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Flying Operations

AIRCREW STANDARDIZATION/EVALUATION CRITERIA--B-1

This volume, in conjunction with applicable sections of AFI 11-408 which implements AFPD 11-4, *Aviation Services*, contains detailed procedures and criteria for evaluation of all Air National Guard (ANG) aircrews flying B-1B aircraft. Supplements to this publication must be approved by the National Guard Bureau (NGB). Forward draft supplements through channels to NGB/XOOC, 2500 Army Pentagon, Washington DC 20310-2500. Also forward a copy of all published supplements. Each B-1 aircrew member is authorized a copy of this instruction. This publication establishes standardization/evaluation guidance for ANG B-1 units. This is the first publication of ANGI 11-B1B, Volume 2.

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Chapter 1

GENERAL INFORMATION

1.1. General. Conduct all evaluations in accordance with (IAW) the provisions of AFI 11-401, *Flight Management*; AFI 11-408, *Aircrew Standardization/Evaluation Program, Organization, and Administration*; this volume, and local supplements.

1.2. Recommended Changes/Waivers. Recommendations for improvements to this volume should be submitted on AF Form 847, *Recommendation for Change of Publications (Flight Publication)*, IAW AFI 11-215, Flight Management Program, to NGB/XOOC.

1.2.1. Waivers. IAW AFI 11-408 and AFI 11-215 procedures, waiver requests must be routed through the Numbered Air Force (NAF) for comment. All waiver requests must include the following, as applicable:

- Name, rank, crew position, type aircraft, type of evaluation, expiration date and applicable paragraph.
- Justification for waiver.
- Unit plan of action.

1.2.2. Units may supplement this publication. Supplements must have approval of NGB/XOO before implementation. All units will forward draft supplements for approval through appropriate channels for comment to NGB/XOO, 2500 Army Pentagon, Washington DC 20310-2500. Also, provide appropriate NAF/OV a copy of the published supplement.

1.3. Procedures:

1.3.1. All evaluations fall under the Qualification, Instrument, Mission, Instructor, or No-Notice criteria in AFI 11-408. Instrument applies only to pilots.

1.3.2. Specific areas required for evaluations are shown in paragraphs 3.4., 4.3., and 5.4 and 6.3. To complete an Instrument/Qualification or Mission evaluation all areas annotated with an "R" must be successfully completed. Schedule all evaluation activity on one sortie to the maximum extent possible. When conditions such as equipment malfunction, operational requirements, or weather preclude evaluation of a particular event inflight, it may be evaluated by an alternate method (i.e. Aircrew Training Device (ATD) or by an oral evaluation) to complete the evaluation. Evaluations conducted in this fashion will be documented in the additional comments portion of the AF Form 8, *Certificate of Aircrew Qualification*. This option will be used as a last resort and at the discretion of the unit OG/CC.

1.3.3. An individual that has an expired or noncurrent Instrument/Qualification evaluation can not perform Instrument/Qualification or Mission activities unsupervised. An individual that has an expired Mission evaluation may accomplish Instrument/Qualification areas unsupervised if the Instrument/Qualification evaluation remains current.

1.3.4. Prior to the flight, the Standardization/Evaluation Flight Examiner (SEFE) will explain the purpose of the flight, what areas will be evaluated, and how the evaluation will be conducted. The evaluatee will accomplish all mission planning. NAF SEFEs (and unit SEFEs as determined locally) will be furnished a copy of necessary charts, flight plans, target data, and any additional items they deem necessary.

1.3.5. The SEFE will thoroughly critique all aspects of the flight. During the critique, the SEFE will review the evaluatee's overall rating, specific deviations, area grades assigned, and any required additional training.

1.3.6. Video recorder and Navigation Weapons Scoring Data Transfer Unit Cartridge (NWS DTUC) may be used to reconstruct/evaluate the mission.

1.4. Reporting Deviations/Discrepancies by Unlike Specialty. Report deviations/discrepancies of unlike specialty or within the formation IAW AFI 11-408.

1.5. Flight Examiner Objectivity Evaluation (Optional). Accomplish IAW AFI 11-408.

1.6. Grading Instructions. The following general criteria will be applied during all phases of flight except as noted for specific events:

Q	Altitude	+/-200 feet
	Airspeed	+/- 5%
	MACH	+/- .04
	Course	+/-5 degrees/3 NM
	TACAN Arc	+/- 2 NM
Q-	Altitude	+/- 300 feet
	Airspeed	+/- 10%
	MACH	+/- .045
	Course	+/- 10 degrees/5 NM
	TACAN Arc	+/- 3 NM
U	Exceeded Q- Limits	

1.6.1. Overall Grade. SEFEs will use the grading criteria in this volume to determine individual area grades. The overall flight evaluation grade is derived from the area grades and is based on a composite of inflight and ground requisite performances tempered by sound evaluator judgment. SEFE judgment must be exercised in those cases not specifically covered in this volume.

1.6.2. Area Grades. The area grade may be the lowest subarea grade. Q- debriefed in any subarea may or may not affect the area grade. Q- with associated corrective training in any subarea will result in an area grade of Q-. Evaluator judgment will determine the area grade for a Q- debriefed in any subarea.

1.6.3. Critical Areas. Critical areas are identified in this volume and annotated in the requirements tables. If the examinee receives an unqualified area grade in any of the critical areas, an overall unqualified grade will be assigned.

Chapter 2

EVALUATION REQUIREMENTS

2.1. General. Evaluation requirements for Qualification/Instrument, Instructor, and Mission checks listed in this chapter are generic. Specific crew specialty requirements for each type of check are contained in the specific specialty chapters.

2.1.1. Currency of Flight Publications. Evaluate publications required for flight for currency and accuracy on all flight evaluations.

2.1.2. Mission Planning Data. Individuals being evaluated are responsible for their own mission planning. When using a staff agency derived products, the individual is responsible to ensure the data used in the aircraft is accurate and effective for mission accomplishment.

2.1.3. Evaluation Scenarios. Mission checks will reflect real-world threats and threat avoidance to the maximum extent possible. Mission evaluations will demonstrate the individual's ability to accomplish the unit's combat tasking to include special missions. Units will schedule actual weapon releases for all Mission evaluations to the maximum extent possible. Units will ensure a random sampling of air refueling on pilot, OSO, and WSO mission evaluations within the constraints of tanker availability and unit scheduling.

2.1.4. Required Bombing and ECM activity. Units may schedule and evaluate these requirements at any altitude. **EXCEPTION:** See paragraph 5.2. for recurring Defensive Systems Officer Mission evaluations.

2.2. Ground Requisites. The following items should be completed prior to initiating any inflight activity for any evaluation, except No-Notice evaluations. Periodic examinations directed by the OG/CC or SQ/CC IAW AFI 11-408, will not be used towards ground requisites.

- Instrument Refresher Course (IRC).
- Emergency Procedures Exam (Closed Book).
- Qualification Exam (Open Book).
- Bold Face Exam.
- Emergency Procedures Evaluation (pilots only).

2.3. Examinations:

2.3.1. Emergency Procedures Examination (closed book). This exam consists of a minimum of 20 questions and includes all flight manuals applicable to the individual's crew position and the unit's mission.

2.3.2. Bold Face. This exam consists of one question concerning each critical action emergency procedure applicable to the individual's specialty. The answer must contain all critical action items in proper sequence. Verbatim responses are not required; however, answers must clearly state the intended course of action.

2.3.3. Qualification Examination (open book). This exam consists of a minimum of 50 questions derived from all flight manuals and governing command directives.

2.3.3.1. Weapon System Officer (WSO) exams will consist of questions applicable to both Offensive Systems Officer (OSO) and Defensive Systems Officer (DSO) positions.

2.3.4. Instrument Refresher Course (IRC). The IRC exam will be IAW AFMAN 11-210 Volume 2, *Pilot's Written Instrument Examination*.

2.4. Instructor Checks:

2.4.1. All flying personnel selected for instructor duty must be evaluated on instructor ability, as well as proficiency in their aircrew specialty. The instructor performance area will be graded on all instructor checks. For instructor evaluations not accomplished in conjunction with an instrument-qualification and/or mission evaluation, the evaluatee will brief, instruct, and debrief a flight or ATD profile representative of the units mission. Exception: Instructor Pilot evaluations will not be conducted in the ATD.

2.4.2. For scheduled instructor checks, the evaluator may require the evaluatee to present verbal explanations of equipment operations, procedures, and techniques pertinent to crew duties and responsibilities. Special demonstrations or instruction requested by the evaluator should not interfere with normal mission accomplishment. An evaluator who desires a critique of areas not covered in the evaluatee's prebrief will allow the evaluatee sufficient time to prepare the critique. For NAF Stan/Eval conducted evaluations, flight or ATD, the evaluatee will critique following the crew debrief. NAF Stan/Eval will provide the evaluatee a performance critique as soon as possible following the evaluatee's critique.

2.4.3. An instructor receiving an area grade of U or Q- with additional training in any grading area must not perform instructor duties until additional training is complete. This restriction is placed in the comments and the YES block is marked in restrictions on the AF Form 8.

2.4.4. An instructor receiving an area grade of U or Q- with corrective training in any instructor area will result in an overall Qual level 3 for the instructor evaluation.

Chapter 3
PILOT EVALUATION CRITERIA

3.1. General. This chapter consists of criteria established to standardize evaluations administered to pilots.

3.2. Emergency Procedures Evaluation (EPE) The requisite EPE will be conducted in the ATD. For units without an ATD, an oral evaluation on emergency procedures, knowledge, and systems malfunctions is required. Evaluations conducted in this fashion will be documented in the additional comments portion of the AF Form 8.

3.2.1. The following items will be included in all EPEs:

- Aircraft General Knowledge.
- All BOLDFACE/CAPs items applicable to the evaluatee's crew position.
- Crew Coordination.
- Instrument procedures and unusual attitude recoveries will be included as a requisite for the Instrument/Qualification evaluation.

3.2.2. Evaluate events accomplished/observed during the EPE against the applicable criteria contained in paragraph 3.5. Airspeed and altitude tolerances are increased 50% for evaluations conducted in the WST.

