

**BY ORDER OF THE
SECRETARY OF THE AIR FORCE**

**AIR FORCE INSTRUCTION 11-2F-15E
VOLUME 2**

9 DECEMBER 2005

Flying Operations

F-15E--AIRCREW EVALUATION CRITERIA



COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This volume establishes criteria and procedures for F-15E flight evaluations and implements AFD 11-2, *Aircraft Rules and Procedures*, 14 Jan 2005; AFD 11-4, *Aviation Service*, 1 Sep 2004; and AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, 17 Jun 2002. It applies to all F-15E units. This instruction does not apply to Air Force Reserve Command (AFRC) or the Air National Guard (ANG). Major Commands (MAJCOM), Direct Reporting Units (DRU), and Field Operating Agencies (FOA) are to forward proposed MAJCOM/DRU/FOA-level supplements to this volume to HQ USAF/XOOT, through HQ ACC/A3TV, 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/A3T, 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 publication 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, *Air Force Content Management Program--Publications*, 30 Jan 2004. Recommendations for improvements to this instruction will be submitted on IMT 847, **Recommendation for Change of Publication**, to the parent MAJCOM. Approved recommendations will be forwarded to MAJCOM OPR (HQ ACC/A3TV). HQ USAF/XO is the approval authority for interim changes to this instruction. This publication requires the collection and or maintenance of information protected by the Privacy Act (PA) of 1974. The authorities to collect and or maintain the records prescribed in this publication are Title 10 *United States Code*, Chapter 857 and Executive Order 9397, *Numbering System for Federal Accounts Relating to Individual Persons*, 30 Nov 1943. Forms affected by the PA have an appropriate PA statement. System of records notice **F011 AF XO**, *Aviation Resource Management System (ARMS)* (December 26, 2002, 67 FR 78777) applies. The Paperwork Reduction Act of 1974 as amended in 1996 affects this instruction. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 37-123, (will convert to 33-363) *Management of Records* and disposed of in accordance with the *Air Force Records Disposition Schedule (RDS)* located at <https://afirms.amc.af.mil>

SUMMARY OF REVISIONS

All references to AF1.3.4. Form 8 changed to IMT-8. **Para 1.1.1.** clarifies the scope of evaluation for Cockpit Resource Management (CRM) skills throughout the entire instruction. **Para 1.3.2.** clarifies types of recording devices. **Para 1.3.3.** Clarifies FE evaluation qualification requirements within their aircrew specialty. **Para 1.3.4.** adds FE briefing and mission planning requirements. **Para 1.3.5.** updates references to **Table 2.1. and 2.2.** **Para 1.5.** updates references to Aircrew Training Devices. **Para 1.5.1.** clarifies emergency procedures evaluation requirements. **Para 1.5.1.4.** added requirement for WSOs to be evaluated on unusual attitude recoveries. **Para 1.5.3.** revised definitions. **Para 1.5.5.** adds provision for a combined INSTM/QUAL/MSN EPE. **Para 1.6.1.** clarifies source documentation for Air-to-Surface hit criteria. **Table 1.2.** updates references for weapons employment scores. **Para 2.1.3.1.** updated to require T.O. 1F-15E-1 be checked during the qualification evaluation. **Para 2.1.2.** updated references. **Para 2.1.2.1.** added to allow for a combined INSTM/QUAL/MSN evaluation. **Para 2.1.3.** deletes reference to the dash 25 checklist. **Para 2.3.** clarified WSO Qualification Evaluation Criteria. **Para 2.4.1.1.1.** updated EPE requirements. **Para 2.4.2.** updates Air-to-Air hit criteria. **Para 2.4.3.2.** clarifies when dry passes are allowed for mission evaluations. **Para 2.6.** updates references. **Para 2.6.1.** clarifies requirements for instructor pilot evaluations from the chase position. **Para 2.6.2.** clarifies requirements for FTU and WIC instructor mission evaluations. **Para 2.8.1.2.** clarifies rear cockpit landing evaluation requirements. **Table 2.1.** adds the requirement for WSOs to be evaluated on unusual attitude recoveries. **Table 2.2.** adds standardized EPE grading areas. **Para 3.2.2.** adds requirement to brief sensor management considerations. **Para 3.2.9.** and **Para 3.4.1.6.** add requirement to evaluate deconfliction contracts. **Para 3.2.12.** updates Comm/Identification, Friend or Foe evaluation criteria. **Para 3.2.36.** adds Area 36 --Task Prioritization. **Para 3.4.1.3.** changed to Composite Force Interface. **Para 3.2.68.** adds Area 68 -- Sensor Management. **Para 3.4.1.6.** adds requirement to evaluate formation contracts. **Para 3.4.1.11.** updates criteria for evaluation of timing criteria. **Para 3.4.1.16.** and **Para 3.4.1.17.** updates weapons system acronyms. **Para 3.4.2.2.** updates tactical intercept evaluation criteria. **Para 3.4.2.4.** updates weapons system acronyms. **Para 3.4.2.6.** adds Area 76 -- Air-to-Air Systems Employment. **Para 3.4.2.7.** adds Area 77 -- Command and Control Integration. **Para 3.4.3.4.** changed to IR/EO Sensor Operation. **Para 3.4.3.6.** adds Area 86 -- Laser Guided Bomb (LGB) Procedures. **Para 3.4.3.7.** adds Area 87 -- System Aided Weapons Delivery Procedures (Guided Weapons). **Para 3.4.3.8.** adds Area 88 -- System Aided Weapons Delivery Procedures (Unguided Weapons). **Chapter 4** "Emergency Procedures Evaluation Criteria" added. A bar (|) indicates revisions from the previous edition.

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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.

1.1.1. Cockpit 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 IMT 4031 is not required.

1.2. Waivers. Waiver authority for this publication is the MAJCOM/A3. Waivers will be requested from the parent MAJCOM Stan/Eval through appropriate channels.

1.3. Procedures:

1.3.1. Flight Examiners (FE) will use the evaluation criteria contained in **Chapter 2** for conducting all flight and emergency procedures evaluations. To ensure standard and objective evaluations, flight examiners will be thoroughly familiar with the prescribed evaluation criteria.

1.3.2. Recording devices (8mm, Video Tape Recorders (VTR), Digital Video Recorders, Air Combat Maneuvering Instrumentation (ACMI), etc.) should be used, when available, to reconstruct/evaluate the mission. For the purposes of this instruction the term "VTR" will include any aircraft video recording device.

1.3.3. Normally, the FE will evaluate within their aircrew specialty during flight evaluations. Any FE may evaluate any type of mission or qualification evaluation for either crew position, with the exception of the pilot instrument (INSTM) or qualification (QUAL) evaluations which must be evaluated by a pilot flight examiner. Any FE can administer an Emergency Procedures Evaluation (EPE). The examinee or FE may fly in any flight position/seat (to include chase) which will 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 may assist in mission planning/briefing as tasked and be furnished a copy of necessary mission data, mission materials, and data transfer module/mission cartridge loads.

1.3.5. Required areas are shown in **Table 2.1. and Table 2.1.** When it is impossible to evaluate a required area in flight, it may be evaluated by an alternate method (i.e., in a simulator or by verbal examination) in order to complete the evaluation. The reason why required area(s) were not evaluated in flight and the alternate method of evaluation used will be documented in the Comments portion of the AF IMT-8, **Certificate of Aircrew Qualification.**

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 inflight 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 and or 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 instruction.

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

1.4.3.2. 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.

Q	Altitude	+/- 200 Feet
Q	Airspeed	+/- 5 percent
Q	Course	+/- 5 degrees / 3NM (whichever is greater)
Q	TACAN arc	+/- 2 NM
Q-	Altitude	+/- 300 Feet
Q-	Airspeed	+/- 10 percent
Q-	Course	+/- 10 degrees / 3NM (whichever is greater)
Q-	TACAN arc	+/- 3 NM
U		Exceeded Q- Criteria

1.5. Emergency Procedures Evaluation. If available and configured appropriately, a flight simulator will be used to conduct the requisite EPE. If a Weapon System Trainer (WST) is not used, the EPE will be conducted in a Cockpit Procedures Trainer (CPT). If a WST or CPT is not used, the EPE will be given verbally. This evaluation will include areas commensurate with examinee's Ready Aircrew Program (RAP) training level.

1.5.1. The following items will be demonstrated on all emergency procedures 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).

1.5.1.3. Aircrew coordination.

1.5.1.4. Unusual attitude recoveries. Required on all EPEs for Pilot Instrument/Qualification and Weapons System Officer (WSO) 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 a minimum of one Heads-up Display (HUD) out approach and 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 will be tailored to unit tasking. The following additional items will 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. Electronic Attack (EA)/Electronic Protect (EP)/All Aspect Missile Defense (AAMD).

1.5.3.3. Evasive action/Threat Reaction.

1.5.3.4. Weapons Employment and Switchology.

1.5.3.5. Terrain Following Radar (TFR) procedures.

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.

1.5.5. Normally an EPE will be conducted separately for the pilot INSTM/QUAL and mission (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.

1.6. Documentation of Weapons Employment Results. Weapons employment results will be documented in the Mission Description Section of the AF IMT-8 for mission evaluations. Include entries for each type of simulated ordnance that was employed.

1.6.1. **Air-to-Surface.** Hit or Miss IAW AFI 11-2F-15EV1, *F-15E--Aircrew Training*, will be entered for each air-to-surface record delivery. For air scored events, FEs will determine weapons employment results. For VTR assessments, system accuracy, delivery accuracy, and guidance accuracy (if applicable) will be evaluated IAW AFTTP 3-1.17. Air scored or VTR assessed deliveries will be annotated with an asterisk. Document results using "Hit/Miss" as in [Table 1.2](#).

