

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

**AIR FORCE INSTRUCTION 11-2F-35A,
VOL 2**



30 SEPTEMBER 2010

Flying Operations

F-35A-AIRCREW EVALUATION CRITERIA

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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RELEASABILITY: There are no releasability restrictions on this publication.

OPR: HQ ACC/A3TV

Certified by: HQ USAF/A3O-A
(Col Jeffrey R. McDaniels)

Pages: 63

This volume implements AFPD 11-2, *Aircraft Rules and Procedures*; AFPD 11-4, *Aviation Service*; and AFI 11-202 Volume 2, *Aircrew Standardization/Evaluation Program*. It applies to all F-35A units. This instruction does apply to Air National Guard (ANG) and Air Force Reserve Command (AFRC). Major Commands (MAJCOMs)/Direct Reporting Units (DRUs)/ Field Operating Agencies (FOAs) are to forward proposed MAJCOM/DRU/FOA-level supplements to this volume to HQ USAF/A3O-AT, through HQ ACC/A3TV, for approval prior to publication in accordance with (IAW) AFPD 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/A3O-AT, HQ ACC/A3TV, 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 prior to publication for review and approval. **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 33-360, *Publications and Forms Management*. See paragraph **1.2** of this volume for guidance on submitting comments and suggesting improvements to this publication.

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, November 22, 1943 as amended by Executive Order 13478, Amendments to Executive Order 9397 Relating to Federal Agency Use of Social Security Numbers, November 18, 2008. 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 Air Force Manual (AFMAN) 33-363, *Management of Records* and disposed of in accordance with the *AF Records Disposition*

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Recommendations for improvements to this volume will be submitted on AF Form 847, *Recommendation for Change of Publication*, through channels, to the parent MAJCOM Stan/Eval. Parent MAJCOM Stan/Eval will forward approved recommendations to lead command OPR (HQ ACC/A3TV, 204 Dodd Blvd, Suite 133, Langley AFB VA 23665-2789). HQ USAF/A3/5 is the approval authority for interim changes to this instruction.

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Chapter 1

GENERAL INFORMATION

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

1.2. Waivers. Waiver authority for this publication is the MAJCOM/A3, IAW AFI 11-202 Vol 2. Waivers will be requested from the parent MAJCOM Stan/Eval through appropriate channels. Waiver authority for supplemental guidance will be as specified in the supplement and approved through the higher level coordination authority.

1.3. Procedures.

1.3.1. Flight examiners (FEs) will use the evaluation criteria contained in **Chapter 3** for conducting flight evaluations and **Chapter 4** for emergency procedure evaluations (EPE). To ensure standard and objective evaluations, FE will be thoroughly familiar with the prescribed evaluation criteria.

1.3.2. Recording devices (Portable Memory Device (PMD), air combat maneuvering instrumentation, etc.) should be used, when available, to reconstruct/evaluate the mission.

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

1.3.4. The FE will brief the examinee on the purpose of the evaluation and how it will be conducted prior to flight. The examinee will accomplish required flight planning in accordance with the flight position during the evaluation. FEs may assist in mission planning/briefing as tasked and will be furnished a copy of necessary mission data, mission materials, and PMD loads.

1.3.5. The FE will thoroughly debrief all aspects of the evaluation. 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. Grading assumes smooth air and a stable aircraft baseline. Momentary deviations from tolerances are acceptable 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. Examinees will brief and fly the desired airspeed/AOA for approaches and SFO parameters.

1.4.3. Appropriate area grades will be assigned by comparing examinee performance against standards per **Chapter 3**. The overall flight evaluation grade will be derived from individual area grades based on a composite for the observed events and tasks.

1.4.3.1. FE judgment must be exercised for applying subjective area grades, for specific situations not covered, and for assigning the overall grade.

1.4.3.2. If the examinee receives an unqualified area grade in any of the critical areas identified by this volume, an overall qualification level of "Q-3" will be assigned.

Table 1.1. The following general criteria apply at all times unless more restrictive in Chapter 3.

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

1.5. Emergency Procedures Evaluation (EPE). In order of preference, the EPE will be conducted in a flight simulator (Mission Rehearsal Trainer (MRT) or Full Mission Simulator (FMS)) or verbally. Only conduct a verbal EPE if a flight simulator is not available or not configured appropriately for the evaluation. Grading criteria for each required item are listed in **Chapter 4**. This evaluation will include areas commensurate with examinee's Ready Aircrew Program (RAP) training level and event qualifications.

1.5.1. The following items are required on all emergency procedure evaluations:

1.5.1.1. Emergency Procedures. All Critical Action Procedures (CAP) will be evaluated by the examinee completing a written CAPs test at the beginning of the EPE and executing all CAPs during the EPE. Any incorrectly completed written CAP will result in a "U". The EPE will not be started until successful completion of the written CAPs.

1.5.1.1.1. In addition to the CAP requirement in paragraph 1.5.1., additional "non-CAP" emergency procedures will be evaluated. Non-CAP emergency procedures will be selected from Table 2.2.

1.5.1.1.2. A minimum of one additional emergency procedure from the Ground Emergencies Section of F-35A Flight Series Data (FSD).

1.5.1.1.3. A minimum of one additional emergency procedure from the Takeoff Emergencies Section of F-35A FSD.

1.5.1.1.4. A minimum of two additional emergency procedures from the In-flight Emergencies Section of F-35A FSD.

1.5.1.1.5. A minimum of one additional emergency procedure from the Landing Emergencies Section of F-35A FSD.

1.5.1.2. Aircraft General Knowledge.

1.5.1.3. Cockpit/Crew Resource Management (CRM).

1.5.1.4. Unusual Attitude Recoveries. This also fulfills the Area 15 (Unusual Attitude Recoveries) requirement for Instrument/Qualification (INSTM/QUAL) evaluations.

1.5.2. All INSTM/QUAL EPEs will include the following additional items:

1.5.2.1. AFMAN 11-217, *Instrument Flight Procedures*. Evaluate a minimum of one helmet-mounted display (HMD) –out approach and use of standby/emergency instruments. Emphasis should be on whether the approach would permit a safe landing.

1.5.2.2. Alternate/divert airfields. Evaluate a minimum of one approach at other than home base.

1.5.3. All Mission (MSN) EPEs will include the following items (tailor MSN evaluation scenarios to unit tasking/mission).

1.5.3.1. Weapons system operation.

1.5.3.2. Electronic attack (EA)/Electronic Protection (EP)/All Aspect Missile Defense (AAMD).

1.5.3.3. Evasive action/Threat Reaction.

1.5.3.4. Weapons employment and switchology.

1.5.4. Examinees receiving an overall unqualified grade will be placed in supervised status until recommended additional training is completed and/or a reevaluation is successfully accomplished. Examinees receiving an overall unqualified grade because of an unsatisfactory CAP accomplishment will not be permitted to fly until a successful reevaluation is accomplished. For EPEs in which the examinee is qualified, but requires additional training, the FE will indicate whether the additional training will be accomplished before the next flight. Additional training and reevaluations will be accomplished IAW AFI 11-202V2.

1.5.5. When the INSTM/QUAL and MSN evaluations are combined, a single EPE may be administered to fulfill the requisites for a combined MSN/INSTM/QUAL evaluation. The combined EPE must be of sufficient scope and length to ensure all required areas for each evaluation are accomplished.

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

1.5.6.1. **Q.** Performance is correct. Quickly recognizes and corrects errors.

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

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

1.6. Documentation of Weapons Employment Results. Weapons employment results will be documented in the Mission Description Section of the AF Form 8, *Certificate of Aircrew Qualification*, for MSN evaluations. Include entries for each type of actual and simulated ordnance that was employed.

1.6.1. Air-to-Surface. Results will be recorded as Hit or Miss for each air-to-surface record delivery. Flight examiners may use either AFI 11-2F-35A Volume 1, *F-35A--Aircrew Training*, individual weapons events or current MAJCOM RAP tasking message events (e.g. combined events, etc.) when determining grading or assigning additional training. Document results as in [Table 1.2](#)

1.6.2. Not Used.

1.6.3. 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 evaluated at pickle with all parameters IAW Air Force Tactics, Techniques, and Procedures (AFTTP) 3-1 Shot/Kill.

1.6.4. FE Judgment. FE judgment will be the determining factor in deciding the weapons employment grade. The FE may elect to award a higher area grade than warranted by the score(s), the FE will include the justification in the Comments Section of the AF Form 8. Include entries for each type of simulated ordnance that was employed.