3.2.2.1. Evaluatees receiving an overall unqualified EPE grade will be placed in supervised status until recommended additional training is accomplished and a reevaluation is successfully accomplished. When an EPE grade results in a qualified with additional training, the SEFE will indicate whether the additional training must be accomplished before the flight evaluation or next unsupervised flight, as applicable. Additional training and reevaluations will be accomplished IAW AFI 11-408.

3.3. Instructor Pilots Checks. Initial instructor checks will be taken in conjunction with Instrument/Qualification/Mission checks.

3.3.1. Unit standardization/evaluation should ensure a random sampling of slats/flaps up, touch-and-go landings are evaluated within the unit. Slats/flaps up, touch-and-go landings will be evaluated on all day IP evaluations where the weather is suitable to accomplish the event.

3.4. Evaluation Requirements:

3.4.1. Instructions.

- "R" indicates areas required for evaluations as identified below:
- An asterisk (*) indicates a critical area.
- Grade all areas observed.

AREA	NOTES	TITLE	INSTRUMENT QUALIFICATION	MISSION
1		Mission Planning	R	R
2		Briefing	R	R
3		Preflight	R	R
4		Takeoff	R	
5		Departure	R	
6		Climb/level-off	R	
7		Cruise/Navigation	R	
8		Inflight Checks	R	
9		Comm/IFF/SIF	R	R
10		Crew Coordination	R	R
11		Emergency Traffic Patterns	R	

12		VFR Pattern/Approach	R	
13		Landing	R	
14		After-Landing	R	
15		Debrief	R	R
16		Knowledge	R	R
17*		Airmanship	R	R
18*		Safety	R	R
19*		Aircrew Discipline	R	R
20		Instructor Performance		
21		Holding		
22		Descent/Instrument Penetration/ En route Descent	R	
23		Airspeed Control on Final Approach	R	
24		Non-precision Approach	R	
25		Precision Approach	R	
26		Missed Approach/Climbout		
27		Tactical Plan		R
28		Tactical Execution		R
29		GCI/AWACS/CF Interface		
30		Training Rules/ROE		R
31		Low Alt Navigation		R
32		Terrain Following (TF)		R
33	1	Low Alt Visual Contour		
34		Bombing		R
35		Range Procedures		
36		Formation		
37	2	Air Refueling		
38		Night Vision Goggle (NVG) Operations		
NOTES:				
1. Required for all evaluations conducted during day, VFR conditions.				
2. Required for initial Aircraft Commander evaluations.				

3.5. Grading Areas:

Area 1. Mission Planning:

1A. Publications:

- Q** Assigned flight publications were current and usable for the unit's combat taskings. Only minor deviations, omissions, and/or errors were noted.
- Q-** Assigned flight publications contained deviations, omissions, and/or errors which did not compromise safety of flight or effective mission accomplishment.
- U** Not up to Q- standards.

1B. Mission Preparation:

- Q** Developed a sound plan to accomplish the mission. Accomplished all preflight activities in accordance with applicable directives. Aware of alternatives available, if flight cannot be completed as planned.
- Q-** Same as above, except minor deviations, errors, or omissions occurred that did not detract from mission effectiveness. Knowledge of performance capabilities or approved operating procedures was marginal in some areas.

U Major errors, omissions, or deviations that would preclude safe/effective mission accomplishment. Faulty knowledge of operating data or procedures.

Area 2. Briefing:

Q Presented a well organized, logical, and timely briefing. All essential mission elements effectively covered. Established clear mission objectives and requirements. Effectively presented all training events.

Q- Briefing was disorganized, hard to follow, redundant, or dwelled on non-essential mission items. Minor training events were omitted. Objectives undefined or poorly quantified.

U Disorganized, incomplete, or unclear presentation caused confusion that significantly detracted from effective mission accomplishment. Did not establish objectives. Omitted major training events.

Area 3. Preflight. Includes all activity from arrival at aircraft to initiation of takeoff checklist. Takeoff data will be graded in this area.

Q Performed all checks and procedures prior to takeoff in accordance with approved checklists and applicable directives.

Q- Same as above except minor deviations occurred which did not detract from mission effectiveness.

U Omitted major checklist items. Major deviations in procedures occurred which precluded safe mission accomplishment. Failed to accurately determine readiness of aircraft for flight. Errors directly contributed to a late takeoff which degraded the mission or made it non-effective.

Area 4. Takeoff. Includes all activity from initiation of takeoff checklist up to and including establishing climb configuration and airspeed.

Q Required procedures and checklist items were accomplished with only minor omissions, deviations, or errors which did not detract from smooth operation. Over controlled slightly or occasionally. No more than slight deviations.

Q- Control application abrupt or rough, but still safe and effective. Slow in correcting deviations in aircraft altitude or attitude.

U Lift-off potentially dangerous. Exceeded aircraft/systems limitations. Failed to establish proper climb attitude. Over-controlled aircraft resulting in excessive deviations from intended flight path. Not up to Q-standards.

Area 5. Departure:

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

Q- Minor deviations in airspeed and/or navigation occurred during departure.

U Failed to comply with published/directed departure instructions.

Area 6. Climb/Level Off. Includes the portion of flight after establishing climb configuration and airspeed up to and including level off.

Q Leveled off smoothly. Promptly established proper cruise airspeed, assigned heading, and intermediate/final level off altitude.

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

U Level-off was erratic. Exceeded Q- limits. Excessive delay or failed to establish proper cruise airspeed.

Area 7. Cruise/Navigation. Include those duties prescribed during phases of flight not specifically covered in other areas. Grade capability to maintain airspeed, heading, altitude, and monitoring of position. Grade any airway and/or navaid point to point navigation in this area.

Q Demonstrated satisfactory capability to navigate using all available means. Correctly applied and complied with appropriate navigation procedures.

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

Area 8. Inflight Checks:

- Q Performed all required inflight checks.
- Q- Same as qualified, except for minor deviations, errors or omissions during checks. Did not detract from mission accomplishment.
- U Did not perform inflight checks or monitor systems to the degree that an emergency condition would have developed if allowed to continue uncorrected.

Area 9. Comm/IFF/SIF:

- Q Complete knowledge of and compliance with applicable Comm/IFF/SIF procedures. Concise transmissions with proper terminology.
- Q- Occasional deviations from applicable procedures that required retransmissions or resetting codes and detracted from effective mission accomplishment. Slow in initiating required actions. Transmissions contained extraneous matter or nonstandard terminology.
- U Incorrect procedures or poor performance precluded mission accomplishment or jeopardized safety.

Area 10. Crew Coordination. Evaluate the use of all available resources to include hardware, software, personnel and external agencies (ARTCC, wingman, Scheduling, etc.) to effectively complete mission objectives.

- Q Effectively coordinated with other crewmembers during all phases of flight to ensure successful mission accomplishment.
- Q- Crew coordination was lacking to the extent that minor deviations or omissions caused significant delays or confusion. Crew communications were not clear or concise.
- U Breakdown in coordination with other crewmembers precluded mission accomplishment or jeopardized safety.

Area 11. Emergency Traffic Patterns. Actions taken in response to actual or simulated emergencies that occur during the flight check (inflight or on the ground) will be evaluated until the SEFE declares the evaluation terminated.

Special Instructions: Simulated two-engine out approach and go around is required (may be accomplished in the WST). The simulated loss of engines must be given during level flight with sufficient time provided to allow completion of the emergency procedures checklist prior to final approach. The use of all engines may be returned after the go-around has been completed and a safe altitude and airspeed have been attained.

- Q Performed emergency procedures IAW applicable directives. Adequately prioritized actions to safely recover the aircraft. Maintained aircraft control within appropriate standards.
- Q- Performed emergency procedures with minor deviations, omissions, and/or errors which did not jeopardize the safe recovery of the aircraft.
- U Performed emergency procedures with major deviations, omissions, and/or errors. Unable to safely recover the aircraft.

Area 12. VFR Pattern/Approach. Grade pattern airspeed according to flight manual speed/configuration schedule. Grade final approach speed according to Area 23.

- Q Performed patterns/approaches IAW applicable procedures. Aircraft control was smooth and positive. Accurate runway alignment. Maintained appropriate airspeed.

- Q- Performed patterns/approaches with minor deviations to applicable directives. Aircraft control was not consistently smooth, but safe. Variations in runway alignment. Slow to correct to appropriate airspeed.
- U Approaches not performed IAW applicable procedures. Erratic aircraft control. Large deviations in runway alignment.

Area 13. Landing. Includes all activity from MDA or DH through landing or go around. Grade landing data used in this area.

- Q Performed landings IAW applicable procedures. Aircraft control was smooth and positive. Accurate runway alignment.
- Q- Performed landings IAW applicable procedures with minor deviations, omissions, and/or errors, which did not jeopardize safety of flight. Aircraft control was rough however, runway alignment was accomplished.
- U Not up to Q- standards.

Area 14. After Landing:

- Q Appropriate after-landing checks and aircraft taxi procedures accomplished in accordance with applicable directives. Completed all required forms (including AFTO 781, *Maintenance Discrepancy and Work Document*) accurately.
- Q- Same as qualified except some deviations or omissions were noted. Safety was not jeopardized.
- U Major deviations, omissions, and/or errors were made which could have jeopardized safety. Data recorded inaccurately or omitted. Not up to Q- standards.

Area 15. Debrief:

- Q Thoroughly debriefed the mission. Compared mission results with established objectives. Debriefed deviations and offered corrections.
- Q- Limited debriefing. Did not thoroughly discuss performance in relationship to mission objectives. Did not debrief all deviations.
- U Did not debrief mission deviations or offer corrective guidance.

Area 16. Knowledge:

16A. Aircraft General/Equipment Operation:

- Q Thorough knowledge of aircraft systems, limitations, and performance characteristics. Operated equipment according to applicable procedures and checklists. Accurately and efficiently analyzed equipment malfunctions with consistently reliable mission results. No damage or significant system degradation resulted from operator inputs or lack of knowledge.
- Q- Knowledge of aircraft systems, limitations, and performance characteristics sufficient to perform the mission safely. Deficiencies either in depth of knowledge or comprehension. Operated equipment with minor deviations, omissions, and/or errors from required procedures. Equipment malfunctions were undetected, analyzed in error, or caused by erroneous data insertion or faulty operator techniques. The level of performance or knowledge consistently resulted in marginal reliability.
- U Not up to Q- standards. Unsatisfactory knowledge of aircraft systems, limitations, or performance characteristics. Damaged equipment. Could not obtain acceptable results due to poor operational techniques or procedures.