1.6.2. **Air-to-Air.** Record the number of simulated missile/gun firing attempts and the number that were valid as in [Table 1.2](#). Shot validity will be at pickle with all parameters IAW AFTTP 3-1 V1.

Table 1.2. Weapons Employment Scores.

Weapons delivery scores were:			
HARB	HADB	SLD	LALD
*Hit	Hit/Hit	Miss/Hit	Hit/Miss
	ATTEMPTED	VALID	
AIM-120	2	2	
AIM-9	4	3	
*VTR assessed			

1.6.3. **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 Comments Section of the AF IMT-8.

Chapter 2

EVALUATION REQUIREMENTS

2.1. General:

2.1.1. All evaluations will follow the guidelines set in AFI 11-202V2.

2.1.2. Evaluation requirements are depicted in **Table 2.1.** and **Table 2.2.** 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 inflight, the FE may elect to evaluate the area(s) by an alternate method, 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.

2.1.2.1. With the approval of the Operations Group Commander, the pilot Instrument/Qualification Evaluation (2.2.) and the Mission Evaluation (2.4.) may be combined as a single evaluation. Unit Commanders, with coordination through the unit Chief of Stan/Eval may designate experienced pilots for this combined evaluation option. Evaluations flown in this manner must fulfill all current INSTM/QUAL and Mission evaluation requirements, including ground phase requisites. This combined evaluation will have a single expiration date IAW AFI 11-202 volume 2.

2.1.3. **Currency of Flight Publications.** Publications that will be checked during the qualification evaluation are:

2.1.3.1. T.O. 1F-15E-1 (ACC/PACAF)

2.1.3.2. T.O. 1F-15E-1CL-1.

2.1.3.3. T.O. 1F-15E-34-1-1CL-1.

2.1.3.4. Local Inflight Guide.

2.1.3.5. Any additional publications specified in the unit supplement to AFI 11-202V2.

2.2. Pilot 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. (USAFE: Preferably non-US locations) This evaluation may be administered on any compatible training mission. Pilots may complete their INSTM/QUAL evaluation with an FE occupying the rear cockpit. Minimum ground phase requisites are:

2.2.1. Open and closed book qualification examinations.

2.2.2. EPE.

2.2.3. Instrument examination.

2.3. WSO Qualification Evaluation. This evaluation is normally combined with WSO mission evaluation for basic mission qualified (BMC), combat mission ready (CMR) WSOs. A separate qualification evaluation will normally be administered to basic aircraft qualified (BAQ) WSOs who do not maintain qualification in the unit's tactical mission and WSOs going through initial qualification. This evaluation

may be administered on any compatible training mission with the approval of the unit Chief of Stan/Eval and the Squadron Commander or Operations Officer's concurrence. Minimum ground phase requisites are:

- 2.3.1. Closed and open book qualification examinations.
- 2.3.2. EPE.
- 2.3.3. Instrument examination.

2.4. Mission Evaluation. Scenarios that represent unit Designed Operational Capability (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, and at the FE's 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 exercise deployments are encouraged. Evaluations during contingency/combat deployments will be given a last resort in order to maintain mission qualification status.

NOTE: BMC aircrew will only be evaluated on those missions routinely performed. Examinees will only be evaluated on those areas for which they are qualified.

- 2.4.1. Minimum ground phase requisites are:

- 2.4.1.1. EPE.

- 2.4.1.1.1. Normally a single EPE will be given to fulfill the requirements of the pilot MSN and WSO QUAL/MSN evaluations.

- 2.4.2. **Air-to-Air.** This evaluation will include, as a minimum, one intercept, offensive maneuvering and planned weapons employment. Adversaries will simulate enemy aircraft, tactics and ordnance IAW AFTTP 3-1V2. Dissimilar aircraft are preferred. Additionally, aircrew:

- 2.4.2.1. Must have an operable radar.

- 2.4.2.2. When weather or other restrictions prohibit D/ACBT, or Low Altitude Training (LOWAT), they may fly multiple intercepts.

- 2.4.3. **Air-to-Surface.** First-look navigation and look-alike targets are encouraged. Navigation legs will reflect unit plans and tasking, with timing appropriate to the tasking. For those examinees who are certified CMR/BMC in nuclear and conventional tasking, the evaluation will emphasize only one scenario. 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:

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

- 2.4.3.2. The mission profile allows a thorough evaluation of the examinee, but does not include range operations due to weather or airspace constraints.

2.5. 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 evaluation criteria in [Chapter 3](#).

2.6. 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](#) and [Table 2.2](#), 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. If an instructional ride allows completion of all requirements for a periodic check the evaluation may be used to update periodic evaluation providing all other requisites are completed.

2.6.1. For units whose instructor pilots normally instruct from a chase aircraft, the examinee will fly a portion of the mission in the chase position.

2.6.2. **Formal Training Unit (FTU) and Weapons Instructor Course (WIC) Mission Evaluations.** FTU and WIC instructor mission evaluation profiles will normally be IAW the formal course syllabus for any mission which the instructor is qualified to instruct.

2.7. LANTIRN (Night). VTR film may be used as a means of evaluating the tactical portion of the evaluation.

2.8. Instructor Pilot Rear Cockpit Evaluations. An evaluation of rear cockpit landings will be completed prior to performing rear cockpit landing instructor duties. These duties include instruction for and demonstration of landings during initial qualification training, requalification training, or additional training.

2.8.1. Examinees will complete rear cockpit evaluations as per procedures in paragraphs [2.8.1.1](#) and [2.8.1.2](#).

2.8.1.1. All rear cockpit landing qualification evaluations will include satisfactory demonstration of: overhead and emergency patterns; a landing performed from the rear cockpit.

2.8.1.2. IPs will accomplish the rear cockpit landing qualification during either the instrument/qualification sortie, the mission evaluation sortie or during another sortie as a requisite. OGV will specify when the rear cockpit landing qualification will be completed and identify procedures for completion of this requirement in the unit supplement to AFI 11-202V2.

2.8.2. When the rear cockpit landing qualification is evaluated during a separate sortie as a requisite for a flight evaluation, record "SPOT" in the Flight Phase block on the AF IMT-8. Describe the purpose of the evaluation as "Rear Cockpit Landing Qualification" in the Mission Description section of the Comments block. In addition, FEs will document all discrepancies on the AF IMT-8 in Section IV, paragraph b, under a subparagraph after the EPE discrepancies as follows: "2. Rear Cockpit Landing Qualification." If no discrepancies are identified, enter "None" after the subparagraph title. A subparagraph 3 would then be used for flight discrepancies. If a reevaluation is required, an additional "SPOT" entry will be recorded in the Flight Phase block on the front of the AF IMT-8. Additional training will be documented IAW AFI 11-202V2.

2.8.3. An initial rear cockpit landing qualification may be conducted independently of another evaluation. FEs will document completion of this Rear Cockpit Landing Qualification as a "SPOT" evaluation on an AF IMT-8. Align the expiration date with the expiration date of the current evaluation during which the examinee would normally complete this requirement.

Table 2.1. Evaluation Requirements.

1 - PILOT INSTRUMENT/QUALIFICATION EVALUATION								
2 - PILOT AIR-TO-SURFACE MISSION EVALUATION								
3 - PILOT AIR-TO-AIR MISSION EVALUATION								
4 - WSO QUALIFICATION EVALUATION								
5 - WSO AIR-TO-SURFACE MISSION EVALUATION								
6 - WSO AIR-TO-AIR MISSION EVALUATION								
AREA	NOTES	AREA TITLE	1	2	3	4	5	6
GENERAL								
1		MISSION PLANNING	R	R	R	R	R	R
2		BRIEFING	R	R	R	R	R	R
3		PRE-TAKEOFF	R	R	R	R	R	R
4		TAKEOFF	R					
5		FORMATION TAKEOFF						
6		DEPARTURE	R					
7		LEVEL-OFF	R					
8		CRUISE/NAVIGATION	R			R		
9		FORMATION						
10		IN-FLIGHT CHECKS	R			R		
11		FUEL MANAGEMENT	R	R	R			
12		COMM/IFF	R			R		
*13		CREW COORDINATION	R	R	R	R	R	R
14	1	AIRWORK/ADVANCED HANDLING/ TACTICAL MANEUVERING	R					
*15	2	UNUSUAL ATTITUDE RECOVERIES	R			R		
16		WEAPONS SYSTEM/BIT CHECKS		R	R		R	R
17		AIR REFUELING						
18		DESCENT	R					
19		GO-AROUND						
20		TRAIL RECOVERY						
21		EMERGENCY TRAFFIC PATTERNS	R					
22		EMERGENCY APPROACH/LANDING	R					
23		VFR PATTERN/APPROACH	R					
24		FORMATION APPROACH/LANDING						