Table 1.2. Weapons Employment Scores.

Weapons employment scores were: (examples) (For abbreviations and acronyms see Attachment 1)		
Air-Ground Scoring		
Laser Guided Bombs (LGB)	Inertia Aided Munition (IAM)	High Angle Strafe (HAS)
*Hit / Miss	*Hit	**Hit
Air-Air (A/A) Scoring		
	ATTEMPTED	VALID
A/A Gun	2	1
Air Intercept Missile (AIM) 120	2	2
AIM 9	1	1
*PMD/simulator (MRT/FMS) assessed /**Air Scored		
For air scored events and/or for PDR assessed deliveries, FEs will determine weapons employment results.		
Flight examiners may use either AFI 11-2F-35AV1 individual weapons events or current MAJCOM RAP tasking message events (e.g. combined events, etc.) when completing Weapons Employment Scores.		

Chapter 2

EVALUATION REQUIREMENTS

2.1. General.

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

2.1.2. Required areas for flight evaluations are detailed in **Table 2.1** and **Table 2.2** for EPEs. When it is impractical or not possible to accomplish a required flight evaluation area in-flight, it may be evaluated by an alternate method (i.e., FMS, MRT, or by verbal examination) in order to complete the evaluation. Document the reason and type of alternate method used in the Additional Comments portion of the AF Form 8. 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. Areas annotated with an "R" are required items for that evaluation.

2.1.2.2. Areas indicated with an "R2" require evaluation of at least two of the items under the associated section for that evaluation (All CAPs are required to be accomplished for both INSTM/QUAL and MSN evaluations).

2.1.3. **Publications Check.** Currency of Flight Publications. Evaluate all issued publications/checklists for currency and accuracy on all flight evaluations. Units may specify additional publications to be evaluated in the unit supplement to AFI 11-202V2.

2.1.4. **Cockpit/Crew Resource Management (CRM).** In accordance with AFI 11-290, *Cockpit/Crew Resource Management*, CRM skills will be evaluated during all evaluations. CRM skills are integral to all phases of flight and are embedded within specific grading criteria; therefore, no specific evaluation criteria area titled CRM exists.

2.1.5. **Combined Evaluations.** With the approval of the Operations Group Commander, the INSTM/QUAL and MSN evaluation may be combined as a single evaluation. Unit Commanders should recommend this option only for experienced pilots. Combined evaluations flown in this manner must fulfill all current INSTM/QUAL and MSN evaluation requirements, including ground phase requisites. One EPE may be accomplished that encompasses requirements of both EPEs, with additional simulator time as required to complete all items.

2.2. Instrument/Qualification Evaluation. A mission flown according to instrument flight rules (to the maximum extent practical) best fulfills the objective of the INSTM/QUAL evaluation. To the maximum extent possible, this evaluation will include approaches at airfields other than home or deployed locations United States Air Forces in Europe (USAFE): Preferably non-US locations). Approaches may be flown to fields which have a non-published, practice approach available (e.g. Visual Flight Rules (VFR) conditions only approach), but not a published Flight Information Publications (FLIP) approach. The intent is to grade instrument procedures which are independent of an approach's certification (to use a non-published approach, the approach plate must be built using the standards applied to published approach plates, local Operations Group Standardization/Evaluation (OGV) must approve use of the

approach, and approval for the approach must be documented in the local unit supplement to AFI 11-202V2). This evaluation may be administered on any compatible training mission.

2.2.1. Minimum ground phase requisites are:

2.2.1.1. Instrument examination.

2.2.1.2. Closed and open book qualification examinations.

2.2.1.3. EPE.

2.2.1.4. CAPs Written Exam. Answers must contain all critical action items in proper sequence. Abbreviations are allowed.

2.3. Mission Evaluation. MSN evaluations will be flown IAW current tactics, unit tasking, theater Area of Responsibility scenarios, and will incorporate all appropriate evaluation requirements from **Table 2.1**. 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 MSN evaluations will be given in the primary DOC of the unit unless directed otherwise by the squadron commander due to assigned contingency tasking. Examinees will be evaluated in the position of their highest qualification. At the FEs discretion, portions may be flown in another position, but the emphasis is to have examinees evaluated at their highest qualification level. Wingman may be required to brief (to include tactics) and/or lead certain phases of the mission, but will not be evaluated for flight leadership. Evaluations during exercises or exercise deployments are encouraged. Evaluations during contingency/combat deployments will be given as a last resort in order to maintain mission qualification status. **Note:** Basic Mission Capable (BMC) aircrew will only be evaluated on those missions routinely performed. Examinees will only be evaluated on those areas for which they are qualified.

2.3.1. Minimum ground phase requisites are:

2.3.1.1. EPE.

2.3.1.2. Air Defense qualified pilots in wings which support a full-time ASA detachment (or home-station alert) will complete at least one Air Sovereignty intercept during every Mission EPE.

2.3.1.3. CAPs Written Exam. Answers must contain all critical action items in proper sequence. Abbreviations are allowed.

2.3.2. Air-to-Surface. This evaluation will include, as a minimum, navigation to initial point (IP), planned weapons employment and threat reactions. First-look navigation and look-alike targets are encouraged. For examinees that are certified Combat Mission Ready/BMC in nuclear and conventional tasking, the evaluation will emphasize only one scenario. Mission profiles should include actual delivery of practice or live ordnance.

2.3.3. Air-to-Air. This evaluation will include, as a minimum, one intercept, offensive maneuvering and planned weapons employment. When practical, adversaries should simulate enemy aircraft, tactics and ordnance IAW AFTTP 3-1. Dissimilar aircraft are preferred. Additionally, pilots:

2.3.3.1. Fly multiple intercepts when weather or other restrictions prohibit Dissimilar Air Combat Training (DACBT)/ Air Combat Training (ACBT), or Low Altitude Training.

2.3.3.2. Air Sovereignty Alert (ASA) mission evaluations will be sampled by ASA assigned units.

2.3.3.2.1. ASA assigned unit pilots, qualified in the ASA mission tasking, will complete an Air Sovereignty Tasking (AST) event during Mission EPEs.

2.3.4. Reconnaissance. A day visual sortie will be used to the maximum extent possible. A minimum of three targets will be assigned and more than 50 percent acquired for successful completion of the mission. Exceptions to the minimum number of targets are permitted for enhanced profiles and specialized missions. Successful acquisition of targets will be based on the requested elements of essential information and/or FE judgment. In-flight targets may be assigned by the FE. Targets not acquired due to adverse weather, verified sensor malfunction or threat reaction will not be charged against the pilot.

2.3.5. FAC(A). Air-to-surface evaluation requirements/grading criteria will be used when determined applicable by the FE.

2.4. Formal Course Evaluation. Syllabus evaluations will be flown IAW syllabus mission profile guidelines if stated, or on a mission profile developed from syllabus training objectives. Formal course guidelines may be modified, based on local operating considerations or FE judgment, to complete the evaluation. Training objectives and related areas will be graded using the performance criteria in **Chapter 3** and **Chapter 4**.

2.5. Instructor Evaluation. Instructor evaluations will be conducted IAW AFI 11-202V2.

2.5.1. Initial Flight Evaluation. To initially qualify as an instructor in the F-35A, the pilot must successfully complete an initial instructor evaluation. This is a one-time evaluation in which the examinee must demonstrate ability to instruct in some phase of the unit's mission. Except for requirements delineated under Area 33, Instructor Performance, in **Chapter 3**, specific profiles and/or events will be determined by the flight examiner.

2.5.2. Subsequent aircrew evaluations (i.e. INSTM/QUAL and MSN) will include instructor portions during the evaluations.

2.5.3. Chase Procedures. Formal Training Unit (FTU) Instructor Pilots (IPs) will be evaluated on chase procedures during INSTM/QUAL or MSN evaluations prior to performing FTU duties for the first time. Subsequent evaluation of chase procedures will be IAW para. 3.2.33.

2.5.4. FTU and Weapons Instructor Course (WIC) Mission Evaluations. USAF Weapon School (USAFWS) and FTU Instructor Pilot mission evaluation profiles will normally be IAW the formal course syllabus for any MSN which the IP is qualified to instruct. The only required items for an FTU or WIC IP mission check are those items required by the syllabus, for the specific sortie being flown.

Table 2.1. FLIGHT Evaluations.