16B. Emergency Procedures:

- Q Correct, immediate response to Bold Face and non-Bold Face emergency situations. Effective use of applicable checklists.
- Q- Correct response to Bold-Face emergencies. Responses to certain areas of non-Bold Face emergencies or follow-on steps to Bold Face procedures were slow/confused. Appropriate use of checklists but slow to locate required data.

U Not up to Q- standards. Incorrect response for Bold Face/Critical Action emergency. Unable to analyze problems or take corrective action. Lacks acceptable familiarity with checklist arrangement or contents.

16C. Flight Rules/Procedures:

Q Thorough knowledge of flight rules and procedures. Thorough knowledge of local area procedures.

Q- Deficiencies in depth of knowledge. Limited knowledge of local area procedures.

U Inadequate knowledge of flight rules and procedures. Inadequate knowledge of local area procedures.

Area 17. Airmanship (Critical):

Q Executed assigned mission in a timely, efficient manner. Demonstrated sound judgment and a keen sense of situational awareness. Conducted the flight with a sense of understanding and comprehension.

U Ineffective decisions, or lack thereof, resulted in failure to accomplish the assigned mission. Poor situational awareness. Demonstrated poor judgment to the extent that safety could have been compromised.

Area 18. Safety (Critical):

Q Aware of, and complied with, all safety factors required for safe aircraft operations and conduct of the mission.

U Was not aware of, or did not comply with, all safety factors required for safe operations or conduct of the mission. Did not adequately clear. Operated the aircraft in a dangerous manner. Failed to correctly accomplish Boldface procedures. Endangered personnel or ignored flight manual warnings.

Area 19. Aircrew Discipline (Critical):

Q Demonstrated strict professional flight and crew discipline through all phases of the mission.

U Failed to exhibit strict flight or crew discipline. Violated or ignored rules or regulations.

Area 20. Instructor Performance. All subareas will be evaluated during all scheduled evaluations.

20A. Briefing/Debriefing:

Q Presented a comprehensive, instructional briefing/debriefing which encompassed all mission events. Made use of available training aids. Analyzed all events/maneuvers. Clearly defined objectives.

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

U Major errors or omissions in briefing/debriefing. Analysis of events or maneuvers was incomplete, inaccurate, or confusing. Did not use available training aids/reference material effectively. Briefing/debriefing below the caliber expected of instructors. Failed to define mission objectives.

20B. Instructor Knowledge:

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

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

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

20C. Ability to Instruct:

Q Demonstrated sound instructor ability. Clearly defined all mission requirements and any required additional training/corrective action. Instruction/evaluation was accurate, effective, and timely.

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

U Demonstrated inadequate ability to instruct/evaluate. Unable to perform, teach, or assess techniques, procedures, systems use, or tactics.

Area 21. Holding:

- Q** Entry and holding procedures IAW applicable directives. Holding pattern limit exceeded by not more than:
- TACAN +/- 2 NM
 - EFC +/- 2 minutes (if assigned).
- Q-** Holding pattern limit exceeded by not more than:
- TACAN +/- 3 NM
 - EFC +/- 3 minutes (if assigned).
- U** Exceeded criteria for Q- or holding pattern limits.

Area 22. Descent/Instrument Penetration/Enroute Descent. This area includes all activity from departing cruise altitude for entry into low level operations, initial penetration, or enroute descent to completion of descent at FAF/GS intercept altitude or level off at planned IFR/TF altitude.

- Q** Performed the let-down/penetration/enroute descent and approach as published/directed and IAW applicable procedures. Complied with all restrictions. Made smooth and timely corrections.
- Q-** Performed the let-down/penetration/enroute descent and approach with minor deviations. Complied with all restrictions. Slow to make corrections.
- U** Performed let-down/the penetration/enroute descent and approach with major deviations. Erratic corrections.

Area 23. Airspeed Control On Final Approach. Airspeed control for final approach is evaluated by reference to the angle of attack (AOA) indicator using the following criteria. If AOA indicator is inoperative or unreliable, normal tolerances for airspeed control apply. **NOTE:** Fly AOA or computed approach speed whichever occurs first.

- Q** Desired AOA +/- 1 degree.
- Q-** Desired AOA +/- 1 1/2 degrees.
- U** Not up to Q- standards.

Area 24. Non-Precision Approach. Approaches must be evaluated inflight. Airspeed “plus” tolerances do not apply unless a specific KIAS is required by tech data or assigned by ATC. Airspeed “minus” tolerances apply only to minimum pattern (maneuvering) speeds. Final approach is from FAF inbound to MAP/VDP.

- Q** Adhered to all published/directed procedures and restrictions. Used appropriate descent rate to arrive at MDA at or before VDP/MAP. Position would have permitted a safe landing.
- Localizer +/- one dot deflection.
 - Final approach fix altitude +150/-100 feet.
 - MDA +100/-0 feet.
- 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.
- Airspeed +15/-10 knots
 - Localizer +/- two dot deflection.
 - Final approach fix altitude +200/-150 feet.
 - MDA +150/-50 feet. (Momentary deviations below MDA)
- U** Did not comply with published/directed procedures or restrictions. Exceeded Q- limits. Maintained steady-state flight below the MDA. Could not safely land from the approach.

Area 25. Precision Approach. Approaches must be evaluated inflight. Airspeed “plus” tolerances do not apply unless a specific KIAS is required by tech data or assigned by ATC. Airspeed “minus” tolerances apply only to minimum pattern (maneuvering) speeds. Final approach is from glide slope interception inbound to DH.

Q Performed procedures as directed and IAW applicable directives. Smooth and timely response to controller's instructions. Complied with decision height. Position would have permitted a safe landing. Maintained glide path with only minor deviations.

ILS/AILA

- Course azimuth within one dot.
- Did not exceed more than one dot below/above glide path.

PAR

- Heading within 5 degrees of controller's instructions.
- Did not exceed "well above" or "well below" the GS.

Q- Performed procedures with minor deviations. Slow to respond to controller's instructions. Position would have permitted a safe landing. Improper glide path control. Initiated appropriate action at Decision Height.

ILS/AILA

- Glide slope within one dot low/two dots high.
- Course azimuth within two dots.

PAR

- Heading within 10 degrees of controller's instructions.

U Performed procedures with major deviations. Erratic corrections. Did not respond to controller's instructions. Erratic glide path control. Did not comply with decision height and/or position would not have permitted a safe landing.

Area 26. Missed Approach/Climb-Out:

Q Executed missed-approach/climb-out as published/directed. Completed the maneuver IAW applicable procedures.

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

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

Area 27. Tactical Plan:

Q Well-developed plan that included consideration of mission objectives, threats, support assets, terrain, deconfliction, aircraft capabilities, and flight member capabilities. Addressed contingencies in development of the plan.

Q- Minor deviations, omissions, and/or errors in the plan resulted in less than optimum achievement of objectives and detracted from mission effectiveness. Planned tactics resulted in unnecessary difficulty.

U Major errors in the plan precluded accomplishment of the stated objective.

Area 28. Tactical Execution:

Q Applied tactics consistent with the threat, mission objectives, support assets, current directives, and sound judgment. Executed the plan and achieved mission goals. Quickly adapted to changing environment. Maintained situational awareness. Threat reactions were timely and correct.

Q- Applied tactics with only minor deviations, omissions, and/or errors which did not prevent the successful accomplishment of the overall mission goal. Slow to react to a changing environment. Situational awareness and timely threat reactions were poor.

U Unable to accomplish the mission due to major errors or omissions during execution of the plan. Situational awareness lost. Numerous threat reactions were omitted or incorrect. Failed to accomplish countermeasures or perform maneuvers to counter threat.

Area 29. GCI/AWACS/Composite Force Interface:

- Q Effectively planned for and used GCI/AWACS/CF to enhance mission and achieve objectives. Limited confusion between GCI/AWACS/CF and bombers.
- Q- Less than optimum use of GCI/AWACS/CF which did not negate the bombers offensive advantage but detracted from mission effectiveness.
- U Inadequate or incorrect use of GCI/AWACS/CF resulted in loss of offensive potential or failure to achieve mission objectives.

Area 30. Training Rules (TR), Rules Of Engagement (ROE):

- Q Adhered to and knowledgeable of all TRs/ROEs.
- Q- Minor deviations, omissions, and/or errors. Made timely and positive corrections. Did not jeopardize safety of flight.
- U Significant deviations indicating a lack of knowledge of TRs/ROE.

Area 31. Low Altitude Navigation. This area includes all activity from the route entry point to the route exit fix. An approved low altitude navigation route, training area, or MOA planned and flown IAW applicable directives meets this requirement.

- Q Required procedures and checklists were accomplished accurately and efficiently. Altitude deviations did not exceed +/-150 feet. Maintained positional and situational awareness. FLIP AP/1B route width or training area/MOA boundaries were not exceeded.
- Q- Minor deviations, omissions and errors were noted. Altitude deviations did not exceed +/-200 feet. Limited positional and situational awareness. FLIP AP/1B route width or training area/MOA boundaries were not exceeded.
- U Not up to Q- standards.

Area 32. Terrain Following (TF). See Area 31 for low level navigation tolerances.

- Q Accomplished required procedures and checklists accurately and efficiently. Used correct clearance plane setting for the route segment flown. Coordination with the WSO/OSO/DSO provided accurate terrain assessment along the flight path of the aircraft. Effective use of terrain masking. Effectively controlled airspeed to meet mission timing and minimum mach requirements.
- Q- Accomplished required procedures and checklists with some deviations, omissions or errors which did not preclude successful accomplishment of TF. Ineffective assessment or use of terrain. Airspeed control was unnecessarily erratic but did not exceed mission timing or minimum mach requirements.
- U Not up to Q- standards. Allowed airspeed to decay below minimum Mach during TF flight.