1 - PILOT INSTRUMENT/QUALIFICATION EVALUATION								
2 - PILOT AIR-TO-SURFACE MISSION EVALUATION								
3 - PILOT AIR-TO-AIR MISSION EVALUATION								
4 - WSO QUALIFICATION EVALUATION								
5 - WSO AIR-TO-SURFACE MISSION EVALUATION								
6 - WSO AIR-TO-AIR MISSION EVALUATION								
AREA	NOTES	AREA TITLE	1	2	3	4	5	6
25		LANDING	R					
26		AFTER-LANDING	R	R	R	R	R	R
27		FLIGHT LEADERSHIP (if applicable)	R	R	R			
28		DEBRIEFING/CRITIQUE	R	R	R	R	R	R
29		KNOWLEDGE	R	R	R	R	R	R
30	*	AIRMANSHIP	R	R	R	R	R	R
31	*	SAFETY	R	R	R	R	R	R
32	*	AIRCREW DISCIPLINE	R	R	R	R	R	R
33		INSTRUCTOR PERFORMANCE (if applicable)	R	R	R	R	R	R
34		INSTRUMENT INTERPRETATION				R		
35		RADAR SCOPE/SENSOR INTERPRETATION				R	R	R
*36		TASK PRIORITIZATION						
37 - 40		NOT USED						
INSTRUMENT								
41		HOLDING						
42	6	INSTRUMENT PENETRATION/ENROUTE DESCENT	R					
43		INSTRUMENT PATTERNS	R					
44		NON-PRECISION APPROACH	R					
45	3	PRECISION APPROACH (PAR)	R					
46	3	PRECISION APPROACH (ILS)	R					
47		MISSED APPROACH/CLIMB OUT	R					
48		CIRCLING/SIDE-STEP APPROACH						
49		INSTRUMENT CROSS-CHECK	R					
50		NOT USED						

1 - PILOT INSTRUMENT/QUALIFICATION EVALUATION								
2 - PILOT AIR-TO-SURFACE MISSION EVALUATION								
3 - PILOT AIR-TO-AIR MISSION EVALUATION								
4 - WSO QUALIFICATION EVALUATION								
5 - WSO AIR-TO-SURFACE MISSION EVALUATION								
6 - WSO AIR-TO-AIR MISSION EVALUATION								
AREA	NOTES	AREA TITLE	1	2	3	4	5	6
TACTICAL EMPLOYMENT								
A. GENERAL								
51		TACTICAL PLAN		R	R		R	R
52		TACTICAL EXECUTION		R	R		R	R
*53		COMPOSITE FORCE INTERFACE						
54		RADIO TRANSMISSIONS		R	R		R	R
*55		VISUAL LOOKOUT/RADAR SEARCH		R	R		R	R
*56		MUTUAL SUPPORT		R	R		R	R
57		TACTICAL NAVIGATION		R			R	
58		INGRESS		R			R	
59		EGRESS		R			R	
60		COMBAT SEPARATION						
61		TIMING		R			R	
62		TRAINING RULES/ROE		R	R		R	R
63	4	THREAT REACTIONS		R	R		R	R
64		TFR PROCEDURES						
65		IN-FLIGHT REPORT		R	R		R	R
66		EA/EP/AAMD		R	R		R	R
67		WEAPON SYSTEM UTILIZATION		R	R	R	R	R
*68		SENSOR MANAGEMENT		R	R		R	R
69-70		NOT USED						
B. AIR-TO-AIR								
*71	4	RADAR MECHANIZATION			R			R
*72	4	TACTICAL INTERCEPT			R			R
73	4	OFFENSIVE MANEUVERING			R			
*74		DEFENSIVE REACTIONS						

1 - PILOT INSTRUMENT/QUALIFICATION EVALUATION								
2 - PILOT AIR-TO-SURFACE MISSION EVALUATION								
3 - PILOT AIR-TO-AIR MISSION EVALUATION								
4 - WSO QUALIFICATION EVALUATION								
5 - WSO AIR-TO-SURFACE MISSION EVALUATION								
6 - WSO AIR-TO-AIR MISSION EVALUATION								
AREA	NOTES	AREA TITLE	1	2	3	4	5	6
75	4	AIR-TO-AIR WEAPONS EMPLOYMENT			R			
*76		AIR-TO-AIR SYSTEMS INTEGRATION			R			R
*77		COMMAND AND CONTROL INTEGRATION						
*78 - 80		NOT USED						
C. AIR-TO-SURFACE								
81		TARGET ACQUISITION		R			R	
82	5	AIR-TO-GROUND WEAPONS EMPLOYMENT		R			R	
83		RANGE PROCEDURES						
*84		IR/EO SENSOR OPERATION						
*85		PRECISION GUIDED MUNITIONS DELIVERY PROCEDURES						
*86		LASER GUIDED BOMB DELIVERY PROCEDURES						
*87		SYSTEM AIDED WEAPONS DELIVERY (GUIDED WEAPONS)						
*88		SYSTEM AIDED WEAPONS DELIVERY (UNGUIDED WEAPONS)						
*89-90		NOT USED						

*Denotes 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 pilot experience levels. Examples are, but are not limited to:
 - a. Aerobatics
 - b. Confidence maneuvers
 - c. Basic Fighter Maneuver (BFM)
 - d. Advanced handling characteristics
 - e. Formation (fingertip, tactical, trail)
2. **Unusual Attitude Recoveries.** They will be evaluated during EPEs or if evaluated in-flight, will be performed with a Pilot FE in the aircraft.
3. Both a precision approach radar (PAR) and an instrument landing system (ILS) must be evaluated if equipment and facilities are available. However, if facilities or equipment are not available, the flight evaluation may be completed as long as one precision approach is flown.
4. It may be impractical to evaluate these required items on certain formal training unit (FTU) and weapons instructor course (WIC) instructor evaluation due to student syllabus constraints (e.g., BFM mission checks). Squadron commanders may approve these exceptions on a limited basis to validate instructor effectiveness. Document in the Comments portion of the AF IMT-8.
5. Annotate by Hit/Miss per event.
6. Every attempt will be made to evaluate the full instrument penetration and approach. If not available due to ATC constraints (i.e. vectored off the approach) an enroute descent/vectors to final may be substituted for this requirement at the discretion of the FE

Table 2.2. EPE Evaluation Requirements.

AREA	NOTES	AREA TITLE	INSTM/ QUAL EPE	MISSION EPE
		GENERAL		
201		Aircraft General Knowledge	R	R
202		Unusual Attitude Recoveries	R	R
203		Crew Coordination/Checklist Usage	R	R
204		TFR Procedures		R
205		Other		
206-209 Not Used				
		GROUND EMERGENCIES		
210		AMAD / Engine Fire / Overheat		
211		JFS No Start / Engage / Abnormal Engagement		
212		EMER GEN Not on-Line / Drops Off Line		
213		Engine Start Malf		
214		Auto Accel / Hot Start		
215		ECS Malf / DISP FLO LO		
216		Brake Malf / Loss of Directional Control		
217		Emer Ground Egress		
218		Other		
219 Not Used				
		TAKEOFF EMERGENCIES		
220		Abort		
221		External Stores Jettison		
222		Engine Fail / Fire / Overheat		
223		AB Fail / Fire / Overheat		
224		Pitch Ratio Fail		
225		Tire Failure		
226		Gear Fails to Retract		
227		Other		
228-229 Not Used				

AREA	NOTES	AREA TITLE	INSTM/ QUAL EPE	MISSION EPE
		INFLIGHT EMERGENCIES		
230		Out of Control / Departure		
231		Single / Double Engine Stall-Stag		
232		Engine Restart		
233		DEEC / Nozzle / Inlet Malf		
234		Engine / AMAD Fire / Overheat		
235		Smoke / Fumes / Fire in Cockpit		
236		Canopy Unlocked / Loss		
237		Bleed Air Malf		
238		ECS Malf / DISP FLO LO		
239		Oil System Malf		
240		Boost Pump Malf		
241		Fuel Transfer / Leak / Venting Malf		
242		Single / Double Generator Fail		
243		AMAD Fail		
244		Flt Control Malf		
245		ADC / INS / EGI CC / MPDP Fail		
246		Throttle Malf		
247		Structural Damage / Controllability Check		
248		Other		
249-250				
Not Used				
		LANDING		
251		Single Engine Ops		
252		Flap Malf		
252		Blown Tire		
254		Hydraulic Malf		
255		Landing Gear Unsafe / Emer Extension		
256		Approach End Arrestment		
257		Other		
258-259				
Not Used				

AREA	NOTES	AREA TITLE	INSTM/ QUAL EPE	MISSION EPE
		INSTRUMENT GENERAL		
260		AFI 11-217/202 V3 Inst Procedures	R	
261		STBY Inst / HUD Out Procedures	R	
262		Alternate / Divert Field Procedures	R	
263		Local Area Procedures	R	
264		Other		
265-269 Not Used				
		MISSION GENERAL		
270		Weapons System Utilization		R
271		EA/EP/RWR/AAMD		R
272		Threat Reactions		R
273		Weapons Delivery Procedures		R
274		HQ/KY-58/Link-16 Procedures		
275		Hung Ordnance		
276		Other		

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 IMT-8 will be annotated by subarea.

3.1.3. Areas marked (P) are for pilots only; areas marked (W) are for WSOs only. All other areas are common to both.

3.2. General:

3.2.1. Area 1--Mission Planning:

3.2.1.1. Mission Planning:

3.2.1.1.1. **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.

3.2.1.1.2. **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.

3.2.1.1.3. **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. Not prepared at briefing time.

3.2.1.2. Publications:

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

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

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

3.2.2. Area 2--Briefing:

3.2.2.1. Organization:

3.2.2.1.1. **Q.** Well organized and presented in a logical sequence. Briefed flight member responsibilities, deconfliction contracts, combat mission priorities and sensor management. Concluded briefing in time to allow for element briefing (if applicable) and preflight of personal equipment, aircraft and ordnance.

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

3.2.2.1.3. **U.** Confusing presentation. Did not allow time for element briefing (if applicable) and preflight of personal equipment, aircraft and ordnance. Failed to brief required areas.

3.2.2.2. Presentation:

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

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

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

3.2.2.3. Mission Coverage:

3.2.2.3.1. **Q.** Established objectives for the mission. Presented all training events and effective techniques discussed for accomplishing the mission.