1--INSTRUMENT/QUALIFICATION EVALUATION							
2--AIR-TO-SURFACE MISSION EVALUATION							
3--AIR-TO-AIR MISSION EVALUATION							
4--RECONNAISSANCE MISSION EVALUATION							
5--FORWARD AIR CONTROLLER MISSION EVALUATION							
AREA	NOTE	AREA TITLE	1	2	3	4	5
GENERAL							
1		MISSION PLANNING	R	R	R	R	R
2		BRIEFING (if applicable)	R	R	R	R	R
3		PRETAKEOFF	R	R	R	R	R
4		TAKEOFF	R				
5		FORMATION TAKEOFF					
6		DEPARTURE	R	R	R	R	R
7		LEVEL OFF	R				
8		CRUISE/NAVIGATION	R	R	R	R	R
9		FORMATION		R	R		
10		IN-FLIGHT CHECKS	R	R	R	R	R
11		FUEL MANAGEMENT	R	R	R	R	R
12		COMM/IFF	R	R	R	R	R
13		NOT USED					
14	1	AIRWORK	R				
15		WEAPONS SYSTEM/BIT CHECKS		R	R	R	R
16		AIR REFUELING					

17		DESCENT	R				
18		GO-AROUND					
19		RECOVERY	R	R	R	R	R
20	3	SFO TRAFFIC PATTERNS	R				
21	3	SFO APP/LANDING	R				
22		VFR PATTERN/APPROACH	R				
23		FORMATION APP/LANDING					
24		LANDING	R				
25		AFTER LANDING	R				
26		FLIGHT LEADERSHIP (if applicable)	R	R	R	R	R
27		DEBRIEFING/CRITIQUE	R	R	R	R	R
28		KNOWLEDGE	R	R	R	R	R
29	Critical	AIRMANSHIP/SITUATION AL AWARENESS	R	R	R	R	R
30	Critical	SAFETY	R	R	R	R	R
31	Critical	FLIGHT DISCIPLINE	R	R	R	R	R
32		INSTRUCTOR PERFORMANCE (if applicable)	R	R	R	R	R
33		NOT USED					
34		RADAR SCOPE/SENSOR INTERPRETATION	R	R	R	R	R
35		TASK PRIORITIZATION	R	R	R	R	R
36-40		NOT USED					

INSTRUMENTS							
41		HOLDING					
42		INSTRUMENT PENETRATION/ENROUTE DESCENT	R				
43		INSTRUMENT PATTERNS	R				
44		NONPRECISION APPROACH	R				
45	4	PRECISION APPROACH (PAR)	R				
46	4	PRECISION APPROACH (ILS)	R				
47		MISSED APPROACH/CLIMB OUT	R				
48		CIRCLING/SIDESTEP APPROACH					
49		INSTRUMENT CROSS-CHECK	R				
50		NOT USED					
TACTICAL EMPLOYMENT							
A. GENERAL							
51		TACTICAL PLAN		R	R	R	R
52		TACTICAL EXECUTION		R	R	R	R
53		COMPOSITE FORCE INTERFACE					
54		RADIO USE/TACTICAL COMM		R	R	R	R
55		VISUAL LOOKOUT/RADAR		R	R	R	R

		MECHANIZATION					
56		MUTUAL SUPPORT (if applicable)		R	R	R	R
57		TACTICAL NAVIGATION		R	R	R	R
58		INGRESS		R		R	R
59		EGRESS		R		R	R
60		COMBAT SEPARATION					
61		TIMING		R		R	R
62		TRAINING RULES/ROE		R	R	R	R
63	5, 7	THREAT REACTIONS		R	R	R	R
64		IN-FLIGHT REPORT		R	R	R	R
65		EA/EP/AAMD		R	R	R	R
66		WEAPONS SYSTEM UTILIZATION		R	R	R	R
67		SENSOR MANAGEMENT		R	R	R	R
68-70		NOT USED					
B. AIR-TO-AIR							
71	5,7	RADAR MECHANIZATION/SORTING			R		
72		AIR SOVEREIGNTY TASKING (Air Defense Units)					
73	5,7	TACTICAL INTERCEPT/CAP			R		
74		NOT USED					
75	5,7	OFFENSIVE			R		

		MANEUVERING					
76		DEFENSIVE/COUNTER OFFENSIVE MANEUVERING					
77	5,7, 8	AIR-TO-AIR WEAPONS EMPLOYMENT			R		
78		AIR-TO-AIR SYSTEMS EMPLOYMENT					
79		COMMAND AND CONTROL INTEGRATION					
80		NOT USED					
C. AIR-TO-SURFACE							
81		TARGET/THREAT ACQUISITION			R		
82	6	AIR-TO-GROUND WEAPONS EMPLOYMENT			R		
83		RANGE/AIRSPACE PROCEDURES					
84		AIR-TO-GROUND SENSOR OPERATIONS					
85		PRECISION GUIDED MUNITIONS DELIVERY PROCEDURES					
86		LGB DELIVERY PROCEDURES					
87		SYSTEM WEAPONS DELIVERY PROCEDURES (GPS AIDED WEAPONS)					
88		CLOSE AIR SUPPORT (CAS)/TIME SENSITIVE TARGETING (TST)					

89-90		NOT USED					
D. SUPPRESSION/DESTRUCTION OF ENEMY AIR DEFENSES							
91		ELECTRONIC THREAT/ORDER OF BATTLE MANAGEMENT		R			
92-110		NOT USED					
E. RECONNAISSANCE							
111		TARGET ACQUISITION				R	
112		IMAGERY QUALITY				R	
113-120		NOT USED					
F. FORWARD AIR CONTROL							
121		TARGET AREA IDENTIFICATION					R
122		TACS/AAGS COORDINATION					R
123		ATTACK PREPARATION AND BRIEFING					R
124		TARGET MARKING/DESCRIPTION					R
125		OBSERVATION POSITION (TYPE 1 CONTROL ONLY)					R
126		ATTACK CONTROL					R
127		POST ATTACK					R
128		VISUAL RECONNAISSANCE					R
129		RENDEZVOUS					R
130		NOT USED					

Notes:

1. Airwork/Advanced Handling/Tactical Maneuvering. This area is required for pilots receiving INSTM/QUAL evaluations. Maneuvers can be:

- a. Aerobatics
- b. Advanced handling characteristics / Confidence maneuvers
- c. Any Air-to-air mission (Basic Fighter Maneuvers (BFM), Air Combat Maneuvering, Air Combat Training, adversary training aid etc.)
- d. Any Air-to-Ground mission (CAS, AI, etc.)
- e. Formation (fingertip, tactical, trail)

2. Simulated Flame Out (SFO) Traffic Patterns/Approach/Landing. Pilots unable to accomplish an SFO during their INSTM/QUAL evaluation may delay this emergency traffic pattern/approach requirement until their next periodic evaluation (usually a MSN evaluation). When delayed until the next periodic evaluation, that evaluation will be incomplete until the SFO is accomplished. Exception: Should adverse weather conditions impede accomplishment of an SFO, a simulator/MRT/FMS evaluation may be used only after every attempt has been made to evaluate the SFO in the eligibility window of the subsequent evaluation. To evaluate an SFO via simulator/MRT/FMS requires prior MAJCOM/A3T approval on a case-by-case basis. Pilots not requiring a MSN evaluation must accomplish an SFO during every INSTM/QUAL evaluation and can also pursue MAJCOM/A3T (AFRC – AFRC/A3V) approval to evaluate it via simulator/MRT/FMS on a case-by-case basis. For all cases, if an SFO is evaluated via simulator/MRT/FMS the subsequent INST/QUAL evaluation must include in-flight evaluation of the SFO. Verbal evaluation of an SFO is never approved. Document non-standard SFO evaluations in the Additional Comments portion of the AF Form 8.

3. Precision Approach. At least one precision approach must be flown to complete the flight evaluation. Annotate types of approach(es) flown in the mission description. (USAFE: aircrew will fly a PAR if available).

4. AETC. These items are not required on FTU Instructor evaluations when syllabus profiles make accomplishment impractical (e.g. BFM mission checks). Document the omissions in the Additional Comments portion of the AF Form 8.

5. Air-to-Ground Weapons Employment. Grade Hit/Miss IAW paragraph [3.4.3.2](#).

6. USAFWS. These items are not required on USAFWS Instructor evaluations when syllabus profiles make accomplishment impractical. Document the omissions in the Additional Comments portion of the AF Form 8.

7. ASA Units. ASA wings are waived and authorized to evaluate Air-to-Air Weapons Employment (Area 77) during EPE profiles.

Table 2.2. Emergency Procedure Evaluations.