Area 33. Low Level Visual Contour. A minimum of 5 minutes must be evaluated while flying at clearance plane altitudes using visual references. Deviations in excess of minus 200 feet, except for momentary crossings over irregular terrain (with no further attempt to make corrections) will result in an unqualified grade.

- Q Accomplished required procedures and checklists accurately and efficiently. Coordination with the WSO/OSO/DSO provided accurate terrain assessment and visual updates as necessary along the flight path of the aircraft. Effective use of terrain masking. Effectively controlled airspeed to meet mission timing requirements.
- Q- Accomplished required procedures and checklists with some deviations, omissions or errors which did not negate the advantages low altitude operations. Ineffective assessment or use of terrain. Airspeed control was unnecessarily erratic but did not exceed mission timing.
- U Not up to Q- standards.

Area 34. Bombing. If a low altitude run is accomplished, TF altitudes should be flown if possible. When weather or equipment precludes bombing at TF altitude the pilots may be evaluated from IFR altitude.

- Q Weapon employment must be accomplished within specified release parameters (altitude, airspeed, and track) for the type of weapon being released and/or mission directives.
- Q- Minor deviations, omissions, and/or errors in weapon employment. All release parameters were met, safety was not compromised, and successful weapon employment objectives were not jeopardized.
- U Not up to Q- standards.

Area 35. Range Procedures:

- Q Used proper procedures for entering and exiting the range. Range operations followed established procedures.
- Q- Minor deviations from established procedures for range entry, exit, or operations.
- U Major deviations from established procedures for range entry, exit, or operations.

Area 36. Formation:

36A. Flight Lead:

- Q Established appropriate formations and maintained positive control of flight/element during mission. Planned ahead and made timely decisions. Complied with applicable procedures.
- Q- Limited flight management. Formation was difficult for wingman to maintain position. Did not always plan ahead and/or was hesitant in making decisions. Delayed mission accomplishment or degraded training. Some deviations in procedure.
- U Did not establish appropriate formations. Little consideration for wingman. Major deviations in procedures. Indecisive. Failed to ensure wingman maintained proper position. Placed wingman in unsafe position or circumstance. Did not accomplish the mission or failed to correct inflight discrepancies.

36B. Wingman:

- Q Able to maintain position with only momentary deviations. Made smooth and immediate position corrections. Maintained safe separation and complied with procedures. Smooth, timely join-up.
- Q- Varied position considerably. Over-controlled. Minor procedural deviations. Slow to join-up.
- U Unable to maintain a formation position. Abrupt position corrections. Did not maintain safe separation. Unsafe join-up and/or procedures.

Area 37. Air Refueling. Practice emergency separation procedures will be evaluated if conditions permit.

- Q Rendezvous and refueling accomplished IAW applicable procedures. Expeditious rendezvous and hookup. Aircraft control was smooth and positive throughout. Sufficiently demonstrated ability to receive onloads commensurate with unit taskings.
- Q- Minor deviations, errors, or omissions from applicable procedures. Unnecessarily delayed rendezvous and/or hookup. Rough aircraft control during rendezvous and refueling. Difficulty maintaining contact position sufficient to receive onloads commensurate with unit taskings.
- U Major deviations, errors, or omissions from applicable procedures. Excessive time to rendezvous and/or hookup delayed mission accomplishment. Unable to maintain contact position sufficient to receive onloads commensurate with unit taskings. Jeopardized safety.

Area 38. NVG Operations:

- Q Calibration and setup of night vision equipment accomplished IAW applicable directives. Effective use of NVGs to enhance situational awareness, tactical employment, and terrain masking. Effective coordination of NVG employment with established TF procedures.
- Q- Minor deviations to equipment calibration and/or setup. Ineffective coordination of NVG operations with established procedures detracted from effective mission accomplishment. Situational awareness and /or tactical employment were not optimized. Did not compromise safety of flight.
- U Not up to Q- standards.

Chapter 4

OFFENSIVE SYSTEM OFFICER EVALUATION CRITERIA

4.1. General:

4.1.1. This chapter consists of criteria established to ensure standard evaluations are administered to Offensive Systems Officers (OSO).

4.2. Instructor OSO Checks. If accomplished in the ATD, the instructor evaluatee will perform at the instructor console. On instructor evaluations in the ATD, the “student” will not be evaluated.

4.2.1. Enter on the AF Form 8, Instructor ATD, date, and grade (1 or 3) under the ground phase. On initial instructor checks not in conjunction with qualification/mission evaluation, a separate AF Form 8 is required. Enter Initial Instructor on the ground phase side with the grade and the date.

4.3. Evaluation Requirements:

4.3.1. Instructions:

- “R” indicates areas required for certain types of evaluations.
- * Indicates critical area.
- Grade all areas observed.

AREA	NOTES		QUAL	MISSION
1		Mission Planning	R	R
2		Preflight	R	
3		Takeoff/Climb	R	
4		General Navigation	R	
5		Comm/IFF/SIF	R	
6	1	Air Refueling Rendezvous		
7		Knowledge	R	
8		Crew Coordination	R	
9		Tactical Plan		R
10		Tactical Execution		R
11		Descent And Landing	R	
12		After Landing	R	
13		Debrief	R	R
14		Low Altitude Navigation		R
15		Terrain Following		R
16		Bombing		R
17		Formation		
18-21		Not Used		
22		Instructor Performance		
23*		Airmanship	R	R
24*		Safety	R	R
25*		Aircrew Discipline	R	R
Notes:				
1. Required for initial mission evaluation.				

4.4. Grading Areas:

Area 1. Mission Planning:**1A. Publications:**

- Q** Assigned flight publications were current and usable for the unit's combat taskings. Only minor deviations, omissions, and/or errors were noted.
- Q-** Assigned flight publications contained deviations, omissions, and/or errors which did not compromise safety of flight or effective mission accomplishment.
- U** Not up to Q- standards.

1B. Mission Preparation:

- Q** Developed a sound plan to accomplish the mission. Accomplished all mission planning activities required by applicable directives. Aware of available alternatives if the flight cannot be completed as planned.
- Q-** Same as above, except minor deviations, errors, or omissions occurred that did not detract from mission effectiveness. Knowledge of performance capabilities or approved operating procedures was marginal in some areas.
- U** Major errors, omissions or deviations that would preclude safe/effective mission accomplishment. Faulty knowledge of operating data or procedures.

1C. Briefing:

- Q** Presented a well organized, logical, and timely briefing. All essential mission elements effectively covered. Established clear mission objectives and requirements. Effectively presented all training events.
- Q-** Briefing was disorganized, hard to follow, redundant, or dwelled on non-essential mission items. Minor training events were omitted. Objectives undefined or poorly quantified.
- U** Disorganized, incomplete, or unclear presentation caused confusion that significantly detracted from effective mission accomplishment. Did not establish objectives. Omitted major training events.

Area 2. Preflight. Includes all activity from arrival at the aircraft to initiation of takeoff checklist.

- Q** Performed all required checks and procedures prior to takeoff in accordance with approved checklists and applicable directives. Only minor deviations, omissions, and/or errors occurred which did not detract from mission effectiveness.
- Q-** Same as above except minor deviations, omissions, and/or errors occurred which detracted from mission effectiveness.
- U** Omitted major checklist items. Major deviations in procedures occurred which precluded safe mission accomplishment. Failed to accurately determine readiness of aircraft for flight. Errors directly contributed to a late takeoff which degraded the mission or made it non-effective.

Area 3. Takeoff/Climb. This includes all activity from start of the takeoff up to and including initial level off.

- Q** Accomplished prescribed procedures and checklists in accordance with applicable directives with only minor deviations, omissions, and/or errors.
- Q-** Deviations, omissions, and/or errors occurred which detracted from overall mission efficiency. Performance or knowledge was the minimum acceptable.
- U** Not up to Q- standards.

Area 4. General Navigation. This area includes all high altitude navigation.

- Q** Demonstrated satisfactory capability to navigate using all available means. Made all control times within one minute, SPINS, or briefed tolerances. Did not allowed the aircraft to deviate more than ten nautical miles from planned course. Advised pilot of altitude deviations prior to exceeding +/-150 feet of deviation. Maintained aircraft position within tolerances specified in applicable directives.
- Q-** Same as "Q" except minor errors, deviations, or omissions occurred that detracted from effective mission accomplishment. Advised the pilots of IFR altitude deviations prior to exceeding +/-200 feet of deviation.
- U** Not up to Q- standards.

Area 5. Comm/IFF/SIF:

- Q** Complete knowledge of and compliance with applicable Comm/IFF/SIF procedures. Concise transmissions with proper terminology.
- Q-** Occasional deviations from applicable procedures that required retransmissions or resetting codes and detracted from effective mission accomplishment. Slow in initiating required actions. Transmissions contained extraneous matter, or nonstandard terminology.
- U** Incorrect procedures or poor performance precluded mission accomplishment or jeopardized safety.

Area 6. Air Refueling Rendezvous. Any rendezvous will satisfy this requirement. Grade buddy refueling procedures using the formation criteria in this chapter. Control times to the ARCP (point parallel) or the RZ point or ARIP for en route rendezvous.

- Q** Accurately and efficiently accomplished procedures and time control required by applicable directives. Positively identified the tanker beacon/skin paint, when applicable, and did not delay final closure.
- Q-** Minor deviations, omissions, and/or errors occurred which adversely impacted join-up. Subsequent mission timing was not affected.
- U** Not up to Q- standards. Made an actual or attempted rendezvous with the wrong aircraft. Individual was unable to find the correct tanker in multi-aircraft refueling.