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

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

3.2.2.4. Flight Member Consideration:

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

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

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

3.2.3. Area 3--Pre-Takeoff:

3.2.3.1. **Q.** Established and adhered to step, start, taxi and take-off times to assure thorough pre-flight, check of personal equipment, element 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.

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

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

3.2.4. Area 4--(P) Takeoff:

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

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

3.2.4.3. **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.

3.2.5. Area 5--(P) Formation Takeoff:

3.2.5.1. Lead:

3.2.5.1.1. **Q.** Smooth on controls. Excellent wingman consideration.

3.2.5.1.2. **Q-.** Occasionally rough on controls. Lack of wingman consideration made it difficult for the wingman to maintain position.

3.2.5.1.3. **U.** Rough on the controls. Did not consider the wingman.

3.2.5.2. Wingman:

3.2.5.2.1. **Q.** Maintained position with only momentary deviations. Maintained appropriate separation and complied with procedures and leader's instructions.

3.2.5.2.2. **Q-.** Over controlled the aircraft to the extent that formation position varied considerably.

3.2.5.2.3. **U.** Abrupt position corrections. Did not maintain appropriate separation or formation position throughout the takeoff.

3.2.6. Area 6--Departure:

3.2.6.1. (P) Instrument/Visual Flight Rules (IFR/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/Rejoin:

3.2.6.2.1. **Q.** Effective use of radar. Trail departure/rejoin accomplished using proper procedures and techniques. Provided efficient commentary throughout departure and or rejoin.

3.2.6.2.2. **Q-.** Minor deviations from established or appropriate procedures. Slow to obtain radar lock-on and or contact due to poor technique. Delayed rejoin due to poor radar technique or inefficient commentary.

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

3.2.7. Area 7--(P) Level-Off:

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

3.2.7.2. **Q-.** Level-off was erratic. Slow in establishing proper cruise airspeed. Slow to set/reset altimeter, as required.

3.2.7.3. **U.** Level-off was erratic. Exceeded Q- limits. E excessive delay or failed to establish proper cruise airspeed. Failed to set/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. **Pilot:**

3.2.9.1.1.1. **Q.** Established and maintained appropriate formations utilizing published and briefed procedures. Maintained positive control of flight/element. Smooth on the controls and considered wingman. Ensured that wingman flew proper position and that deconfliction contracts were adhered to. Planned ahead and made timely decisions.

3.2.9.1.1.2. **Q-.** Made minor deviations from published and or briefed procedures. Demonstrated limited flight management. Occasionally rough on the controls. Maneuvered excessively, making it difficult for wingman to maintain position. Did not always plan ahead and or hesitant in making decisions

3.2.9.1.1.3. **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 forcing wingman out of position. Provided little consideration for wingman. Indecisive. Failed to ensure wingman maintained proper position. Failed to maintain deconfliction contracts.

3.2.9.1.2. **WSO:**

3.2.9.1.2.1. **Q.** Effectively monitored formation utilizing published and or briefed procedures. Provided timely and accurate description/direction of flight/element to maintain appropriate formation/position. Ensured that wingman flew proper position and that deconfliction contracts were adhered to.

3.2.9.1.2.2. **Q-.** Made minor deviations from published and or briefed procedures. Demonstrated limited formation monitoring. Occasionally slow/hesitant to provide description/direction as necessary to ensure correct formation/position

3.2.9.1.2.3. **U.** Formation flight not accomplished in accordance with published and or briefed procedures. Provided inaccurate / little or no description/direction necessary to ensure appropriate formations. Failed to maintain deconfliction contracts.

3.2.9.2. **Wingman:**

3.2.9.2.1. **Pilot:**

3.2.9.2.1.1. **Q.** Maintained position in accordance with published and briefed procedures with only momentary deviations. Demonstrated smooth and immediate position corrections. Maintained appropriate separation and complied with flight lead's instructions. Maintained briefed deconfliction contract. Rejoin was smooth and timely.

3.2.9.2.1.2. **Q-.** Made minor deviations to published procedures. Slow to comply with flight lead's instructions. Varied position considerably. Over controlled. Slow to rejoin.

3.2.9.2.1.3. **U.** Formation flight not accomplished in accordance with published and or briefed procedures. Did not comply with flight lead's instructions. Unable to maintain a formation position. Failed to maintain deconfliction contract. Made abrupt position corrections. Did not maintain appropriate separation.

3.2.9.2.2. WSO:

3.2.9.2.2.1. **Q.** Effectively monitored formation utilizing published and or briefed procedures. Provided timely and accurate description/direction of flight/element to maintain appropriate formation/position. Maintained briefed deconfliction contract.

3.2.9.2.2.2. **Q-.** Made minor deviations from published and or briefed procedures. Demonstrated limited formation monitoring. Occasionally slow/hesitant to provide description/direction as necessary to ensure correct formation/position.

3.2.9.2.2.3. **U.** Formation flight not accomplished in accordance with published and or briefed procedures. Provided inaccurate or little or no description/direction necessary to ensure appropriate formations. Failed to maintain deconfliction contract.

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

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/Identification, Friend or Foe (IFF):

3.2.12.1. **Q.** Complete knowledge of and compliance with correct Comm/IFF 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).

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).

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).

3.2.13. **Area 13--Crew Coordination**

3.2.13.1. **Q**. Effectively coordinated with other crewmember without misunderstanding.

3.2.13.2. **Q-**. Coordinated with other crewmember with minor exceptions. Intra-crew communications were not clear or concise.

3.2.13.3. **U**. Breakdown in coordination with other crewmember precluded mission accomplishment or jeopardized safety.

3.2.14. **Area 14--Airwork/Advanced Handling/Tactical Maneuvering:**

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

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

3.2.14.3. **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.

3.2.15. **Area 15--Unusual Attitude Recoveries:**

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

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

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

3.2.16. **Area 16--Weapons System/Built-in Test (BIT) Checks:**

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

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

3.2.16.3. **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.

3.2.17. Area 17--Air Refueling:**3.2.17.1. Air Refueling Rendezvous:**

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

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

3.2.17.1.3. **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.

3.2.17.2. (P) Air Refueling Procedures/Techniques:

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

3.2.17.2.2. **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.

3.2.17.2.3. **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.

3.2.18. Area 18--Descent:

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

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

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

3.2.19. Area 19--(P) Go-Around:

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

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

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

3.2.20. Area 20--Trail Recovery:

3.2.20.1. **Q.** Performed approach IAW applicable procedures using proper techniques. Effective use of radar. Provided efficient commentary throughout recovery.

3.2.20.2. **Q-.** Performed approach with minor deviations from established or appropriate procedures. Slow to obtain radar lock-on and or contact due to poor technique. Inefficient commentary.

3.2.20.3. **U.** Approach not performed IAW applicable procedures. Unable to accomplish recovery due to poor technique.

3.2.21. **Area 21--(P) Emergency Traffic Pattern:** (Prior to configuration. Includes simulated single engine and no-flap emergency, pattern, as appropriate.)

3.2.21.1. **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.

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

3.2.21.3. **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.

3.2.22. **Area 22--(P) Emergency Approach/Landing (configuration through rollout):**

3.2.22.1. **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. Arrestment gear could have been used, if appropriate.

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

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

3.2.23. **Area 23--(P) VFR Pattern/Approach:**

3.2.23.1. **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 AOA. Airspeed -5/+10 knots.

3.2.23.2. **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 AOA. Airspeed -5/+15 knots.

3.2.23.3. **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.

3.2.24. **Area 24--(P) Formation Approach/Landing:**

3.2.24.1. **Flight Lead:**

3.2.24.1.1. **Q.** Smooth on controls and considered wingman. Complied with formation landing procedures. Flew approach as published/directed.

3.2.24.1.2. **Q-.** Occasionally rough on the controls. Made it difficult for wingman to maintain position. Some procedural deviations. Slow to comply with published procedures.

3.2.24.1.3. **U.** Did not monitor wingman's position or configuration. Rough on the controls. No consideration for wingman. Major deviations in procedures. Did not fly approach as published/directed. Flight could not land from approach.

3.2.24.2. **Wingman:**

3.2.24.2.1. **Q.** Maintained position with only momentary deviations. Smooth and immediate corrections. Maintained appropriate separation and complied with procedures and flight lead's instructions.

3.2.24.2.2. **Q-.** Varied position considerably. Over controlled.

3.2.24.2.3. **U.** Abrupt position corrections. Did not maintain appropriate separation. Erratic wing position and or procedural deviations.

3.2.25. **Area 25--(P) 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 will utilize a normal glideslope from either the decision height or from a point where visual acquisition of the runway environment is made.

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

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

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

3.2.26. **Area 26--After-Landing:**

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

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

3.2.26.3. **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.

3.2.27. **Area 27--Flight Leadership (if applicable):**

3.2.27.1. **Q.** Positively directed the flight during accomplishment of the mission and made timely comments to correct discrepancies when required. Ensures briefed formation roles and responsibilities are maintained. Made sound and timely in-flight decisions.

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

3.2.27.3. **U.** Did not accomplish the mission or failed to correct in-flight discrepancies. In-flight decisions jeopardized mission accomplishment. Failed to maintain briefed formation roles and responsibilities.

3.2.28. Area 28--Debriefing/Critique:

3.2.28.1. **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. Thoroughly debriefed any breakdowns in deconfliction contracts, roles and responsibilities.

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

3.2.28.3. **U.** Did not debrief mission deviations or offer corrective guidance. Failed to debrief breakdowns in deconfliction contracts, roles and responsibilities.

3.2.29. Area 29--Knowledge. Evaluate all applicable subareas.

3.2.29.1. Aircraft General:

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

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

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

3.2.29.2. Emergency Procedures:

3.2.29.2.1. **Q.** Displayed correct, immediate response to emergency situations. Effectively used checklist.