1--INSTRUMENT/QUALIFICATION EMERGENCY PROCEDURES EVALUATION				
2--MISSION EMERGENCY PROCEDURES EVALUATION				
AREA	NOTE	AREA TITLE	1	2
GROUND EMERGENCIES			R2	R2
		ELECTRICAL SYSTEM FAILURES		
201		BATTERY FAILURE		
202		IPP FIRE		
203-205		NOT USED		
		ENGINE		
206		ENGINE/CM BAY FIRE		
207		ENGINE COMM FAILURE		
208		ENGINE CONTROL FAILURE		
209-210		NOT USED		
		MISCELLANEOUS		
211		ABORT		
212		EGRESS		
213		FUEL LEAK		
214		NWS DEGRADED/FAILURE		
215		NOT USED		
		BRAKE SYSTEM		
216		BRAKE DEGRADED/FAILURE		
218		HOT BRAKES		

219-220		NOT USED		
TAKEOFF EMERGENCIES			R2	R2
		ENGINE		
221		AFTERBURNER FAILURE		
207		ENGINE COMM FAILURE		
208		ENGINE CONTROL FAILURE		
206		ENGINE/CM BAY FIRE		
222		ENGINE THRUST LOW		
223-226		NOT USED		
		LANDING GEAR MALFUNCTIONS		
227		LG FAILS TO RETRACT		
228		BLOWN TIRE ON TAKEOFF		
229		GEAR FIRE		
230		NOT USED		
IN-FLIGHT EMERGENCIES			R 2	R2
		ELECTRICAL SYSTEM FAILURES		
231		CNVTR FAIL DUAL		
232		CNVTR HOT		
233		EPS COMM DEGRADED		
234		EPS FAULT/FAILURE		
235		IPP MALFUNCTION / FAILURE		
202		IPP FIRE		
201		BATTERY FAILURE		

238		SINGLE GENERATOR FAILURE		
239		MULTIPLE GENERATOR FAILURE		
240		NOT USED		
		FLIGHT CONTROL FAILURES		
241		CG MALFUNCTION		
242		CONTROLLABILITY CHECK		
243		FCS SINGLE CHANNEL FAILURE		
244		FCS DUAL CHANNEL FAILURE		
245		FCS DATA FAILURE		
246		FCS POWER LIMIT		
247		LEF MALFUNCTION		
248		OUT OF CONTROL RECOVERY		
249		DUAL RUDDER FAILURE		
250		STAB FAILURE		
251 -255		NOT USED		
		ENGINE MALFUNCTIONS		
207		ENGINE COMM FAILURE		
208		ENGINE CONTROL FAILURE		
258		ENGINE DEGRADED		
259		ENGINE FADEC FAILURE / HOT		
260		ENGINE STALL RECOVERY		
222		ENGINE THRUST LOW		
262		ENGINE START - ABNORMAL		

263		ENGINE UNRESPONSIVE		
206		ENGINE/CM BAY FIRE		
265		FLAMEOUT LANDING		
266		THROTTLE JAMMED/PASSIVE		
267		NOT USED		
		FUEL MALFUNCTIONS		
268		FUEL BOOST MALFUNCTION		
213		FUEL LEAK		
270		HOT FUEL/OIL OR GRAVITY FEED		
271		FUEL FEED/RECIRC		
272-275		NOT USED		
		HYDRAULIC MALFUNCTIONS		
276		HYDRAULICS COLD		
277		SINGLE HYDRAULICS SYSTEM DEGRADED/FAIL		
278		DUAL HYDRAULICS SYSTEM DEGRADED/FAIL		
279-290		NOT USED		
		MISCELLANEOUS		
291		CNI CONTROL		
292		CNI HOT		
293		COMM FAILURE		
294		BOS DISABLED		
295		DITCHING		
296		INS DEGRADED/FAILURE		

297		WEAPON BAY FIRE		
298-300		NOT USED		
CANOPY MALFUNCTIONS				
301		CANOPY DELAMINATION		
302		CANOPY LOSS/PENETRATION IN FLIGHT		
303-305		NOT USED		
ENVIRONMENTAL CONTROL SYSTEM				
306		CABIN PRESSURE/ENVIRONMENTAL CONTROL SYS MALFUNCTION		
307		BOS SYSTEM MALFUNCTION		
308		SMOKE AND FUMES IN COCKPIT/OBOGS		
309-310		NOT USED		
EJECTION				
311		EJECTION (IMMEDIATE)		
312		EJECTION (TIME PERMITTING)		
313		EJECTION SEAT FAILURE		
315		NOT USED		
JETTISON				
316		SELECTIVE JETTISON		
317		EMERGENCY JETTISON		
318-320		NOT USED		
LANDING EMERGENCIES			R2	R2
LG MALFUNCTIONS				

321		ALTERNATE LG EXTENSION		
322		LANDING WITH LG UNSAFE/UP		
323		LANDING WITH A BLOWN MAIN GEAR TIRE		
324		LANDING WITH A BLOWN NOSE GEAR TIRE		
229		GEAR FIRE		
326		NOT USED		
		MISCELLANEOUS		
214		NWS DEGRADED/FAILURE		
242		CONTROLLABILITY CHECK		
265		FLAMEOUT LANDING		
330		NOT USED		
		ARRESTMENTS		
331		CABLE/BARRICADE ARRESTMENT		
332		HOOK FAILURE		
333-335		NOT USED		
		BRAKE SYSTEM		
216		BRAKE DEGRADED/FAILURE		
218		HOT BRAKES		
338-340		NOT USED		
GENERAL				
341		AIRCRAFT GENERAL KNOWLEDGE	R	R
342		UNUSUAL ATTITUDE RECOVERIES	R	R
343		AFMAN 11-217, INSTRUMENT FLIGHT PROCEDURES	R	

344		HMD-OUT APPROACH	R	
345		STANDBY/EMERGENCY INSTRUMENTS	R	
346		ALTERNATE/DIVERT AIRFIELDS	R	
347		WEAPONS SYSTEM OPERATION		R
348		EA/EP/AAMD		R
349		EVASIVE ACTION		R
350		WEAPONS EMPLOYMENT AND SWITCHOLOGY		R
351	2	AIR SOVEREIGNTY TASKING		R

Notes:

1. Areas indicated with an “R2” require evaluation of at least two of the items under the associated Section for that evaluation. See paragraph [1.5.1](#). for detailed information.
2. Air Defense qualified pilots in wings which support a full-time ASA detachment (or home-station alert) will complete at least one Air Sovereignty intercept during every Mission EPE.

Chapter 3

FLIGHT 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, grades will be assigned to each subarea for which grading criteria is provided. Discrepancies will be annotated on the back of the AF Form 8 by subarea.

3.2. General.

3.2.1. Area 1--Mission Planning:

3.2.1.1. Mission Preparation:

3.2.1.1.1. **Q.** Clearly defined the mission overview and mission goals. Developed a sound plan to accomplish the mission. Provided specific information on what needed to be done. Solicited feedback from other crewmembers to ensure understanding of mission requirements. Thoroughly critiqued plans to identify potential problem areas and ensured all flight members understood possible contingencies. Checked all factors applicable to flight in accordance with applicable directives. When required, extracted necessary information from air tasking order/frag. Aware of alternatives available if flight cannot be completed as planned. Read and initialed for all items in the flight crew information file and read files. Prepared at briefing time.

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

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

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 (if applicable):

3.2.2.1. Organization:

3.2.2.1.1. **Q.** Well organized, included all applicable information 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. Not fully prepared for briefing.

3.2.2.1.3. **U.** Confusing presentation, poorly organized and not presented in a logical sequence. 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 covering all pertinent items. Effectively used available briefing aids. Flight members clearly understood mission requirements.

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

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

3.2.2.3. Mission Coverage:

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

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

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

3.2.2.4. Flight Member Consideration:

3.2.2.4.1. **Q.** Properly assessed 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 correctly assess 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--Pretakeoff:
- 3.2.3.1. **Q.** Established and adhered to step, start engine, taxi and take-off times to assure thorough preflight, 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--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 inconsistent, rough or erratic.
- 3.2.4.3. **U.** Takeoff potentially dangerous. Exceeded aircraft/systems limitations and/or violated applicable flight rules. Over-controlled aircraft resulting in excessive deviations from intended flight path.
- 3.2.5. Area 5--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.** Erratic control. 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-** Overcontrolled 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. Instrument/Visual Flight Rules:

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--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. 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.

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.