Area 7. Knowledge:

7A. Aircraft General/Equipment Operation:

- Q** Thorough knowledge of aircraft systems, limitations, and performance characteristics. Operated equipment according to applicable procedures and checklists. Accurately and efficiently analyzed equipment malfunctions with consistently reliable mission results. No damage or significant system degradation resulted from operator inputs or lack of knowledge.
- Q-** Knowledge of aircraft systems, limitations, and performance characteristics sufficient to perform the mission safely. Deficiencies either in depth of knowledge or comprehension. Operated equipment with minor deviations, omissions, and/or errors from required procedures. Equipment malfunctions were undetected, analyzed in error, or caused by erroneous data insertion or faulty operator techniques. The level of performance or knowledge consistently resulted in marginal reliability.
- U** Unsatisfactory knowledge of aircraft systems, limitations, or performance characteristics. Damaged equipment. Could not obtain acceptable results due to poor operational techniques or procedures.

7B. Emergency Procedures. Includes simulated emergency procedures inflight or in the WST within the limitations of applicable directives. Grade all emergencies (simulated or actual) IAW criteria in this area.

- Q** Properly analyzed the situation without undue delay and demonstrated adequate knowledge of procedures to effectively handle the emergency. Critical actions required by the flight manual were accomplished with only minor deviations. All applicable non-critical procedures were accomplished accurately and efficiently. Bold Face/Critical Action Procedures were accomplished without error. Effective use of applicable checklists.
- Q-** Minor omissions and/or errors occurred that did not prevent critical actions from being accomplished. Response to certain areas of non-critical emergencies or follow-on steps to critical procedures were slow/confused. Appropriate use of checklists but slow to locate required data. Knowledge of emergency procedures and actions taken may demonstrate the need for additional training.
- U** Not up to Q- standards. Incorrect response for Bold Face/Critical Action emergency. Unable to analyze problems or take corrective action. Lacks acceptable familiarity with checklist arrangement or contents.

Area 8. Crew Coordination. Evaluate the use of all available resources to include hardware, software, personnel and external agencies (ARTCC, wingman, scheduling, etc.) to effectively complete mission objectives.

- Q Effectively coordinated with other crewmembers during all phases of flight to ensure successful mission accomplishment.
- Q- Crew coordination was lacking to the extent that minor deviations or omissions caused significant delays or confusion. Crew communications were not clear or concise
- U Not up to Q- standards. Breakdown in coordination with other crewmembers precluded mission accomplishment or jeopardized safety.

Area 9. Tactical Plan:

- Q Well-developed plan that included consideration of mission objectives, threats, support assets, terrain, deconfliction, aircraft capabilities, and flight member capabilities. Addressed contingencies in development of plan.
- Q- Minor deviations, omissions, and/or errors in the plan resulted in less than optimum achievement of objectives and detracted from mission effectiveness. Planned tactics resulted in unnecessary difficulty.
- U Major errors in the plan precluded accomplishment of the stated objective.

Area 10. Tactical Execution:

- Q Applied tactics consistent with the threat, mission objectives, support assets, current directives, and sound judgment. Executed the plan and achieved mission goals. Quickly adapted to changing environment. Maintained situational awareness. Threat reactions were timely and correct.
- Q- Applied tactics with only minor deviations, omissions, and/or errors which did not prevent the successful accomplishment of the overall mission goal. Slow to react to a changing environment. Situational awareness and threat reactions were poor and/or untimely.
- U Unable to accomplish the mission due to major errors or omissions during execution of the plan. Situational awareness lost. Numerous threat reactions were omitted or incorrect. Failed to accomplish countermeasures or perform maneuvers to counter threat.

Area 11. Descent and Landing:

- Q Accomplished procedures and checklists required by applicable directives accurately and efficiently. Informed pilots of airspeed deviations of -5/+10 knots, altitude deviations prior to exceeding +/-150 feet, and assigned heading +/- 6 degrees. Appropriate FLIP information was correctly used. Landing data was computed within 3 KIAS for approach speed and 500 feet for landing roll distance.
- Q- Accomplished procedures and checklists required by applicable directives with minor omissions, deviations, or errors. Informed pilots of airspeed deviations of -10/+15 knots, altitude deviations prior to exceeding +/-200 feet of deviation, and assigned heading +/-9 degrees. Landing data was computed within 6 KIAS for approach speed and 1000 feet for landing roll distance.
- U Allowed the pilot to descend unannounced below MDA/DH in excess of 50 feet. Not up to Q- standards.

Area 12. After Landing:

- Q Accomplished procedures/checklists required by applicable directives accurately and efficiently. Accurately completed required documentation.
- Q- Accomplished procedures/checklists required by applicable directives with only minor deviations, omissions, and/or errors.
- U Not up to Q- standards.

Area 13. Debrief:

- Q Thoroughly debriefed the mission (or applicable portions). Compared mission results with initial mission objectives. Debriefed deviations. Offered corrective guidance as appropriate.

- Q-** Limited debriefing. Did not thoroughly discuss performance in relation to mission objectives. Did not debrief all deviations.
- U** Not up to Q- standards. Did not debrief mission deviations or offer corrective guidance.

Area 14. Low Altitude Navigation. An approved low altitude navigation route, training area, or MOA meets this requirement. Altitude tolerances are based on an SCA from SPINs or the MSA/IFR altitudes.

- Q** Accurately and efficiently accomplished procedures and checklists required by applicable directives. Advised pilot of altitude deviations prior to exceeding +/-150 feet of deviation. Did not exceed FLIP AP/1B route width or training area/MOA boundary. Made all low level enroute points and control times within one minute, SPINS, or briefed tolerances, whichever was more restrictive.
- Q-** Procedures and checklists required by applicable directives were accomplished with omissions, deviations, or errors which detracted from effective mission accomplishment. Control times were made good within +/- 2 1/2 minutes, SPINS, or briefed tolerances, whichever was more restrictive. Advised the pilots of altitude deviations prior to exceeding +/-200 feet of deviation.
- U** Not up to Q- standards.

Area 15. Terrain Following (TF). Credit for TF may be awarded if visual contour is flown.

- Q** Accomplished required procedures and checklists accurately and efficiently. Used correct clearance plane setting for the route segment flown. Coordination with the pilots provided accurate terrain assessment along the flight path of the aircraft. Effective use of terrain masking.
- Q-** Accomplished required procedures and checklists with some deviations, omissions or errors which did not preclude successful completion of TF. Ineffective assessment or use of terrain.
- U** Not up to Q- standards.

Area 16. Bombing. This area encompasses all bombing-related procedures and checklists. Any bomb run satisfies this requirement. Units may supplement this requirement to allow for unit taskings. Each bomb run must result in a simulated/actual release of an effective weapon. Evaluate each attempted/scheduled release. If equipment malfunctions preclude synchronous capability, alternate bombing meets the synchronous requirements of the evaluation.

- Q** Accomplished procedures and checklists prescribed by applicable directives to prearm, prepare for release, arm, and release all weapons accurately and efficiently. Properly configured weapons for release, and correctly analyzed malfunctions. Achieved all weapons release parameters.
- Q-** Only minor deviations, omissions, and/or errors in weapon employment. All release parameters were met, safety was not compromised, and successful weapon employment objectives were achieved.
- U** Not up to Q- standards.

Area 17. Formation:

- Q** Accomplished inflight departure, join-up, and enroute procedures and responsibilities IAW applicable directives. Advised the pilot of the position of the other aircraft in the formation in a timely manner. Advised the pilot of altitude and/or position errors within 150 feet and one-half mile.
- Q-** Accomplished inflight procedures IAW applicable directives with minor errors, deviations, or omissions not adversely affecting mission accomplishment. Advised the pilot of altitude and/or position errors within 200 feet and three-quarters of a mile.
- U** Not up to Q- standards.

Areas 18 - 21. Not Used.

Area 22. Instructor Performance:

22A. Briefing/Debriefing:

- Q Presented a comprehensive, instructional briefing/debriefing which encompassed all mission events. Made use of available training aids/reference materials. Clearly defined all objectives.
- Q- Minor errors or omissions in briefing/ debriefing or mission critique. Occasionally unclear in analysis of events or maneuvers.
- U Major errors or omissions in briefing or debriefing. Analysis of events or maneuvers was incomplete, inaccurate or confusing. Did not use available training aids/reference materials effectively. Briefing/debriefing below the caliber expected of instructors. Failed to define mission objectives.

22B. Demonstration of Equipment Operation:

- Q Performed required operation within prescribed parameters. Provided concise, meaningful commentary. Demonstrated sound instructor proficiency.
- Q- Performed required operation with minor deviations from prescribed parameters. Commentary was sometimes unclear.
- U Was unable to properly perform required operations. Made major procedural errors. Did not provide adequate commentary. Demonstrated instructor proficiency below the caliber expected of instructors.

22C. Instructor Knowledge:

- Q Demonstrated in-depth knowledge of procedures, requirements, aircraft equipment operation, mission and tactics beyond that expected of non-instructors.
- Q- Deficiencies in depth of knowledge, comprehension of procedures, requirements, aircraft equipment operation, mission or tactics.
- U Unfamiliar with procedures, requirements, aircraft equipment operation, mission or tactics. Lack of knowledge in certain areas seriously detracted from instructor effectiveness.

22D. Ability to Instruct:

- Q Demonstrated sound instructor ability. Clearly defined all mission requirements and any required additional training/corrective action. Instruction was accurate, effective and timely.
- Q- Problems in communication or analysis degraded the effectiveness of instruction/evaluation.
- U Demonstrated inadequate ability to instruct/evaluate. Unable to perform, teach, or assess techniques, procedures, systems use, or tactics. Instruction was inaccurate, ineffective or untimely.

Area 23. Airmanship (Critical):

- Q Executed assigned mission in a timely, efficient manner. Demonstrated sound judgment and a keen sense of situational awareness. Conducted the flight with a sense of understanding and comprehension.
- U Ineffective decisions, or lack thereof, resulted in failure to accomplish the assigned mission. Poor situational awareness. Demonstrated poor judgment to the extent that safety could have been compromised.

Area 24. Safety (Critical):

- Q Aware of, and complied with, all safety factors required for safe operations and conduct of the mission.
- U Was not aware of, or did not comply with, all safety factors required for safe operations or conduct of the mission. Failed to correctly accomplish Boldface procedures. Endangered personnel or ignored flight manual warnings.