3.2.29.2.2. **Q-.** Response to certain emergencies was slow/confused. Used the checklist when appropriate, but slow to locate required data.

3.2.29.2.3. **U.** Unable to analyze problems or take corrective action. Did not use checklist, or lacks acceptable familiarity with its arrangement or contents.

3.2.29.3. Flight Rules/Procedures:

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

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

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

3.2.29.4. Weapon/Tactics/Threat:

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

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

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

3.2.29.5. Local Area Procedures:

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

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

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

3.2.29.6. Plans/Alert Procedures:

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

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

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

3.2.29.7. Authentication Procedures:

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

3.2.29.7.2. **Q-.** Minor errors in authentication. Required numerous attempts to complete authentication.

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

3.2.30. Area 30--Airmanship (Critical):

3.2.30.1. **Q.** Executed the assigned mission in a timely, efficient manner. Conducted the flight with a sense of understanding and comprehension. Aware of performance of self and other flight members. Recognized, verbalized and acted on unexpected events.

3.2.30.2. **U.** Decisions or lack thereof resulted in failure to accomplish the assigned mission. Mis-analyzed flight conditions and or failed to recognize/understand mission developments, or demonstrated poor judgment to the extent that flight safety could have been compromised.

3.2.31. Area 31--Safety (Critical):

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

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

3.2.32. Area 32--Aircrew Discipline (Critical):

3.2.32.1. **Q.** Demonstrated strict professional flight and aircrew discipline throughout all phases of the mission.

3.2.32.2. **U.** Failed to exhibit strict flight or aircrew discipline. Violated or ignored rules or instructions.

3.2.33. Area 33--Instructor Performance (if applicable):

3.2.33.1. Briefing/Debriefing:

3.2.33.1.1. **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.

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

3.2.33.1.3. **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.

3.2.33.2. Demonstration of Maneuvers. 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.

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

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

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

3.2.33.3. Instructor Knowledge:

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

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

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

3.2.33.4. Ability to Instruct:

3.2.33.4.1. **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.

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

3.2.33.4.3. **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/mis-sion situation at all times.

3.2.33.5. Training/Evaluation Forms Preparation:

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

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

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

3.2.34. Area 34--(W) Instrument Interpretation:

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

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

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

3.2.35. Area 35--Radar Scope/Sensor Interpretation:

3.2.35.1. **Q.** Correctly interpreted radar/sensor display. Was able to compensate for system errors or unanticipated developments to successfully employ radar/sensor.

3.2.35.2. **Q-.** Slow to interpret radar/sensor display. Had difficulties compensating for system errors or unanticipated developments.

3.2.35.3. **U.** Could not interpret radar/sensor display. Could not compensate for or identify system errors or unanticipated developments.

3.2.36. Area 36--Task Prioritization:

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

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

3.2.36.3. **U.** Incorrectly prioritized or managed tasks. Displayed lack of systems knowledge causing task overload that seriously degraded mission accomplishment or safety of flight. Failed to communicate task priorities to other flight members. Failed to ask for assistance when overloaded.

Improperly or ineffectively identified contingencies, gathered data, or communicated a decision that seriously degraded mission accomplishment or safety of flight.

3.2.37. **Areas 37-40.** Not used.

3.3. Instrument:

3.3.1. Area 41--(P) Holding:

3.3.1.1. **Q.** Performed entry and holding IAW published procedures and directives. TACAN holding pattern limit exceeded by not more than ± 2 NM.

3.3.1.2. **Q-.** Minor deviations to procedures or directives. TACAN holding pattern limit exceeded by not more than ± 3 NM.

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

3.3.2. Area 42-- (P) Instrument Penetration/Enroute Descent (Initial Approach Fix to Final Approach Fix/Descent Point) or enroute descent (radar vectors to final approach):

3.3.2.1. **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.

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

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

3.3.3. Area 43--(P) 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--(P) Non-Precision Approach:

3.3.4.1. **Q.** Adhered to all published/directed procedures and restrictions. Used appropriate descent rate to arrive at Minimum Descent Altitude (MDA) at or before the Visual Descent Point (VDP) or Missed Approach Point (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 +/-5 degrees (Airport Surveillance Radar (ASR))

3.3.4.1.3. Course +/-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 +/-10 degrees (ASR)

3.3.4.2.3. Course +/-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--(P) Precision Approach (PAR):

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

3.3.5.1.1. Airspeed +10/-5 kts.

3.3.5.1.2. Heading within 5 degrees of controller instruction.

3.3.5.2. Q-. Performed procedures with minor deviations. Slow to respond to controller's instructions. Position would have permitted a safe landing. Slow to correct to proper/briefed AOA. Improper glide path control.

3.3.5.2.1. Airspeed +15/-5 kts.

3.3.5.2.2. Heading within 10 degrees of controller instruction. Initiated missed approach (if applicable) at decision height, +50/-0 ft.

3.3.5.3. 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 would not have permitted a safe landing. Erratic glide path control.

3.3.6. Area 46--(P) Precision Approach (ILS)

3.3.6.1. 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.

3.3.6.1.1. Airspeed +10/-5 kts

3.3.6.1.2. Glide Slope/Azimuth within one dot

3.3.6.2. 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.

3.3.6.2.1. Airspeed +15/-5 kts

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

3.3.6.2.3. Azimuth within two dots

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

3.3.6.3. **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.

3.3.7. Area 47--(P) Missed Approach/Climb Out:

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

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

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

3.3.8. Area 48--(P) Circling/Side-Step Approach:

3.3.8.1. **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. Established and maintained proper runway alignment.

3.3.8.2. **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.

3.3.8.3. **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.

3.3.9. Area 49--(P) Instrument Cross Check:

3.3.9.1. **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.

3.3.9.2. **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.

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

3.3.10. **Area 50.** Not used.

3.4. Tactical Employment:

3.4.1. 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. Low 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 -- Composite Force Interface (CF):

3.4.1.3.1. **Q.** Effectively planned for and used Composite Force Assets to enhance mission and achieve objectives. No confusion between Composite Force Assets and fighters.

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

3.4.1.3.3. **U.** Inadequate or incorrect use of Composite Force Assets 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 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/Radar Search:

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

3.4.1.5.2. **Q-** Demonstrated limited knowledge of visual lookout/radar search 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 / radar search 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 supporting responsibilities and formation contracts.

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 supporting 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 supporting responsibilities and formation contracts.

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/Medium Altitude:

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

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

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

3.4.1.7.3. Low Altitude:

3.4.1.7.3.1. **Q.** Demonstrated satisfactory capability to adjust for deviations in time and course; only minor corrections required. Remained oriented within planned route and took into consideration simulated/actual threats, weather, air space restrictions, and ATC for all course adjustments to accomplish the mission. Used terrain masking as circumstances allowed.

3.4.1.7.3.2. **Q-.** Low level altitude and airspeed control resulted in large corrections.

3.4.1.7.3.3. **U.** Failed to recognize checkpoints or adjust for deviations in time and course. Exceeded low level route boundaries. Did not use terrain masking if available and tactically required. Exceeded Q- parameters. Major errors in procedures/use of navigation equipment. Violated low level instructions/restricted airspace.

3.4.1.8. Area 58--Ingress:

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

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

3.4.1.8.3. **U.** Failed to honor known/simulated factor threats and defenses significantly reducing survivability. Failed to employ effective evasive maneuvers and 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--Combat Separation:

3.4.1.10.1. **Q.** Adhered to briefed/directed separation procedures. Positive control of flight/element during separation. Maintained mutual support with adversary unable to achieve valid simulated missile/gun firing parameters.

3.4.1.10.2. **Q-** Minor deviations from briefed/directed separation procedures. Limited control of flight/element during separation. Allowed mutual support to break down intermittently.

3.4.1.10.3. **U.** Did not adhere to briefed/directed separation procedures to the degree that an emergency fuel condition would have developed if allowed to continue uncorrected. Could not effectively separate from the engagement or could not regain mutual support.

3.4.1.11. **Area 61--Timing.** Time will be based on pre-planned Time On Target (TOT) (ordnance impact) or vulnerability period (Defensive Counter Air (DCA)) or push time (Offensive Counter Air (OCA) Sweep). This area may be evaluated as a First Run Attack (FRA) or with FAC coordination. Adjustments in TOT will be made for non-aircrew-caused delays. In the case of "no spot," timing will be adjusted to a bomb release or "off" call plus weapon time of flight. If range clearance is delayed, time at a pre-planned IP may be substituted for TOT. The FE may widen this timing criteria if the examinee was forced to maneuver extensively along the ingress route due to reactions to simulated enemy air or ground defenses and or weather.

3.4.1.11.1. Nuclear:

3.4.1.11.1.1. **Q.** ± 30 seconds

3.4.1.11.1.2. **Q-**. \pm 1 minute

3.4.1.11.1.3. **U**. Exceeded Q- parameters.

3.4.1.11.2. Conventional:

3.4.1.11.2.1. **Q**. Within assigned TOT window.

3.4.1.11.2.2. **Q-**. \pm 2 minutes of assigned TOT window.

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

3.4.1.11.3. Air-to-Air Escort/Sweep/CAP:

3.4.1.11.3.1. **Q**. Arrived on station not more than 1 minute late. Covered TOT.

3.4.1.11.3.2. **Q-**. Arrived on station not more than 2 minutes late. Covered TOT.

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

3.4.1.11.4. Defensive Counter Air (DCA):

3.4.1.11.4.1. **Q**. Arrived on station not more than 1 minute late. Covered vulnerability (VUL) period.