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

3.2.9. Area 9--Formation:

3.2.9.1. Flight Lead:

3.2.9.1.1. **Q.** Established and maintained appropriate formations utilizing published and briefed procedures. Maintained positive control of flight/element. Smooth control and considered the wingman appropriately. Planned ahead and made timely decisions. Ensured wingman position and adherence to deconfliction contracts. Effectively coordinated with other flight members throughout the mission. Ensured smooth and efficient flight operation.

3.2.9.1.2. **Q-**. Made minor deviations from published and/or briefed procedures. Demonstrated limited flight management. Occasionally rough on the controls. Maneuvered excessively, making it difficult for wingman to maintain position. Did not always plan ahead and/or hesitant in making decisions. Flight coordination was adequate to accomplish the mission. Deficiencies in communication or interaction resulted in degraded flight or mission efficiency.

3.2.9.1.3. **U**. Formation flight not accomplished in accordance with published and/or briefed procedures. Did not establish appropriate formations. Continually rough on the controls. Maneuvered erratically causing wingman to break out or overshoot formation. Provided little consideration for wingman. Indecisive. Failed to ensure wingman maintained proper position. Failed to maintain deconfliction contracts. Poor flight coordination seriously degraded mission accomplishment or safety of flight.

3.2.9.2. Wingman:

3.2.9.2.1. **Q**. Maintained position in accordance with published and briefed procedures with only momentary deviations. Demonstrated smooth and immediate position corrections. Maintained appropriate separation and complied with leader's instructions. Rejoin was smooth and timely. Contributed to the smooth and efficient operation of the flight. Maintained mutual support during the entire sortie.

3.2.9.2.2. **Q-**. Made minor deviations to published procedures. Slow to comply with leader's instructions. Varied position considerably. Overcontrolled. Slow to rejoin. Made minor mistakes reducing mutual support. Minor errors in performing assigned flight tasks.

3.2.9.2.3. **U**. Formation flight not accomplished in accordance with published and/or briefed procedures. Did not comply with leader's instructions. Unable to maintain a formation position. Failed to maintain deconfliction contracts. Made abrupt position corrections. Did not maintain appropriate separation. Rejoin was unsafe. Poor flight coordination seriously degraded mission accomplishment or safety of flight.

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**. Properly managed 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 or required intervention for safety. 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--Not used.

3.2.14. Area 14--Airwork:

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--Weapons System/Built In Test (BIT) Checks:

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

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

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

3.2.16. Area 16--Air Refueling:

3.2.16.1. Air Refueling Rendezvous:

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

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

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

3.2.16.2. --Air Refueling Procedures/Techniques:

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

3.2.16.2.2. **Q-.** Slow to recognize and apply needed corrections to establish and maintain proper position. Aircraft control was not always positive and smooth, but adequate. Accomplished published/directed procedures with deviations or omissions that did not affect the successful completion of air refueling.

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

3.2.17. Area 17--Descent:

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

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

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

3.2.18. Area 18--Go-Around:

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

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

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

3.2.19. Area 19--Recovery:

3.2.19.1. **Q.** Performed recovery IAW applicable procedures using proper techniques. Effective use of radar during radar assisted trail recovery. Provided efficient commentary throughout recovery.

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

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

3.2.20. Area 20--SFO Traffic Pattern (Prior to configuration):

3.2.20.1. **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.

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

3.2.20.3. **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.

3.2.21. Area 21--SFO Approach/Landing (Configuration through rollout):

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

3.2.21.2. **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.

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

3.2.22. Area 22--VFR Pattern/Approach:

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

3.2.22.2. **Q-**. Performed patterns/approaches with minor deviations to procedures and techniques outlined in the flight manual, operational procedures and local directives. Aircraft control was not consistently smooth, but safe. Alignment with runway varied. Slow to correct to proper/briefed airspeed/AOA. Airspeed -5/+15 knots.

3.2.22.3. **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.

3.2.23. Area 23--Formation Approach/Landing:

3.2.23.1. Flight Lead:

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

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

3.2.23.1.3. **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.

3.2.23.2. Wingman:

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

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

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

3.2.24. Area 24--Landing. Listed criteria only applicable to normal VFR approaches. Where runway configuration, arresting cable placement or flight manual limitations require an adjustment to the desired touchdown point, a simulated runway threshold will be identified and the grading criteria applied accordingly. For instrument approaches, the examinee should utilize a normal glideslope from either the decision height or from a point where visual acquisition of the runway environment is made.

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

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

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

3.2.25. Area 25--After Landing:

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

3.2.25.2. **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.

3.2.25.3. **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.

3.2.26. Area 26--Flight Leadership (if applicable):

3.2.26.1. **Q**. Positively and effectively led the flight and made timely comments to correct discrepancies when required. Made sound and timely in-flight decisions. Provided direction/information when needed. Adapted effectively to meet new situational demands. Knew assigned tasks of other flight members. Asked for inputs and made positive statements to motivate flight members/other agencies. Coordinated effectively with other flight members/other agencies without misunderstanding, confusion, or undue delay.

3.2.26.2. **Q-**. In-flight decisions delayed mission accomplishment or degraded training benefit. Flight coordination was limited though adequate to accomplish the mission. Provided limited direction/information when needed. Slow to adapt to meet new situational demands. Demonstrated only limited knowledge of assigned tasks of other flight members. Did not consistently seek inputs from other flight members/other agencies. Limited effort to motivate flight members/other agencies through positive statements.

3.2.26.3. **U**. Did not accomplish the mission or failed to correct in-flight discrepancies. In-flight decisions were unsafe and/or jeopardized mission accomplishment. Failed to maintain briefed formation roles and responsibilities. Did not provide direction/information when needed. Did not adapt to meet new situational demands. Did not know the assigned tasks of other flight members. Did not ask for inputs. Made no effort to make positive statements to motivate flight members/other agencies. Lack of flight/other agency coordination resulted in significant degradation of mission accomplishment.

3.2.27. Area 27--Debriefing/Critique:

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

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

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

3.2.28. Area 28--Knowledge. Evaluate all applicable subareas.

3.2.28.1. Aircraft General:

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

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

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

3.2.28.2. Emergency Procedures:

3.2.28.2.1. **Q.** Displayed 100% correct, immediate response to CAPs and non-CAP emergency situations. Effectively used checklist.

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

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

3.2.28.3. Flight Rules/Procedures:

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

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

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

3.2.28.4. Weapon/Tactics/Threat:

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

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

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

3.2.28.5. Local Area Procedures:

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

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

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

3.2.28.6. Plans/Alert Procedures:

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

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

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

3.2.28.7. Authentication Procedures:

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

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

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

3.2.29. Area 29--Airmanship/Situational Awareness (Critical):

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

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

3.2.30. Area 30--Safety (Critical):

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

3.2.30.2. **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.

3.2.31. Area 31--Flight Discipline (Critical):

3.2.31.1. **Q.** Provided required direction/information. Correctly adapted to meet new situational demands. Demonstrated strict professional flight and crew discipline throughout all phases of the mission.

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

3.2.32. Area 32--Instructor Performance (if applicable). FTU IPs will be evaluated on chase procedures during INSTM/QUAL evaluations.

3.2.32.1. Briefing/Debriefing:

3.2.32.1.1. **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. Gave positive and negative performance feedback at appropriate times—feedback was specific, objective, based on observable behavior, and given constructively. Re-capped key points/compared mission's results with objectives. When appropriate, took the initiative and time to share operational knowledge and experience.

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

3.2.32.1.3. **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. Feedback not given or given poorly. Attempted to hide mistakes. Elected not to conduct flight debrief.

3.2.32.2. Demonstration of Maneuvers.

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

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

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

3.2.32.3. Instructor Knowledge:

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

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

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

3.2.32.4. Ability to Instruct:

3.2.32.4.1. **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.

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

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

3.2.32.5. Training/Evaluation Forms Preparation:

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

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

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

3.2.33. Area 33--Not used.

3.2.34. Area 34--Radar Scope/Sensor Interpretation:

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

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

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

3.2.35. Area 35--Task Prioritization:

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

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

3.2.35.3. **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.

3.2.36. Areas 36-40.--Not used.

3.3. Instrument.

3.3.1. Area 41--Holding:

3.3.1.1. **Q.** Performed entry and holding IAW published procedures and directives. Holding pattern limit exceeded by not more than: Leg Timing \pm 15 seconds, TACAN \pm 2 NM.