Area 25. Aircrew Discipline (Critical):

- Q Demonstrated strict professional flight and crew discipline through all phases of the mission.
 - U Failed to exhibit strict flight or crew discipline. Violated or ignored rules or regulations.
-

Chapter 5

DEFENSIVE SYSTEM OFFICER EVALUATION CRITERIA

5.1. General. This chapter consists of criteria established to ensure standard evaluations are administered to Defensive Systems Officers (DSO).

5.2. Flight Electronic Countermeasures Requirements. At least one low altitude defensive action ECM run will be scheduled for mission evaluations. The run should be scheduled against a MUTES capable site to the maximum extent possible, but at a minimum it should be scheduled against a site capable of presenting and scoring a Optional Defense Run (ODR). Local units may supplement this requirement to allow for unit taskings. If the scheduled activity is attempted and not accomplished due to circumstances beyond the aircrew's control, the requirements of this paragraph will be satisfied by accomplishing any ECM run if sufficient activity is observed by the SEFE.

5.2.1. AFI 11-408 ECM at MUTES capable sites will be requested by type. The SEFE will, on mission planning day for mission evaluations, select a strategic, tactical, or naval MUTES scenario. For no-notice evaluations, scheduled Mike scenarios may be changed by the evaluatee to a Sierra, Tango, or November scenario.

5.2.2. SEFEs will not consider DSO performance as less than qualified based solely on unreliable/substandard scores. If the DSO procedures and techniques are completely satisfactory, unreliable/substandard scores become only an indication of equipment capability. Conversely, reliable/standard scores may result although marginal or unacceptable procedures and techniques were used.

5.3. Instructor DSO Checks. Initial, requalification, and recurring instructor checks will be accomplished in the ATD for DSOs who are not OSO qualified. If accomplished in the ATD, the instructor evaluatee will perform at the instructor console. On instructor evaluations in the ATD, the "student" will not be evaluated.

5.3.1. Enter on the AF Form 8, Instructor ATD, date, and grade (1 or 3) under the ground phase. On initial instructor checks not in conjunction with qualification/mission evaluation, a separate AF Form 8 is required. Enter Initial Instructor on the ground phase side with the grade and the date.

5.4. Evaluation Requirements.

5.4.1. Instructions:

- "R" indicates areas required for certain types of evaluations.
- * Indicates critical area.
- Grade all areas observed.

AREA		QUAL	MISSION
1	Mission Planning	R	R
2	Preflight	R	
3	Takeoff/Climb	R	
4	General Navigation	R	
5	Comm/IFF/SIF	R	
6	Air Refueling Rendezvous		
7	Knowledge	R	
8	Crew Coordination	R	
9	Tactical Plan		R
10	Tactical Execution		R
11	Descent And Landing	R	
12	After Landing	R	
13	Debrief	R	R
14 - 17	Not Used		
18	Penetration Procedures		R
19	Expendable Procedures		R
20	Airborne Interceptor Activity (AI)		

21	Withdrawal Procedures		R
22	Instructor Performance		
23*	Airmanship	R	R
24*	Safety	R	R
25*	Aircrew Discipline	R	R

5.5. Grading Areas:

Area 1. Mission Planning:

1A. Publications:

- Q Assigned flight publications were current and usable for the unit's combat taskings. Only minor deviations, omissions, and/or errors were noted.
- Q- Assigned flight publications contained deviations, omissions, and/or errors which did not compromise safety of flight or effective mission accomplishment.
- U Not up to Q- standards.

1B. Mission Preparation:

- Q Developed a sound plan to accomplish the mission. Accomplished all mission planning activities required by applicable directives. Aware of available alternatives if the flight cannot be completed as planned.
- Q- Same as above, except minor deviations, errors, or omissions occurred that did not detract from mission effectiveness. Knowledge of performance capabilities or approved operating procedures was marginal in some areas.
- U Major errors, omissions or deviations that would preclude safe/effective mission accomplishment. Faulty knowledge of operating data or procedures.

1C. Briefing.

- Q Presented a well organized, logical, and timely briefing. All essential mission elements effectively covered. Established clear mission objectives and requirements. Effectively presented all training events.
- Q- Briefing was disorganized, hard to follow, redundant, or dwelled on non-essential mission items. Minor training events were omitted. Objectives undefined or poorly quantified.
- U Disorganized, incomplete, or unclear presentation caused confusion that significantly detracted from effective mission accomplishment. Did not establish objectives. Omitted major training events.

Area 2. Preflight. Includes all activity from arrival at the aircraft to initiation of takeoff checklist.

- Q Performed all checks and procedures prior to takeoff in accordance with approved checklists and applicable directives. Only minor deviations, omissions, and/or errors occurred which did not detract from mission effectiveness.
- Q- Same as above except minor deviations, omissions, and/or errors occurred which detracted from mission effectiveness.
- U Omitted major checklist item(s). Major deviations in procedure(s) occurred which precluded safe mission accomplishment. Failed to accurately determine readiness of aircraft for flight. Errors directly contributed to a late takeoff which degraded the mission or made it non-effective.

Area 3. Takeoff/Climb. This includes all activity from start of the takeoff up to and including initial level off.

- Q Accomplished prescribed procedures and checklists in accordance with applicable directives with only minor deviations, omissions, and/or errors.
- Q- Deviations, omissions, and/or errors occurred which detracted from overall mission efficiency. Performance or knowledge was the minimum acceptable.
- U Not up to Q- standards.

Area 4. General Navigation. The DSO should assist the OSO/WSO with position monitoring, time control, and general navigation. The following will be used to evaluate the DSO for navigation insofar as these criteria do not interfere with defense of the aircraft (threat detection, avoidance and tactics will take priority).

- Q** Maintained aircraft position within tolerances specified in applicable directives. Notified crew if control times will not be made within one minute, SPINS, or briefed tolerances, whichever is more restrictive. Advised pilot of altitude deviations prior to exceeding +/-150 feet of deviation.
- Q-** Same as "Q" except minor errors, deviations, or omissions occurred that detracted from effective mission accomplishment. Pilot advised of IFR altitude deviations prior to exceeding 200 feet of deviation.
- U** Not up to Q- standards.

Area 5. Comm/IFF/SIF:

- Q** Complete knowledge of and compliance with applicable Comm/IFF/SIF procedures. Concise transmissions with proper terminology.
- Q-** Occasional deviations from applicable procedures that required retransmissions or resetting codes and detracted from effective mission accomplishment. Slow in initiating required actions. Transmissions contained extraneous matter, or nonstandard terminology.
- U** Incorrect procedures or poor performance precluded mission accomplishment or jeopardized safety.

Area 6. Air Refueling Rendezvous:

- Q** Procedures were accomplished according to applicable directives with only minor deviations, omissions, and/or errors.
- Q-** Procedures were accomplished with deviations, omissions, and/or errors which significantly detracted from effective mission accomplishment.
- U** Procedures were accomplished with major deviations, omissions, and/or errors which prevented effective mission accomplishment.

Area 7. Knowledge:

7A. Aircraft General / Equipment Operation:

- Q** Thorough knowledge of aircraft systems, limitations, and performance characteristics. Operated equipment according to applicable procedures and checklists. Accurately and efficiently analyzed equipment malfunctions with consistently reliable mission results. No damage or significant system degradation resulted from operator inputs or lack of knowledge.
- Q-** Knowledge of aircraft systems, limitations, and performance characteristics sufficient to perform the mission safely. Deficiencies either in depth of knowledge or comprehension. Operated equipment with minor deviations, omissions, and/or errors from required procedures. Equipment malfunctions were undetected, analyzed in error, or caused by erroneous data insertion or faulty operator techniques. The level of performance or knowledge consistently resulted in marginal reliability.
- U** Unsatisfactory knowledge of aircraft systems, limitations, or performance characteristics. Damaged equipment. Could not obtain acceptable results due to poor operational techniques or procedures.

7B. Emergency Procedures. Includes simulated emergency procedures inflight or in the ATD within the limitations of applicable directives. Grade all emergencies (simulated or actual) IAW criteria in this area.

- Q** Properly analyzed the situation without undue delay and demonstrated adequate knowledge of procedures to effectively handle the emergency. Critical actions required by the flight manual were accomplished with only minor deviations. All applicable non-critical procedures were accomplished accurately and efficiently. Bold Face/Critical Action Procedures were accomplished without error. Effective use of applicable checklists.
- Q-** Minor omissions and/or errors occurred that did not prevent critical actions from being accomplished. Response to certain areas of non-critical emergencies or follow-on steps to critical procedures were

slow/confused. Appropriate use of checklists but slow to locate required data. Knowledge of emergency procedures and actions taken may demonstrate the need for additional training.

- U Not up to Q- standards. Incorrect response for Bold Face/Critical Action emergency. Unable to analyze problems or take corrective action. Lacks acceptable familiarity with checklist arrangement or contents.

Area 8. Crew Coordination. Evaluate the use of all available resources to include hardware, software, personnel and external agencies (ARTCC, wingman, Scheduling, etc.) to effectively complete mission objectives.

- Q Effectively coordinated with other crewmembers during all phases of flight to ensure successful mission accomplishment.
- Q- Crew coordination was lacking to the extent that minor deviations or omissions caused significant delays or confusion. Crew communications were not clear or concise.
- U Not up to Q- standards. Breakdown in coordination with other crewmembers precluded mission accomplishment or jeopardized safety.

Area 9. Tactical Plan:

- Q Well-developed plan that included consideration of mission objectives, threats, support assets, terrain, deconfliction, aircraft capabilities, and flight member capabilities. Addressed contingencies in development of plan.
- Q- Minor deviations, omissions, and/or errors in the plan resulted in less than optimum achievement of objectives and detracted from mission effectiveness. Planned tactics resulted in unnecessary difficulty.
- U Major errors in the plan precluded accomplishment of the stated objective.

Area 10. Tactical Execution:

- Q Applied tactics consistent with the threat, mission objectives, support assets, current directives, and sound judgment. Executed the plan and achieved mission goals. Quickly adapted to changing environment. Maintained situational awareness. Countermeasures and equipment settings were correctly applied. Threat reactions and directives were timely and correct.
- Q- Applied tactics with only minor deviations, omissions, and/or errors which did not prevent the successful accomplishment of the overall mission goal. Slow to react to a changing environment. Situational awareness, directive guidance, and threat reactions were poor and/or untimely.
- U Unable to accomplish the mission due to major errors or omissions during execution of the plan. Situational awareness lost. Numerous threat reactions were omitted or incorrect. Failed to identify/counter a threat consistent with ALQ-161 capabilities.