3.4.1.11.4.2. **Q-**. Arrived on station not more than 2 minutes late. Covered VUL period.

3.4.1.11.4.3. **U**. Exceeded Q- parameters. Failed to cover VUL period due to inadequate planning or use of resources.

3.4.1.12. Area 62--Training Rules/Rules of Engagement (ROE):

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

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

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

3.4.1.13. Area 63--Threat Reactions:

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

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

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

3.4.1.14. Area 64--Terrain Following Radar (TFR) Procedures:

3.4.1.14.1. **Q**. Followed all prescribed procedures and performed all TFR system checks correctly prior to beginning TFR operations. TFR procedures were IAW applicable directives.

3.4.1.14.2. **Q-**. Performed required checks of the TFR system with only minor deviations which would not affect terrain following performance. Minor procedural deviations which did not detract from mission accomplishment.

3.4.1.14.3. **U.** Major deviations in required TFR system checks. Significant procedural errors which could cause inadequate terrain clearance during TFR operations.

3.4.1.15. Area 65--In-flight Report:

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

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

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

3.4.1.16. Area 66--EA/EP/AAMD:

3.4.1.16.1. **Q.** Interpretation of threat scope aural tones, warning lights and operation of tactical electronic warning system (TEWS), electronic warfare warning system (EWWS), countermeasures dispenser (CMD) systems, indicated thorough knowledge and timely application.

3.4.1.16.2. **Q-.** Interpretation of threat scope, aural tones, warning lights and operation of TEWS, EWWS, CMD systems indicated limited knowledge and timely application.

3.4.1.16.3. **U.** Displayed unsatisfactory interpretation of threat scope, aural tones, warning lights or operation of TEWS, EWWS, CMD systems.

3.4.1.17. Area 67--Weapons System Utilization:

3.4.1.17.1. **Q.** Correctly utilized the weapon system to deliver the desired ordnance (actual or simulated). Executed all required procedures to successfully employ the weapon. Effectively integrated Radar, embedded GPS INS (EGI), target pod (TGP), fighter datalink (FDL), tactical situation display (TSD) to achieve optimum results.

3.4.1.17.2. **Q-.** Late to prepare the weapon system to deliver the desired ordnance. Minor procedural errors degraded weapons employment. Slow to integrate Radar, EGI, TGP, FDL, TSD. Did not achieve optimum results.

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

3.4.1.17.3. **U.** Did not correctly prepare the weapon system to deliver the desired ordnance. Improper procedures during the attack resulted in unsuccessful weapons delivery. Failed to integrate Radar, EGI, TGP, FDL, TSD. Did not achieve desired weapons effects.

3.4.1.18. Area 68--Sensor Management:

3.4.1.18.1. **Q.** Correctly planned, briefed, prioritized and executed a sound sensor management plan. Identified high task periods and primary/secondary/tertiary sensors based on mission priorities and flight member responsibilities. Accounted for threats, changes in tasking, weather and flight member experience. Re-prioritized sensor tasks based on existing and new information to ensure mission success. Displayed sound knowledge of sensor systems.

3.4.1.18.2. **Q-.** Made minor errors in planning, prioritization and management of sensor tasks. Did not completely account for threats, changes in tasking, weather or flight member experience.

3.4.1.18.3. **U.** Incorrectly prioritized or managed sensor tasks in a manner which seriously degraded mission accomplishment or safety of flight. Over-tasked other flight members or failed to communicate task over-load. Displayed lack of knowledge of sensor systems.

3.4.1.19. **Areas 69 - 70.** Not used.

3.4.2. **Air-to-Air:**

3.4.2.1. **Area 71--Radar Mechanization:**

3.4.2.1.1. **Q.** Demonstrated satisfactory knowledge and effective application of radar search/sorting techniques for all phases of flight. Recognized chaff/EA and compensated for lock transfer. Utilized radar, with proper EP techniques, to maximum extent possible.

3.4.2.1.2. **Q-.** Demonstrated adequate knowledge of radar search techniques. Did not establish radar search responsibilities for all phases of flight. Allowed EA/chaff to excessively delay target acquisition/intercept. Late contacts resulted in excessive maneuvering during target acquisition.

3.4.2.1.3. **U.** Demonstrated unsatisfactory knowledge and or application of radar search responsibilities. Unable to counter the threat/or recognize chaff. Did not acquire the target due to aircrew error.

3.4.2.2. **Area 72--Tactical Intercept:**

3.4.2.2.1. **Q.** Thorough knowledge and correct employment of tactical intercept procedures. Intercept resulted in a successful VID/EID followed by an offensive attack, if applicable. CAP successfully employed and designated airspace patrolled in a satisfactory manner.

3.4.2.2.2. **Q-.** Limited knowledge of tactical intercept procedures. Intercept resulted in a successful VID/EID; however, large or difficult corrections were required to complete the pass and subsequent attack. CAP could have been more effective.

3.4.2.2.3. **U.** Intercept unsuccessful due to poor techniques and or improper procedures. Intercept terminated in a counteroffensive position. Designated CAP airspace not patrolled effectively or attacks not negated.

3.4.2.3. **Area 73--(P) Offensive Maneuvering:**

3.4.2.3.1. **Q.** Effective use of basic fighter maneuvering and air combat maneuvering to attack/counter opposing aircraft. Good aircraft control. Effectively managed energy level during engagements.

3.4.2.3.2. **Q-.** Limited maneuvering proficiency; however, during engagements did not effectively counter opposing aircraft. Occasionally mismanaged energy levels, jeopardizing offensive advantage.

3.4.2.3.3. **U.** Unsatisfactory knowledge or performance of maneuvers, aircraft handling or energy management. Lost offensive advantage.

3.4.2.4. **Area 74--Defensive Reactions:**

3.4.2.4.1. **Pilot:**

3.4.2.4.1.1. **Q.** Performed correct initial move to counter attack of opposing aircraft. Used correct maneuvers to negate the threat. Effective interpretation of TEWS/EWWS. Effective and timely use of CMD.

3.4.2.4.1.2. **Q-.** Some hesitation or confusion during initial stages of counteroffensive/defensive situation. Minor errors in energy management or BFM delayed negating the

attack of an opposing aircraft. Slow to interpret TEWS/EWWS. Slow to employ CMD. Used CMD program which degraded effectiveness of countermeasures.

3.4.2.4.1.3. **U.** Unable to negate attack of opposing aircraft. Failed to recognize threat warnings from TEWS/EWWS. Failed to employ CMD.

3.4.2.4.2. **WSO:**

3.4.2.4.2.1. **Q.** Demonstrated a satisfactory knowledge and understanding of initial moves. Directed the initial move correctly to counter attack of opposing aircraft. Directed timely counters for the pilot when necessary. Effective interpretation of TEWS/EWWS. Effective and timely use of CMD.

3.4.2.4.2.2. **Q-.** Limited knowledge and understanding of initial moves. Some hesitation or confusion during initial stages of the defensive situation. Slow to interpret TEWS/EWWS. Slow to employ CMD. Used CMD program which degraded effectiveness of countermeasures.

3.4.2.4.2.3. **U.** Demonstrated inadequate knowledge and understanding of initial moves. Unable to direct maneuvers to negate attack of opposing aircraft. Failed to recognize threat warnings from TEWS/EWWS. Failed to employ CMD.

3.4.2.5. **Area 75--Air-to-Air Weapons Employment.** Snapshots assessed as misses may be discounted from computations if attacks were tactically sound and attempted within designated parameters.

3.4.2.5.1. **Q.** Demonstrated proper knowledge of missile/gun firing procedures and attack parameters. Simulated missile/gun firing was accomplished IAW shot doctrine and within designated parameters. Successfully completed 75 percent (or two successful shots of three attempts/one successful shot of two attempts) of attempted shots.

3.4.2.5.2. **Q-.** Demonstrated limited knowledge of missile/gun firing procedures and attack parameters. Simulated employment of weapons was successful but made minor errors which did not affect overall result. Slow to recognize appropriate parameters. Successfully completed 50 percent or more of all attempted shots (four or more attempts).

3.4.2.5.3. **U.** Demonstrated inadequate knowledge of missile/gun firing procedures or attack parameters. Attempts to simulate weapons employment were unsuccessful due to pilot error. Did not meet Q- criteria.

3.4.2.6. **Area 76 -- Air-to-Air Systems Employment**

3.4.2.6.1. **Q.** Effective use and integration of Sensors, Fighter Data Link, (FDL) Tactical Situation Display, Target Pod. Optimized information flow to other flight members.

3.4.2.6.2. **Q-.** Slow to integrate of Sensors, Fighter Data Link, (FDL) Tactical Situation Display, Target Pod. Slow to pass information to other flight members.

3.4.2.6.3. **U.** Failed to effectively integrate Sensors, Fighter Data Link, (FDL) Tactical Situation Display, Target Pod. Failed to pass appropriate information to other flight members.

3.4.2.7. **Area 77 -- Command and Control Integration**

3.4.2.7.1. **Q.** Effectively integrated AWACS/GCI information into tactical plan. Requested threat declarations when required. Communicated changes in the tactical situation, weather and threats to Command and Control agencies.

3.4.2.7.2. **Q-.** Slow to integrate AWACS/GCI information into tactical plan. Slow to request threat declarations. Incomplete communication of changes in the tactical situation, weather and threats to Command and Control agencies.

3.4.2.7.3. **U.** Failed to integrate AWACS/GCI information into tactical plan. Failed to request or did not abide by threat declarations. Inadequate communication of changes in the tactical situation, weather and threats to Command and Control agencies.

3.4.2.8. **Areas 78 - 80.** Not used.

