1, *Publications Management Program*

AFMAN 37-139, *Records Disposition Schedule*

***Abbreviations and Acronyms***

**AOA**—Angle of Attack

**ATD**—Aircrew Training Device

**BFM**—Basic Fighter Maneuvers

**CPT**—Cockpit Procedures Trainer

**CRM**—Cockpit/Crew Resource Management

**ECCM**—Electronic Counter Countermeasures

**ECM**—Electronic Countermeasure

**EMCON**—Emission Control

**EPE**—Emergency Procedures Evaluation

**FE**—Flight Examiners

**FCIF**—Flight Crew Information File

**FTU**—Flying Training Unit

**IP**—Instructor Pilot

**IRC**—Instrument Refresher Course

**LGB**—Laser Guided Bomb

**RWR**—Radar Warning Receiver

**UTD**—Unit Training Device

**VTR**—Video Tape Recorder