Area 11. Descent and Landing:

- Q Accomplished procedures and checklists required by applicable directives accurately and efficiently. Informed pilots of airspeed deviations of -5/+10 knots, altitude deviations prior to exceeding +/-150 feet, and assigned heading +/- 6 degrees. Appropriate FLIP information was correctly used. Landing data was computed within 3 KIAS for approach speed and 500 feet for landing roll distance.
- Q- Accomplished procedures and checklists required by applicable directives with minor omissions, deviations, or errors. Informed pilots of airspeed deviations of -10/+15 knots, altitude deviations prior to exceeding +/-200 feet of deviation, and assigned heading +/-9 degrees. Landing data was computed within 6 KIAS for approach speed and 1000 feet for landing roll distance.
- U Allowed the pilot to descend unannounced below MDA/DH in excess of 50 feet. Not up to Q- standards.

Area 12. After Landing:

- Q Accomplished procedures/checklists required by applicable directives accurately and efficiently. Accurately completed required documentation.

- Q- Accomplished procedures/checklists required by applicable directives with only minor deviations, omissions, and/or errors.
- U Not up to Q- standards.

Area 13. Debrief:

- Q Thoroughly debriefed the mission (or applicable portions). Compared mission results with initial mission objectives. Debriefed deviations. Offered corrective guidance as appropriate.
- Q- Limited debriefing. Did not thoroughly discuss performance in relationship to mission objectives. Did not debrief all deviations.
- U Not up to Q- standards. Did not debrief mission deviations or offer corrective guidance.

Area 14 - 17. Not Used.

Area 18. Penetration Procedures. This area consists of actions required for penetration into the target area through the last weapon release.

- Q Initial equipment settings were accomplished IAW applicable mission materials and verified using the Equipment Set checklist. Receiver monitoring and procedures were accomplished IAW applicable directives.
- Q- Required actions and procedures were accomplished with minor deviations, omissions or errors which detracted from effective mission accomplishment.
- U Required procedures and actions were not accomplished or were accomplished with deviations, omissions, and/or errors that significantly detracted from mission effectiveness or prevented mission accomplishment.

Area 19. Expendable Procedures. All expendable procedures (actual or simulated) will be graded in this area.

- Q Procedures were accomplished in a timely manner IAW applicable directives with only minor deviations, omissions, and/or errors.
- Q- Procedures were accomplished according to applicable directives, with deviations, omissions, and/or errors which detracted from effective mission accomplishment.
- U Procedures were omitted or accomplished with deviations, omissions or errors that significantly detracted from mission effectiveness or prevented mission accomplishment.

Area 20. Airborne Interceptor (AI) Activity. This area consists of all actions taken against airborne interceptors.

- Q Countermeasures against AIs were in accordance with applicable directives. ECM was timely and correctly applied with only minor deviations, omissions, and/or errors. All threats were identified/countered consistent with ALQ-161 capabilities.
- Q- Required actions were accomplished, with minor deviations, omissions, and/or errors that detracted from effective mission accomplishment. Slow to identify/counter threats consistent with ALQ-161 capabilities.
- U Required actions were accomplished with major deviations, omissions, and/or errors that significantly detracted from mission effectiveness or prevented mission accomplishment. Failed to identify/counter threats consistent with ALQ-161 capabilities.

Area 21. Withdrawal Procedures. This phase includes all actions (except in response to a direct threat) after the last weapon release until reaching friendly airspace.

- Q All procedures required by applicable directives were accomplished with only minor deviations, omissions, and/or errors.
- Q- Required actions/procedures were incomplete or accomplished with deviations, omissions, and/or errors which detracted from effective mission accomplishment.

- U Required actions/procedures were not accomplished or were accomplished with deviations, omissions, and/or errors that significantly detracted from mission effectiveness or prevented mission accomplishment.

Area 22. Instructor Performance:

22A. Briefing/Debriefing:

- Q Presented a comprehensive, instructional briefing/ debriefing which encompassed all mission events. Made use of available training aids/reference materials. Clearly defined all objectives.
- Q- Minor errors or omissions in briefing/debriefing or mission critique. Occasionally unclear in analysis of events or maneuvers.
- U Major errors or omissions in briefing or debriefing. Analysis of events or maneuvers was incomplete, inaccurate or confusing. Did not use available training aids/reference materials effectively. Briefing/debriefing below the caliber expected of instructors. Failed to define mission objectives.

22B. Demonstration of Equipment Operation:

- Q Performed required operation within prescribed parameters. Provided concise, meaningful commentary. Demonstrated sound instructor proficiency.
- Q- Performed required operation with minor deviations from prescribed parameters. Commentary was sometimes unclear.
- U Was unable to properly perform required operations. Made major procedural errors. Did not provide adequate commentary. Demonstrated instructor proficiency below the caliber expected of instructors.

22C. Instructor Knowledge:

- Q Demonstrated in-depth knowledge of procedures, requirements, aircraft equipment operation, mission and tactics beyond that expected of non-instructors.
- Q- Deficiencies in depth of knowledge, comprehension of procedures, requirements, aircraft equipment operation, mission or tactics.
- U Unfamiliar with procedures, requirements, aircraft equipment operation, mission or tactics. Lack of knowledge in certain areas seriously detracted from instructor effectiveness.

22D. Ability to Instruct:

- Q Demonstrated sound instructor ability. Clearly defined all mission requirements and any required additional training/corrective action. Instruction was accurate, effective, and timely.
- Q- Problems in communication or analysis degraded the effectiveness of instruction/evaluation.
- U Demonstrated inadequate ability to instruct/evaluate. Unable to perform, teach, or assess techniques, procedures, systems use, or tactics. Instruction was inaccurate, ineffective, and/or untimely.

Area 23. Airmanship (Critical):

- Q Executed assigned mission in a timely, efficient manner. Demonstrated sound judgment and a keen sense of situational awareness. Conducted the flight with a sense of understanding and comprehension.
- U Ineffective decisions, or lack thereof, resulted in failure to accomplish the assigned mission. Poor situational awareness. Demonstrated poor judgment to the extent that safety could have been compromised.

Area 24. Safety (Critical):

- Q Aware of, and complied with, all safety factors required for safe operations and conduct of the mission.
- U Was not aware of, or did not comply with, all safety factors required for safe operations or conduct of the mission. Failed to correctly accomplish Boldface procedures. Endangered personnel or ignored flight manual warnings.

Area 25. Aircrew Discipline (Critical):

- Q Demonstrated strict professional flight and crew discipline through all phases of the mission. Complied with frequency and geographical restrictions.
- U Failed to exhibit strict flight or crew discipline. Violated or ignored rules or instructions.

Chapter 6

WEAPON SYSTEM OFFICER EVALUATION CRITERIA

6.1. General. This chapter consists of criteria established to ensure standard evaluations are administered to Weapon Systems Officers (WSO).

6.2. Instructor WSO Checks. The instructor evaluatee may perform at either instructor console if evaluated in the ATD, but will not be accomplished while occupying a crew position. On instructor evaluations in the ATD, the “student” will not be evaluated.

6.2.1. Enter on the AF Form 8, Instructor ATD, date, and grade (1 or 3) under the ground phase. On initial instructor checks not in conjunction with qualification/mission evaluation, a separate AF Form 8 is required. Enter Initial Instructor on the ground phase side with grade and date.

6.3. Evaluation Requirements. The intent of the WSO evaluation is to accomplish one low level in the OSO position and one ECM run in the DSO position. The ECM run should be scheduled against a MUTES capable site but, at a minimum, scheduled against a site capable of presenting and scoring a Optional Defense Run (ODR). Item 6 and items 14 thru 17 should be conducted from the OSO position when accomplished. Items 18 thru 21 should be conducted from the DSO position when accomplished. The remaining portions of the evaluation may be accomplished in either seat and will be evaluated with respect to their applicability to the position being flown. Seat swapping should be kept to a minimum.

6.3.1. Instructions.

- “R” indicates areas required for certain types of evaluations.
- * Indicates critical area.
- Grade all areas observed.

AREA	NOTES		QUAL	MISSION
1		Mission Planning	R	R
2		Preflight	R	
3		Takeoff/Climb	R	
4		General Navigation	R	
5		Comm/IFF/SIF	R	
6	1	Air Refueling Rendezvous		
7		Knowledge	R	
8		Crew Coordination	R	
9		Tactical Plan		R
10		Tactical Execution		R
11		Descent And Landing	R	
12		After Landing	R	
13		Debrief	R	R
14		Low Alt Navigation		R
15		Terrain Following		R
16		Bombing		R
17		Formation		
18		Penetration Procedures		R
19		Expendable Procedures		R
20		Airborne Interceptor Activity (AI)		

21		Withdrawal Procedures		R
22		Instructor Performance		
23*		Airmanship	R	R
24*		Safety	R	R
25*		Aircrew Discipline	R	R
Notes:				
1. Required on initial mission evaluation.				

6.4. Grading Areas:

Area 1. Mission Planning:

1A. Publications:

- Q** Assigned flight publications were current and usable for the unit's combat taskings. Only minor deviations, omissions, and/or errors were noted.
- Q-** Assigned flight publications contained deviations, omissions, and/or errors which did not compromise safety of flight or effective mission accomplishment.
- U** Not up to Q- standards.

1B. Mission Preparation:

- Q** Developed a sound plan to accomplish the mission. Accomplished all mission planning activities required by applicable directives. Aware of available alternatives if the flight cannot be completed as planned.
- Q-** Same as above, except minor deviations, errors, or omissions occurred that did not detract from mission effectiveness. Knowledge of performance capabilities or approved operating procedures was marginal in some areas.
- U** Major errors, omissions, or deviations that would preclude safe/effective mission accomplishment. Faulty knowledge of operating data or procedures.