3.4.3. **Air-to-Surface:**

3.4.3.1. **Area 81--Target Acquisition:**

3.4.3.1.1. **Q.** Target acquired on the first attack with radar and or TGT Pod 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.

3.4.3.1.2. **Q-.** Late to acquire the target with radar and or TGT Pod, degraded the initial attack or reattack. For multiple target scenarios, 50 percent or more of the targets were acquired on the first attack or with a successful reattack.

3.4.3.1.3. **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.

3.4.3.2. **Area 82--Air-to-Ground Weapons Employment:**

1. **Scoreable Ranges.** When weapons deliveries are performed on different ranges during the same mission, or like deliveries constituting separate events are performed on the same range, all events will be evaluated and the area grade will be predicated upon the criteria below.

2. **Unscoreable Ranges.** Hit/Miss will be determined by the FE based on impact of the simulated ordnance and desired weapons effects for the pass flown.

3. **Simulated Releases.** Hit/Miss will be determined by the FE based on VTR film, etc.

4. The FE will determine Hit/Miss by reference to VTR film in cases where unexplained weapons delivery misses occur (e.g., wind shears).

3.4.3.2.1. **Single Pass (Tactical Attack):**

3.4.3.2.1.1. **Q.** Demonstrated complete knowledge of weapons delivery procedures, attack parameters, and weapons computations for the events performed. Bomb Score was within hit criteria.

3.4.3.2.1.2. **Q-.** Minor errors in knowledge of weapons delivery procedures, attack parameters, or weapons computations for the events performed. Bomb Score less than or equal to 150% of hit criteria.

3.4.3.2.1.3. **U.** Demonstrated inadequate knowledge of weapons delivery procedures, attack parameters, or weapons computations for the events flown. Failed to deliver ordnance on original attack or reattack due to crew error (switch error, navigation error, etc.). Bomb Score exceeded 150% of hit criteria.

3.4.3.2.2. Single Event:

3.4.3.2.2.1. **Q.** Demonstrated complete knowledge of weapons delivery procedures, attack parameters, weapons computations and error analysis for the events performed. At least 50% of all bombs were within hit criteria.

3.4.3.2.2.2. **Q-.** Minor errors in knowledge of weapons delivery procedures, attack parameters, weapons computations, or error analysis for the events performed. At least 50% of all bombs were within hit criteria.

3.4.3.2.2.3. **U.** Demonstrated inadequate knowledge of weapons delivery procedures, attack parameters, weapons computations or error analysis for the events flown. Less than 50% of all bombs were within hit criteria.

3.4.3.2.3. Multiple Events:

3.4.3.2.3.1. **Q.** Qualified within the applicable criteria in all events attempted. At least 50% of all bombs in each event were within hit criteria.

SLD	HADB	HARB
Miss/Hit	Miss/Hit	Miss/Hit

3.4.3.2.3.2. **Q-.** Minor errors in knowledge of weapons delivery procedures, attack parameters, weapons computations, or error analysis for the events performed. Less than Q criteria, but qualified in 50% or greater of all events attempted.

SLD	HADB	HARB
Miss/Miss	Miss/Hit	Miss/Hit

3.4.3.2.3.3. **U.** Demonstrated inadequate knowledge of weapons delivery procedures, attack parameters, weapons computations, or error analysis for the events flown. Unqualified in greater than 50% of all events attempted.

SLD	HADB	HARB
Miss/Miss	Miss/Miss	Hit/Hit

3.4.3.3. Area 83--Range Procedures:

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

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

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

3.4.3.4. Area 84--IR/EO Sensor Operation:

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

3.4.3.4.2. **Q-** Poor tuning of sensor and or poor search technique hindered target identification degrading weapons delivery. Did not thoroughly understand tuning and /or search procedures.

3.4.3.4.3. **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. Improper search technique resulted in late or no TGT acquisition.

3.4.3.5. Area 85--Precision Guided Munitions Delivery Procedures:

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

3.4.3.5.2. **Q-** Minor errors resulting in release outside the planned PGM delivery parameters degraded weapons effectiveness. Guidance procedures degraded weapon effectiveness. Minor errors in PGM delivery and recovery procedures degraded weapons effectiveness.

3.4.3.5.3. **U.** Improper release parameters resulted in the PGM being delivered outside weapon limits. Used improper guidance procedures which caused the weapon to miss the target. Major errors in execution of PGM delivery and or recovery procedures.

3.4.3.6. Area 86--Laser Guided Bomb (LGB) Delivery Procedures:

3.4.3.6.1. **Q.** Correctly released the LGB at the planned delivery parameters. Velocity Vector on the ASL at release. Used proper lasing procedures to optimally guide the LGB. Followed all current procedures and guidance during the LGB delivery and recovery.

3.4.3.6.2. **Q-** Minor errors resulting in release outside the planned LGB delivery parameters degraded weapons effectiveness. Lasing procedures degraded weapon effectiveness. Minor errors in LGB delivery and recovery procedures degraded weapons effectiveness.

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

3.4.3.7. Area 87-- System Aided Weapons Delivery Procedures (GPS/INS Guided Weapons):

3.4.3.7.1. **Q.** Correctly released the weapon at the planned delivery parameters. Followed all current procedures and guidance during the weapon delivery and recovery. Performed proper BIT checks and weapon crypto key loading. Weapon time of flight adequate for maximum GPS/INS accuracy. Release commanded IN ZONE LAR.

3.4.3.7.2. **Q-** Minor errors resulting in release outside the planned weapon delivery parameters degraded weapons effectiveness. Mission planning errors resulted in degraded weapon effectiveness. Slow to analyze or correct BIT check or crypto key errors. Minor errors in weapon delivery and recovery procedures degraded weapons effectiveness. GPS/INS accuracy degraded due to inadequate time of flight. Release commanded IN RANGE LAR but outside of IN ZONE LAR.

3.4.3.7.3. **U.** Improper release parameters resulted in the weapon being delivered outside weapon limits. Used improper procedures which caused the weapon to miss the target. Major

errors in execution of weapon delivery and or recovery procedures. Unable to BIT check or key weapon.

3.4.3.8. Area 88-- System Aided Systems Delivery Procedures (Unguided Weapons):

3.4.3.8.1. **Q.** Correctly released the weapon at the planned delivery parameters. Airspeed, altitude and roll rate steady prior to release. Followed all current procedures during the weapon delivery and recovery. Correct target coordinates entered. GPS verified less than 50' of error. (as applicable) Mission Nav updated as required. (as applicable) Flight path marker on the ASL at pickle. Wind model set as required.

3.4.3.8.2. **Q -.** Minor errors resulting in release outside the planned weapon delivery parameters degraded weapons effectiveness. Errors in airspeed, altitude or roll control degraded delivery accuracy. Minor errors in weapon delivery and recovery procedures degraded weapons effectiveness. GPS or Mission Nav accuracy degraded. Flight path marker off the ASL, but with valid release envelope at pickle. Did not completely account for wind effect.

3.4.3.8.3. **U.** Improper release parameters resulted in the weapon being delivered outside weapon limits. Wrong target coordinates entered. Used improper procedures which caused the weapon to miss the target. Major errors in execution of weapon delivery and or recovery procedures.

3.4.3.9. Areas 89 - 90. Not used.

Chapter 4

EMERGENCY PROCEDURES EVALUATION CRITERIA

4.1. General Grading Standards: The grading criteria in this chapter are divided into two sections: Aircraft Malfunctions and General. Use all sections for criteria applicable to the events performed on the evaluation. For malfunctions or procedures not listed in [Table 2.2.](#), use the appropriate "Other" area. (e.g. for an unlisted Ground Emergency use area 218)

4.2. General:

4.2.1. Areas 206-209, 210-217, 220-226, 230-248, 251-257--Aircraft Malfunctions:

4.2.1.1. **Q.** Immediately recognized and analyzed malfunction. Displayed correct, immediate response to emergency situations. Effectively used checklist.

4.2.1.2. **Q-.** Slow to recognize and or analyze malfunction. Response to certain required steps in emergency procedures was slow/confused. Used the checklist when appropriate, but slow to locate required data and implement guidance.

4.2.1.3. **U.** Unable to analyze problems or take corrective action. Did not use checklist and or lacked acceptable familiarity with its arrangement or contents.

4.2.2. Areas 205-206, 219, 228-229, 249-250, 258-259, 265-269 and 122-125. Not used.

4.2.3. Area 201--Aircraft General Knowledge:

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

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

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

4.2.4. Area 202--Unusual Attitude Recoveries:

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

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

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

4.2.5. Area 203--Crew Coordination/Checklist Usage:

4.2.5.1. **Q.** Effectively coordinated with other crewmember without misunderstanding. Effectively used checklist.

4.2.5.2. **Q-.** Coordinated with other crewmember with minor exceptions. Intra-crew communications were not clear or concise. Slow to use proper checklist.

4.2.5.3. **U.** Breakdown in coordination with other crewmember precluded mission accomplishment or jeopardized safety. Failed to follow checklist procedures or used incorrect checklist.

4.2.6. Areas 204-- Terrain Following Radar (TFR) Procedures:

4.2.6.1. **Q.** Followed all prescribed procedures and performed all TFR system checks correctly prior to beginning TFR operations. TFR procedures were IAW applicable directives.

4.2.6.2. **Q-.** Performed required checks of the TFR system with only minor deviations which would not affect terrain following performance. Minor procedural deviations which did not detract from mission accomplishment.

4.2.6.3. **U.** Major deviations in required TFR system checks. Significant procedural errors which could cause inadequate terrain clearance during TFR operations.