3.3.1.2. **Q-.** Minor deviations to procedures or directives. Holding pattern limit exceeded by not more than: Leg Timing \pm 20 seconds, TACAN \pm 3 NM.

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

3.3.2. Area 42--Instrument Penetration (Initial Approach Fix to Final Approach Fix/Descent Point)/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--Instrument Patterns (Downwind/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--Nonprecision 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 Visual Descent Point (VDP)/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 (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--Precision Approach (Precision Approach Radar [PAR]) (See Note 4, [Table 2.1](#)):

3.3.5.1. **Q**. Performed procedures as directed and IAW applicable flight manual. Smooth and timely response to controller's instructions. 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's instructions.

3.3.5.1.3. Initiated missed approach (if applicable) at decision height.

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's instructions.

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

3.3.5.3. **U**. Performed procedures with major deviations. Did not respond to controller's instructions. Erratic corrections. 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--Precision Approach (Instrument Landing System [ILS]) (See Note 4, [Table 2.1](#)):

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.
- 3.3.6.1.3. Initiated missed approach (if applicable) at decision height.
- 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 Decision Height would not have permitted a safe landing.
- 3.3.7. Area 47--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/climbout with minor deviations. Slow to comply with published procedures, controller's instructions or flight manual procedures.
 - 3.3.7.3. **U.** Executed missed approach/climbout with major deviations, or did not comply with applicable directives.
- 3.3.8. Area 48--Circling/Sidestep Approach:
 - 3.3.8.1. **Q.** Performed circling/sidestep approach in accordance with procedures and techniques outlined in the flight manual and AFMAN 11-217. Aircraft control was positive and smooth. Proper runway alignment.
 - 3.3.8.2. **Q-** Performed circling/sidestep 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/sidestep 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--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.** Realistic, well-developed plan that encompassed mission objectives, threats 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 (CF) Interface:

3.4.1.3.1. **Q.** Effectively planned for and used CF assets to enhance mission and achieve objectives.

3.4.1.3.2. **Q-.** Minor confusion between CF 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 CF assets resulted in loss of offensive potential.

3.4.1.4. Area 54--Radio Use/Tactical Communications:

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 Mechanization:

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

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. Made minor deviations in deconfliction contract adherence.

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. Failed to maintain deconfliction contracts.

3.4.1.6. Area 56--Mutual Support (if applicable):

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 ability 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 ability 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. 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 threats and defenses. Employed effective use of evasive maneuvers, terrain masking and/or route and altitude selection.

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

3.4.1.8.3. **U**. Failed to honor known/simulated threats and defenses significantly reducing survivability. Failed to employ effective evasive maneuvers, 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 preplanned time on target (TOT), time to target (TTT) for ordnance impact or vulnerability period (SEAD/Defensive Counter Air) or push time (Offensive Counter Air Sweep). CAS missions may use either TOT or vulnerability period (VUL) criteria, depending on tasking. This area may be evaluated as a First Run Attack or with FAC coordination. Adjustments in TOT will be made for non-pilot caused delays. In the case of "no spot," timing will be adjusted to a bomb release or "off" call. If range clearance is delayed, time at a preplanned IP may be substituted for TOT. The FE may widen this timing criterion if the examinee was forced to maneuver extensively along the ingress route due to simulated enemy air or ground defense reactions, ATC instructions, and/or weather.
- 3.4.1.11.1. Conventional/Recce:
- 3.4.1.11.2. **Q.** ± 1 minute. Covered TOT.
- 3.4.1.11.3. **Q-** ± 2 minutes. Covered TOT.
- 3.4.1.11.4. **U.** Exceeded Q- parameters. Failed to cover TOT due to inadequate planning or use of resources.
- 3.4.1.11.5. Air-to-Air Escort/Sweep/CAP:
- 3.4.1.11.5.1. **Q.** Arrived on station not more than 1 minute late. Covered TOT.
- 3.4.1.11.5.2. **Q-** Arrived on station not more than 2 minutes late. Covered TOT.
- 3.4.1.11.5.3. **U.** Exceeded Q- parameters. Failed to cover TOT 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--In-flight Report (not applicable for FTU):
- 3.4.1.14.1. **Q.** Gave accurate, precise in-flight reports in correct format.
- 3.4.1.14.2. **Q-.** Deviated from established procedures/format. Completed reports.
- 3.4.1.14.3. **U.** Failed to make in-flight reports. Unfamiliar with in-flight reporting procedures.
- 3.4.1.15. Area 65-- EA/EP/AAMD
- 3.4.1.15.1. **Q.** Displayed thorough knowledge and operation of EA/EP systems.
- 3.4.1.15.2. **Q-.** Displayed limited knowledge and/or minor errors in operation of EA/EP systems.
- 3.4.1.15.3. **U.** Displayed unsatisfactory knowledge and/or minor errors in operation of EA/EP systems.
- 3.4.1.16. Area 66--Weapons System Utilization:
- 3.4.1.16.1. **Q.** Correctly utilized the weapon system to deliver the desired ordnance (actual or simulated). Executed all required procedures to successfully employ the weapon.
- 3.4.1.16.2. **Q-.** Late to prepare the weapon system to deliver the desired ordnance. Minor procedural errors degraded weapons employment. **Note:** A successful reattack following a dry pass caused by minor procedural errors during the delivery is an example of degraded weapons employment.
- 3.4.1.16.3. **U.** Did not correctly prepare the weapon system to deliver the desired ordnance. Improper procedures during the attack resulted in unsuccessful weapons delivery.
- 3.4.1.17. Area 67--Sensor Management:
- 3.4.1.17.1. **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.
- 3.4.1.17.2. **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.
- 3.4.1.17.3. **U.** Incorrectly prioritized or managed sensor tasks in a manner which seriously degraded mission accomplishment or safety of flight. Overtasked other flight members or failed to communicate task overload. Displayed lack of knowledge of sensor systems.
- 3.4.1.18. Areas 68-70.--Not used.

3.4.2. Air-to-Air:

3.4.2.1. Area 71--Radar Mechanization/Sorting:

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/combat chaff. Did not acquire the target due to pilot error.

3.4.2.2. Area 72--Air Sovereignty Tasking:

3.4.2.2.1. **Q.** Responded properly to directive commentary. Completed all required armament/safety checks. Successfully completed visual identification pass. Properly performed procedures for air defense operations.

3.4.2.2.2. **Q-.** Slow response to directive commentary contributed to delayed completion of a visual identification pass or required large position corrections to complete a firing pass. Completed all required armament/safety checks. Minor deficiencies during performance of procedures for air defense operations.

3.4.2.2.3. **U.** Failed to complete intercepts/visual identification passes because of improper procedures. Did not complete an armament/safety check. Failed to perform proper procedures for air defense operations.

3.4.2.3. Area 73--Tactical Intercept/Combat Air Patrol (CAP):

3.4.2.3.1. **Q.** Thorough knowledge and correct employment of tactical intercept procedures. Effective CAP of designated airspace resulting in successful threat identification and intercept, if applicable. Successfully engaged all factor threats.

3.4.2.3.2. **Q-.** Limited knowledge of tactical intercept procedures. Intercept resulted in successful threat identification; however, excessive corrections were required to complete the intercept and/or threat engagement. CAP could have been more effective.

3.4.2.3.3. **U.** CAP did not adequately cover designated airspace. Threat identification and/or intercept unsuccessful due to poor techniques and/or improper procedures. Engagement terminated in a defensive position.

3.4.2.4. Area 74.--Not used.

3.4.2.5. Area 75--Offensive Maneuvering:

3.4.2.5.1. **Q.** Effective use of basic fighter maneuvering and air combat maneuvering or Beyond Visual Range weapons employment IAW the ROE to successfully engage

opposing aircraft. Effectively managed energy level during engagements. Maintained offensive advantage.

3.4.2.5.2. **Q-**. Limited maneuvering proficiency. Did not effectively counter opposing aircraft. Occasionally mismanaged energy levels, jeopardizing offensive advantage.

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

3.4.2.6. Area 76--Defensive/Counteroffensive Maneuvering:

3.4.2.6.1. **Q**. Performed correct initial move to counter attack of opposing aircraft. Used correct maneuvers to negate the threat. Effectively gained counteroffensive advantage.

3.4.2.6.2. **Q-**. Some hesitation or confusion/defensive situation. Minor errors in energy management or maneuvering delayed negating the attack of opposing aircraft.

3.4.2.6.3. **U**. Unable to negate attack of opposing aircraft.

3.4.2.7. Area 77--Air-to-Air Weapons Employment. Snapshots assessed as misses may be discounted from computations if attacks were tactically sound and attempted within designated parameters.

3.4.2.7.1. **Q**. Demonstrated proper knowledge of weapons employment procedures and attack parameters. Simulated weapons employment was accomplished at each opportunity and within designated parameters. Successfully completed 75 percent (or two of three or one of two) of all attempted shots.

3.4.2.7.2. **Q-**. Demonstrated limited knowledge of weapons employment or attack parameters. Simulated weapons employment of weapons was successful but slow to recognize appropriate parameters. Did not meet Q criteria for attempted shots, but minor errors did not affect overall result.

3.4.2.7.3. **U**. Demonstrated inadequate knowledge of weapons employment procedures or attack parameters. All attempts to simulate weapons employment were unsuccessful due to pilot error.

3.4.2.8. Area 78--Air-to-Air Systems Employment:

3.4.2.8.1. **Q**. Effective use and integration of Sensors, Multifunction Advanced Data Link (MADL), Tactical Situation Display, EOTS. Optimized information flow to other flight members.

3.4.2.8.2. **Q-**. Slow to integrate use of Sensors, MADL, Tactical Situation Display, EOTS. Slow to pass information to other flight members.

3.4.2.8.3. **U**. Failed to effectively integrate Sensors, MADL, Tactical Situation Display, EOTS. Failed to pass appropriate information to other flight members.

3.4.2.9. Area 79--Command and Control (C2) Integration:

3.4.2.9.1. **Q.** Effectively integrated AWACS/GCI information into tactical plan when necessary. Requested threat declarations when required. Communicated changes in the tactical situation, weather and threats to C2 agencies.

3.4.2.9.2. **Q-.** Slow to integrate AWACS/GCI information into tactical plan when necessary. Slow to request threat declarations. Incomplete communication of changes in the tactical situation, weather and threats to C2 agencies.

3.4.2.9.3. **U.** Failed to integrate AWACS/GCI information into tactical plan when necessary. Failed to request or did not abide by threat declarations. Inadequate communication of changes in the tactical situation, weather and threats to C2 agencies.

3.4.2.10. Area 80.--Not used.

3.4.3. Air-to-Surface:

3.4.3.1. Area 81--Target (TGT)/Threat Acquisition:

3.4.3.1.1. **Q.** Target acquired on the first attack with radar, TGT IR and/or visual acquisition or, if missed due to safety, clearance to expend, or 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 IR and/or visual acquisition, 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:

Note 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.

Note 2. Unscoreable Ranges. Hit/Miss will be determined by the FE based on impact of the ordnance (e.g. LGB, IAM, 25MM, etc.) and desired weapons effects for the pass flown.

Note 3. Simulated Releases. Hit/Miss may be determined by the FE based on PDR review, etc.

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

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. Weapon/Strafe 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. Weapon 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 pilot error (switch error, navigation error, etc.). Weapon score exceeded 150% of hit criteria.

3.4.3.2.2. Single Weapon 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 weapons 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 weapons 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 weapons were within hit criteria.

3.4.3.2.3. Multiple Weapon 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.

IAM

Miss/Hit

LGB

Miss/Hit

Note: IAM includes GBU 54 regardless of the terminal guidance portion of employment.

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.

IAM

Miss/Hit

LGB

Miss/Hit

Note: IAM includes GBU 54 regardless of the terminal guidance portion of employment.

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.

IAM

Miss/Miss

LGB

Hit/Hit

Note: IAM includes GBU 54 regardless of the terminal guidance portion of employment.

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/Electro-Optical Sensor Operation:

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

3.4.3.4.2. **Q-** Poor tuning of sensor hindered target identification degrading weapons delivery. Did not thoroughly understand system set-up procedures.

3.4.3.4.3. **U.** Improper search technique resulted in late or no target acquisition. Improper set-up of sensor created an unusable picture and prevented target identification or weapons delivery.

3.4.3.5. Area 85--Precision Guided Munitions (PGM) 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/seeker 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. 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/seeker limits. Used improper lasing procedures which caused the weapon to miss the target. Major errors in execution of LGB delivery and/or recovery procedures.

3.4.3.7. Area 87--System Weapons Delivery Procedures (GPS Aided 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 accuracy.

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 accuracy degraded due to inadequate time of flight.

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--Close Air Support (CAS)/Time Sensitive Targeting (TST):

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

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

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

3.4.3.9. Areas 89-90.--Not used.

3.4.4. Suppression of Enemy Air Defenses/Destruction of Enemy Air Defenses: **Note:** Air-to-surface Weapons Employment: All non HARM weapons employment criteria will be IAW Section **3.4.3**, areas 81 - 88.

3.4.4.1. Area 91--Electronic Threat/Order of Battle Management:

3.4.4.1.1. **Q.** Effective detection, analysis, and prioritization of factor threats. Efficient and timely use of available on or offboard systems to effectively detect, engage, and/or suppress threat emitters. Identified factor threats IAW prebriefed tactical plan. Effectively reacted to pop-up threats or unplanned threats.

3.4.4.1.2. **Q-** Slow to detect, prioritize, target, or suppress briefed or pop-up factor threat emitters. Inefficient use of on or offboard systems.

3.4.4.1.3. **U.** Failed to detect, prioritize, or target to effectively suppress factor threats. Incorrect identification of threats. Ineffective reactions to pop-up threats.

3.4.4.2. Area 92-110.--Not used.

3.4.5. Reconnaissance:

3.4.5.1. Area 111--Target Acquisition:

3.4.5.1.1. **Q.** Successfully acquired all assigned/attempted targets IAW mission requirements.

- 3.4.5.1.2. **Q-** Acquired greater than 50 percent of the assigned/attempted targets.
- 3.4.5.1.3. **U.** Acquired 50 percent or less of assigned/attempted targets.
- 3.4.5.2. Area 112--Imagery Quality:
 - 3.4.5.2.1. **Q.** Effective confirmation of Essential Element of Information (EEI) with acceptable threat exposure.
 - 3.4.5.2.2. **Q-** Inefficient procedures or actions, but EEI could still be confirmed. Unnecessary threat exposure.
 - 3.4.5.2.3. **U.** EEI could not be confirmed due to pilot induced errors.
- 3.4.5.3. Areas 113-120.--Not used.
- 3.4.6. Forward Air Control:
 - 3.4.6.1. Area 121--Target Area Identification:
 - 3.4.6.1.1. **Q.** Acquired the target and positively confirmed target and friendly location expeditiously.
 - 3.4.6.1.2. **Q-** Minor delays in acquiring target, but positively confirmed location. Mission effectiveness was not compromised.
 - 3.4.6.1.3. **U.** Failed to locate or did not positively confirm target location.
 - 3.4.6.2. Area 122--Tactical Air Control System (TACS) Coordination:
 - 3.4.6.2.1. **Q.** Effected timely coordination with all appropriate agencies to include strike clearance.
 - 3.4.6.2.2. **Q-** Effected coordination with all appropriate agencies. Delays caused by untimely coordination did not affect mission accomplishment. Strike clearance was received prior to initiating the attack.
 - 3.4.6.2.3. **U.** Did not coordinate with all appropriate agencies. Commenced attack without strike clearance. Delays caused by untimely coordination rendered the mission ineffective.
 - 3.4.6.3. Area 123--Attack Preparation and Briefing:
 - 3.4.6.3.1. **Q.** Provided the strikers with a clear briefing in accordance with the appropriate directives. Tactics and weapons selection commensurate with situation.
 - 3.4.6.3.2. **Q-** Briefing had minor errors/omissions which did not affect mission effectiveness.
 - 3.4.6.3.3. **U.** Briefing was not clearly and concisely delivered. Provided erroneous or omitted information which compromised mission effectiveness.
 - 3.4.6.4. Area 124--Target Marking/Description:
 - 3.4.6.4.1. **Q.** Accomplished accurate and timely marking. Strikers understood location of the specific target.

3.4.6.4.2. **Q-** Marks were adequate for the strikers to identify the target, but remarking or excessive verbal description was required to identify the target.

3.4.6.4.3. **U.** Strikers could not locate the target due to ineffective description/markings.

3.4.6.5. Area 125--Observation Position (Type 1 control only):

3.4.6.5.1. **Q.** Maneuvered to clearly observe the target and strikers during all phases of the attack. Exercised positive and efficient aircraft control. Maintained within sound maneuvering parameters.

3.4.6.5.2. **Q-** Observation position afforded an adequate view of the target and strikers. Minor deviations from maneuvering parameters but exercised safe aircraft control.