4.2.7. Area 260--AFMAN 11-217 Instrument Flight Procedures:

4.2.7.1. **Q.** Procedures performed in accordance with directives, published procedures and techniques outlined in the flight manual and AFMAN 11-217. Complied with decision height and or MDA; used appropriate descent rate to arrive at MDA at or before VDP/MAP. Displayed effective instrument cross-check and smooth and positive aircraft control throughout.

4.2.7.2. **Q-.** Procedures performed with minor deviations to directives, published procedures and techniques outlined in the flight manual and AFMAN 11-217. Slow to make corrections or initiate procedures; arrived at MDA at or before the MAP, but past the VDP. Displayed slow instrument cross-check and aircraft control occasionally abrupt to compensate for recognition of errors.

4.2.7.3. **U.** Procedures not performed in accordance with directives, published procedures and techniques outlined in the flight manual and AFMAN 11-217. Did not comply with decision height and or MDA. Displayed inadequate instrument cross-check and erratic aircraft control..

4.2.8. Area 261-- Standby Instrument/HUD-Out Approach:

4.2.8.1. **Q.** Performed approach in accordance with directives, published procedures and techniques outlined in the flight manual and AFMAN 11-217. Maintained proper/briefed AOA. Maintained desired glide path with only minor deviations.

4.2.8.2. **Q-.** Performed approach with minor deviations to directives, published procedures and techniques outlined in the flight manual and AFMAN 11-217. Slow to correct to proper/briefed AOA. Did not always maintain desired glide path control..

4.2.8.3. **U.** Performed procedures with major deviations to directives, published procedures and techniques outlined in the flight manual and AFMAN 11-217. Failed to attain and or maintain proper/briefed AOA. Displayed erratic glide slope control.

4.2.9. Area 262--Alternate/Divert Airfields:

4.2.9.1. **Q.** Made proper divert decision and correctly performed initial divert execution actions.

4.2.9.2. **Q-.** Slow to make divert decision and or slow to correctly perform initial divert execution actions.

4.2.9.3. **U.** Failed to make proper divert decision and or correctly perform initial divert execution actions.

4.2.10. Area 270--Weapons System Utilization:

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

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

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

4.2.11. Area 271--Electronic Attack (EA)/Electronic Protection (EP)/Radar Warning Receiver (RWR) All Aspect Missile Defense (AAMD):

4.2.11.1. **Q**. Interpretation of threat scope aural tones, warning lights and operation of chaff/flare/EA/EP systems, indicated thorough knowledge.

4.2.11.2. **Q-**. Interpretation of threat scope, aural tones, warning lights and operation of chaff/flare/EA/EP systems indicated limited knowledge.

4.2.11.3. **U**. Displayed unsatisfactory interpretation of threat scope, aural tones, warning lights or operation of chaff/flare/EA/EP system.

4.2.12. Area 272--Threat Reactions:

4.2.12.1. **Q**. Threat reactions were timely and correct. Appropriately employed countermeasures and performed maneuvers to counter threat.

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

4.2.12.3. **U**. Numerous threat reactions were omitted or incorrect. Failed to employ appropriate countermeasures or perform maneuvers to counter threat.

4.2.13. Area 273--Weapons Delivery Procedures:

4.2.13.1. **Q**. Displayed thorough knowledge of aircraft weapons systems effects, tactics and switchology.

4.2.13.2. **Q-**. Displayed deficiencies in depth of knowledge or comprehension of aircraft weapons systems effects, tactics and switchology which would not preclude successful mission accomplishment.

4.2.13.3. **U**. Displayed insufficient knowledge or comprehension of aircraft weapons systems effects, tactics and switchology which could preclude successful mission accomplishment.

4.2.14. Area 274--HQ/KY-58/Link-16 Procedures:

4.2.14.1. **Q**. Displayed thorough knowledge of HQ/KY-58/Link-16 Procedures

4.2.14.2. **Q-**. Displayed deficiencies in depth of knowledge or comprehension of HQ/KY-58/Link-16 Procedures which would not preclude successful mission accomplishment.

4.2.14.3. **U**. Displayed insufficient knowledge or comprehension of HQ/KY-58/Link-16 Procedures aircraft which could preclude successful mission accomplishment.

4.2.15. Area 275--Hung Ordnance Procedures:

4.2.15.1. **Q**. Displayed thorough knowledge of hung ordnance procedures. Followed proper tech order and local area procedures.

4.2.15.2. **Q-**. Displayed deficiencies in depth of knowledge or hung ordnance procedures. Slow to follow proper tech order, unsure of local area procedures.

4.2.15.3. **U**. Displayed insufficient knowledge or comprehension of hung ordnance procedures. Failed to follow proper tech order and local area procedures.

4.3. Forms Adopted. AF IMT 847, Recommendation for Change of Publication. AF IMT 8, Certificate of Aircrew Qualification. AF IMT 942, Record of Evaluation. AFTO Form 781, *ARMS Aircrew/Mission Flight Data Document* or *Maintenance Discrepancy and Work Document*

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

AFPD 11-2, *Aircraft Rules and Procedures*

AFPD 11-4, *Aviation Service*

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

AFMAN 11-217, Vol 1, *Instrument Flight Procedures*

AFI 11-2F-15EV1, *F-15E Aircrew Training*

AFI 33-360V1, *Air Force Content Management Program-Publications*

AFMAN 37-139, *Records Disposition Schedule*

AFTTP 3-1.1, *General Planning and Employment Considerations*

AFTTP 3-1.17, *Tactical Employment—F-15E (Secret)*

AFTTP 3-3V17, *Combat Aircraft Fundamentals--F-15E*

T.O. 1F-15E-1, *F-15E Flight Manual*

T.O. 1F-15E-1CL-1, *F-15E Flight Crew Checklist*

T.O. 1F-15E-34-1-1CL-1, *F-15E Flight Crew Nonnuclear Weapon Delivery Checklist*

Abbreviations and Acronyms

AAMD—All Aspect Missile Defense

ACMI—Air Combat Maneuvering Instrumentation

AFTTP—Air Force Tactics, Techniques, and Procedures

AFRC—Air Force Reserve Command

AGL—Above Ground Level

ANG—Air National Guard

ARMS—Air Force Resource Management System

ASR—Airport Surveillance Radar

ATC—Air Traffic Control

ATD—Aircrew Training Device

AWACS—Airborne Warning and Control System

BFM—Basic Fighter Maneuver

BIT—Built in test

BMC—Basic Mission Capable

BAQ—Basic Aircraft Qualification
CAS—Close Air Support
CF—Composite Force
CMD—Countermeasures Dispenser
CMR—Combat Mission Ready
CPT—Cockpit Procedures Trainer
CRM—Cockpit/Crew Resource Management
DB—Dive Bomb
DCA—Defensive Counterair
DOC—Designed Operational Capability
DRU—Direct Reporting Unit
EA—Electronic Attack
ECCM—Electronic Counter-Countermeasures
ECM—Electronic Countermeasures
EGI—Embedded GPS INS
EMCON—Emission Control
EOR—End of Runway
EO—Electro Optical
EP—Electronic Protection
EPE—Emergency Procedure Evaluation
EWWS—Electronic Warfare Warning System
FAC—Forward Air Controller
FAF—Final Approach Fix
FCIF—Flight Crew Information File
FDL—Fighter Data Link
EID—Electronic Identification
FE—Flight Examiner
FOA—Field Operating Agency
FRA—First Run Attack
FMT—Full Mission Trainer
FTU—Formal Training Unit
GCI—Ground Control Intercept

GFAC—Ground Forward Air Controller
GPS—Global Positioning System
HHQ—Higher Headquarters
HADB—High Altitude Dive Bomb
HARB—High Altitude Release Bomb
HQ—Have Quick
HUD—Heads Up Display
IAW—In Accordance With
IFF—Identification, Friend or Foe
IFR—Instrument Flight Rules
ILS—Instrument Landing System
IMT 8—The form formerly known as AF Form-8
IMC—Instrument Meteorological Conditions
INS—Inertia Navigation System
INSTM—Instrument
IP—Instructor Pilot
IRC—Instrument Refresher Course
LAHD—Low Angle High Drag
LALD—Low Angle Low Drag
LGB—Laser Guided Bomb
LOWAT—Low Altitude Training
MAP—Missed Approach Procedure
MAJCOM—Major Command
MOA—Military Operating Area
MSA—Minimum Safe Altitude
MSL—Mean Sea Level
MSN—Mission
MTC—Mission Training Center
NORDO—No Radio
NVG—Night Vision Goggle
OCA—Offensive Counterair
OFT—Operational Flying Trainer

OGV—Operations Group Stan/Eval
PAR—Precision Approach Radar
PGM—Precision-Guided Munition
RAP—Ready Aircrew Program
RCO—Range Control Officer
RCR—Runway Conditions Reading
RDS—Records Disposition Schedule
ROE—Rules of Engagement
RWR—Radar Warning Receiver
SA—Surface Attack or Situational Awareness
SAT—Surface Attack Tactics
SLD—Systems Level Delivery
TACS—Tactical Air Control System
TACAN—Tactical Air Navigation
TEWS—Tactical Electronic Warfare System
TGP—Target Pod
TSD—Tactical Situation Display
TFR—Terrain Following Radar
TOLD—Takeoff and Landing Data
TOT—Time over Target
VDP—Visual Descent Point
VFR—Visual Flight Rules
VID—Visual Identification
VLD—Visual Level Delivery
VMC—Visual Meteorological Conditions
VTR—Video Tape Recorder
VUL—Vulnerability Period
WIC—Weapons Instructor Course
WSO—Weapon Systems Officer
WST—Weapon System Trainer
WTT—Weapons and Tactics Trainer