3.4.6.5.3. **U.** Observation position did not allow an adequate view of the target and strikers. Aircraft flown outside of maneuvering parameters.

3.4.6.6. Area 126--Attack Control:

3.4.6.6.1. **Q.** Exercised positive control of strikers throughout mission. Provided clear, timely, accurate ordnance adjustment instructions and attack clearance to each aircraft.

3.4.6.6.2. **Q-** Control of strikers and ordnance adjustment were adequate and safe. Attack clearance provided to each aircraft. Control and clearances could have been more positive and expeditious but mission was effective.

3.4.6.6.3. **U.** Control and instructions were not timely, clear or accurate, causing a severely degraded or ineffective mission.

3.4.6.7. Area 127--Post Attack:

3.4.6.7.1. **Q.** Accomplished a complete and accurate assessment. Provided the strikers and appropriate agencies a concise report in accordance with the governing directives.

3.4.6.7.2. **Q-** Assessment was not consistent with delivery accuracy or ordnance effects and/or made minor errors/omissions in rendering the report.

3.4.6.7.3. **U.** Did not accomplish a realistic assessment of the attack. Results were grossly exaggerated/underestimated. Report contained major errors.

3.4.6.8. Area 128--Visual Reconnaissance:

3.4.6.8.1. **Q.** Effectively identified appropriate elements of information. Minimized threat exposure. Preserved operational security.

3.4.6.8.2. **Q-** Minor errors or omissions in identification of aircraft. Degraded operational security.

3.4.6.8.3. **U.** Elements of information were not identified or confirmed. Unnecessarily jeopardized aircraft. Operational security compromised.

3.4.6.9. Area 129--Rendezvous:

- 3.4.6.9.1. **Q.** Expeditiously effected rendezvous where threat permitted or provided timely and accurate holding instructions.
- 3.4.6.9.2. **Q-** Minor delays or confusion in rendezvous or holding instructions. Holding instructions or attempt to rendezvous possibly jeopardized own or attack aircraft unnecessarily.
- 3.4.6.9.3. **U.** Provided erroneous or inaccurate instructions. Unnecessarily jeopardized own or attack aircraft.
- 3.4.6.10. Area 130.--Not used.

Chapter 4

EMERGENCY PROCEDURES EVALUATION CRITERIA

4.1. General Grading Standards: The grading criteria in this chapter are divided into three sections: CAP, Non-CAP Malfunctions and General. Use all sections for criteria applicable to the events performed on the evaluation.

4.2. General:

4.2.1. Areas 201-340--Non-CAP Malfunctions:

4.2.1.1. **Q.** Recognized and analyzed malfunction in a timely manner. 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 203-205, 209-210, 215, 219-220, 226, 230, 240, 253-255, 267, 272-275, 279-290, 298-300, 303-305, 309-310, 315, 318-320, 326, 330, 334-335, 339-340.--Not used.

4.2.3. Area 341--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 342--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 343--AFMAN 11-217:

4.2.5.1. **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.

4.2.5.2. **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.

4.2.5.3. **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..

4.2.6. Area 344--HMD-Out Approach:

4.2.6.1. **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.

4.2.6.2. **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.

4.2.6.3. **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.

4.2.7. Area 345--Standby/Emergency Instruments:

4.2.7.1. **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.

4.2.7.2. **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..

4.2.7.3. **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.

4.2.8. Area 346--Alternate/Divert Airfields:

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

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

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

4.2.9. Area 347--Weapons System Operation:

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

4.2.9.2. **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.

4.2.9.3. **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.

4.2.10. Area 348--EA/EP/AAMD:

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

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

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

4.2.11. Area 349--Evasive Action:

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

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

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

4.2.12. Area 350--Weapons Employment and Switchology:

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

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

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

4.2.13. Not used.

4.2.14. Area 351--Air Sovereignty Tasking:

4.2.14.1. **Q**. Responded properly to directive commentary. Completed all required armament/safety checks. Successfully completed visual identification pass. Properly performed procedures for air defense operations.

4.2.14.2. **Q-**. Slow response to directive commentary contributed to delay completion of a visual identification pass or required large position corrections to complete a firing pass. Completed all required armament/safety checks. Minor deficiencies during performance of procedures for air defense operations.

4.2.14.3. U. Failed to complete intercepts/visual identification passes because of improper procedures. Did not complete an armament/safety check. Failed to perform proper procedures for air defense operations.

4.3. Forms Prescribed. None.

4.4. Forms Adopted. Form 8, *Certificate of Aircrew Qualification*; AFTO Form 781, *ARMS Aircrew/Mission Flight Data Document*; AF Form 847, *Recommendation for Change of Publication*, AF Form 4031, *CRM Skills Training/ Evaluation Form*

PHILIP M BREEDLOVE, Lt Gen, USAF
DCS, Operations, Plans and Requirements

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

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AFI 11-202 Volume 2, *Aircrew Standardization/Evaluation Program, 13. September 2010*
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AFI 33-360, *Publications and Forms Management, 18 May 2006*
AFMAN 11-217, *Instrument Flight Procedures, 03 Jan 2005*
AFMAN 33-363, *Management of Records, 01 Mar 2008*
AFPD 11-2, *Aircraft Rules and Procedures, 14 Jan 2005*
AFPD 11-4, *Aviation Service, 1 Sep 2004*
AFTTP 3-1.1, *General Planning and Employment Considerations, 5 May 2008*
AF RDS on the AF Portal at the AFRMS link

Abbreviations and Acronyms

AAGS—Army Air-Ground System
AAMD—All Aspect Missile Defense
ACC—Air Combat Command
ACBT—Air Combat Training
AF—Air Force
AFRC—Air Force Reserve Command
AFTTP—Air Force Tactics, Techniques, and Procedures
AIM—Air Intercept Missile
ANG—Air National Guard
AOA—Angle of Attack
ARMS—Aviation Resource Management System
ASA—Air Sovereignty Alert
ASR—Airport Surveillance Radar
AST—Air Sovereignty Tasking
ATC—Air Traffic Control
AWACS—Airborne Warning and Control System
BFM—Basic Fighter Maneuver
BIT—Built-in Test

BMC—Basic Mission Capable
C2—Command and Control
CAP—Critical Action Procedure / Combat Air Patrol
CAS—Close Air Support
CF—Composite Force
CRM—Cockpit/Crew Resource Management
DAS—Distributed Aperture System
DACBT—Dissimilar Air Combat Training
DOC—Designed Operational Capability
DRU—Direct Reporting Unit
EA—Electronic Attack
EEl—Essential Element of Information
EOTS—Electro Optical Targeting System
EP—Electronic Protection
EPE—Emergency Procedures Evaluation
FAC—Forward Air Controller
FE—Flight Examiner
FLIP—Flight Information Publications
FMS—Full Mission Simulator
FOA—Field Operating Agency
FSD—Flight Series Data
FTU—Formal Training Unit
GCI—Ground Control Intercept
GPS—Global Positioning System
HMD—Heads Mounted Display
IAM—Inertia Aided Munition
IAW—In Accordance With
IFF—Identification, Friend or Foe
ILS—Instrument Landing System
INS—Inertial Navigation System
INSTM—Instrument
IP—Instructor Pilot

IR—Infrared
LGB—Laser-Guided Bomb
MADL—Multifunction Advanced Data Link
MAJCOM—Major Command
MAP—Missed Approach Point
MDA—Minimum Descent Altitude
MRT—Mission Rehearsal Trainer
MSN—Mission
NM—Nautical Mile
OGV—Operations Group Standardization/Evaluation
PA—Privacy Act
PACAF—Pacific Air Forces
PAR—Precision Approach Radar
PET—Preemptive Target
PGM—Precision-Guided Munition
PMD—Portable Memory Device
QUAL—Qualification
RAP—Ready Aircrew Program
RESCORT—Rescue Escort
RDS—Records Disposition Schedule
ROE—Rules of Engagement
SEAD—Suppression of Enemy Air Defenses
SFO—Simulated Flame Out
TACAN—Tactical Air Navigation
TACS—Tactical Air Control System
TGT—Target
TOT—Time on Target
TST—Time Sensitive Targeting
TTT—Time to Target
USAF—United States Air Force
USAFE—United States Air Force in Europe
USAFWS—United States Air Force Weapons School

VDP—Visual Descent Point

VFR—Visual Flight Rules

VUL—Vulnerability Period

WIC—Weapons Instructor Course