1C. Briefing:

- Q** Presented a well organized, logical, and timely briefing. All essential mission elements effectively covered. Established clear mission objectives and requirements. Effectively presented all training events.
- Q-** Briefing was disorganized, hard to follow, redundant, or dwelled on non-essential mission items. Minor training events were omitted. Objectives undefined or poorly quantified.
- U** Disorganized, incomplete, or unclear presentation caused confusion that significantly detracted from effective mission accomplishment. Did not establish objectives. Omitted major training events.

Area 2. Preflight. Includes all activity from arrival at the aircraft to initiation of takeoff checklist.

- Q** Performed all checks and procedures prior to takeoff in accordance with approved checklists and applicable directives. Only minor deviations, omissions, and/or errors occurred which did not detract from mission effectiveness.
- Q-** Same as above except minor deviations, omissions, and/or errors occurred which detracted from mission effectiveness.
- U** Omitted major checklist items. Major deviations in procedures occurred which precluded safe mission accomplishment. Failed to accurately determine readiness of aircraft for flight. Errors directly contributed to a late takeoff which degraded the mission or made it non-effective.

Area 3. Takeoff/Climb. This includes all activity from start of the takeoff up to and including initial level off.

- Q** Accomplished prescribed procedures and checklists in accordance with applicable directives with only minor deviations, omissions, and/or errors.
- Q-** Deviations, omissions, and/or errors occurred which detracted from overall mission efficiency. Performance or knowledge was the minimum acceptable.

U Not up to Q- standards.

Area 4. General Navigation. This area will be used to evaluate all high altitude navigation for WSOs occupying the OSO position. When occupying the DSO position, WSOs will assist the OSO with position monitoring, time control, and general navigation as much as possible. The following will be used to evaluate WSOs occupying the DSO position for navigation insofar as these criteria do not interfere with defense of the aircraft (threat detection, avoidance and tactics will take priority).

Q Demonstrated satisfactory capability to navigate using all available means. Made all control times within one minute, SPINS, or briefed tolerances. Did not allowed the aircraft to deviate more than ten nautical miles from planned course. Advised pilot of altitude deviations prior to exceeding +/-150 feet of deviation. Maintained aircraft position within tolerances specified in applicable directives.

Q- Same as "Q" except minor errors, deviations, or omissions occurred that detracted from effective mission accomplishment. Advised the pilots of IFR altitude deviations prior to exceeding +/-200 feet of deviation.

U Not up to Q- standards.

Area 5. Comm/IFF/SIF:

Q Complete knowledge of and compliance with applicable Comm/IFF/SIF procedures. Concise transmissions with proper terminology.

Q- Occasional deviations from applicable procedures that required retransmissions or resetting codes and detracted from effective mission accomplishment. Slow in initiating required actions. Transmissions contained extraneous matter, or nonstandard terminology.

U Incorrect procedures or poor performance precluded mission accomplishment or jeopardized safety.

Area 6. Air Refueling Rendezvous. Any rendezvous will satisfy this requirement. Grade buddy refueling procedures using the formation criteria in this chapter. Control times to the ARCP (point parallel) or the RZ point or ARIP for en route rendezvous.

Q Accurately and efficiently accomplished procedures and time control required by applicable directives. Positively identified the tanker beacon/skin paint, when applicable, and did not delay final closure.

Q- Minor deviations, omissions, and/or errors occurred which adversely impacted join-up. Subsequent mission timing was not affected.

U Not up to Q- standards. Made an actual or attempted rendezvous with the wrong aircraft. Individual was unable to find the correct tanker in multi-aircraft refueling.

Area 7. Knowledge:

7A. Aircraft General/Equipment Operation:

Q Thorough knowledge of aircraft systems, limitations, and performance characteristics. Operated equipment according to applicable procedures and checklists. Accurately and efficiently analyzed equipment malfunctions with consistently reliable mission results. No damage or significant system degradation resulted from operator inputs or lack of knowledge.

Q- Knowledge of aircraft systems, limitations, and performance characteristics sufficient to perform the mission safely. Deficiencies either in depth of knowledge or comprehension. Operated equipment with minor deviations, omissions, and/or errors from required procedures. Equipment malfunctions were undetected, analyzed in error, or caused by erroneous data insertion or faulty operator techniques. The level of performance or knowledge consistently resulted in marginal reliability.

U Unsatisfactory knowledge of aircraft systems, limitations, or performance characteristics. Damaged equipment. Could not obtain acceptable results due to poor operational techniques or procedures.

7B. Emergency Procedures. Includes simulated emergency procedures inflight or in the WST within the limitations of applicable directives. Grade all emergencies (simulated or actual) IAW criteria in this area.

- Q Properly analyzed the situation without undue delay and demonstrated adequate knowledge of procedures to effectively handle the emergency. Critical actions required by the flight manual were accomplished with only minor deviations. All applicable non-critical procedures were accomplished accurately and efficiently. Bold Face/Critical Action Procedures were accomplished without error. Effective use of applicable checklists.
- Q- Minor omissions and/or errors occurred that did not prevent critical actions from being accomplished. Response to certain areas of non-critical emergencies or follow-on steps to critical procedures were slow/confused. Appropriate use of checklists but slow to locate required data. Knowledge of emergency procedures and actions taken may demonstrate the need for additional training.
- U Not up to Q- standards. Incorrect response for Bold Face/Critical Action emergency. Unable to analyze problems or take corrective action. Lacks acceptable familiarity with checklist arrangement or contents.

Area 8. Crew Coordination. Evaluate the use of all available resources to include hardware, software, personnel and external agencies (ARTCC, wingman, scheduling, etc.) to effectively complete mission objectives.

- Q Effectively coordinated with other crewmembers during all phases of flight to ensure successful mission accomplishment.
- Q- Crew coordination was lacking to the extent that minor deviations or omissions caused significant delays or confusion. Crew communications were not clear or concise.
- U Not up to Q- standards. Breakdown in coordination with other crewmembers precluded mission accomplishment or jeopardized safety.

Area 9. Tactical Plan:

- Q Well-developed plan that included consideration of mission objectives, threats, support assets, terrain, deconfliction, aircraft capabilities, and flight member capabilities. Addressed contingencies in development of plan.
- Q- Minor deviations, omissions, and/or errors in the plan resulted in less than optimum achievement of objectives and detracted from mission effectiveness. Planned tactics resulted in unnecessary difficulty.
- U Major errors in the plan precluded accomplishment of the stated objective.

Area 10. Tactical Execution:

- Q Applied tactics consistent with the threat, mission objectives, support assets, current directives, and sound judgment. Executed the plan and achieved mission goals. Quickly adapted to changing environment. Maintained situational awareness. Countermeasures and equipment settings were correctly applied. Threat reactions and directives were timely and correct.
- Q- Applied tactics with only minor deviations, omissions, and/or errors which did not prevent the successful accomplishment of the overall mission goal. Slow to react to a changing environment. Situational awareness, directive guidance, and threat reactions were poor and/or untimely.
- U Unable to accomplish the mission due to major errors or omissions during execution of the plan. Situational awareness lost. Numerous threat reactions were omitted or incorrect. Failed to identify/counter a threat consistent with ALQ-161 capabilities.

Area 11. Descent and Landing:

- Q Accomplished procedures and checklists required by applicable directives accurately and efficiently. Informed pilots of airspeed deviations of -5/+10 knots, altitude deviations prior to exceeding +/-150 feet, and assigned heading +/- 6 degrees. Appropriate FLIP information was correctly used. Landing data was computed within 3 KIAS for approach speed and 500 feet for landing roll distance.
- Q- Accomplished procedures and checklists required by applicable directives with minor omissions, deviations, or errors. Informed pilots of airspeed deviations of -10/+15 knots, altitude deviations prior to exceeding +/-

200 feet of deviation, and assigned heading +/-9 degrees. Landing data was computed within 6 KIAS for approach speed and 1000 feet for landing roll distance.

U Allowed the pilot to descend unannounced below MDA/DH in excess of 50 feet. Not up to Q- standards.

Area 12. After Landing:

Q Accomplished procedures/checklists required by applicable directives accurately and efficiently. Accurately completed required documentation.

Q- Accomplished procedures/checklists required by applicable directives with only minor deviations, omissions, and/or errors.

U Not up to Q- standards.

Area 13. Debrief:

Q Thoroughly debriefed the mission (or applicable portions). Compared mission results with initial mission objectives. Debriefed deviations. Offered corrective guidance as appropriate.

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

U Not up to Q- standards. Did not debrief mission deviations or offer corrective guidance.

Area 14. Low Altitude Navigation. An approved low altitude navigation route, training area, or MOA meets this requirement. Altitude tolerances are based on an SCA from SPINs or the MSA/IFR altitudes.

Q Accurately and efficiently accomplished procedures and checklists required by applicable directives. Advised pilot of altitude deviations prior to exceeding +/-150 feet of deviation. Did not exceed FLIP AP/1B route width or training area/MOA boundary. Made all low level enroute points and control times within one minute, SPINs, or briefed tolerances, whichever was more restrictive.

Q- Procedures and checklists required by applicable directives were accomplished with omissions, deviations, or errors which detracted from effective mission accomplishment. Control times were made good within +/- 2 1/2 minutes, SPINs, or briefed tolerances, whichever was more restrictive. Advised the pilots of altitude deviations prior to exceeding +/-200 feet of deviation.

U Not up to Q- standards.

Area 15. Terrain Following (TF). Credit for TF may be awarded if visual contour is flown.

Q Accomplished required procedures and checklists accurately and efficiently. Used correct clearance plane setting for the route segment flown. Coordination with the pilots provided accurate terrain assessment along the flight path of the aircraft. Effective use of terrain masking.

Q- Accomplished required procedures and checklists with some deviations, omissions or errors which did not preclude successful completion of TF. Ineffective assessment or use of terrain.

U Not up to Q- standards.

Area 16. Bombing. This area encompasses all bombing related procedures and checklists. Any bomb run satisfies this requirement. Units may supplement this requirement to allow for unit taskings. Each bomb run must result in a simulated/actual release of an effective weapon. Evaluate each attempted/scheduled release. If equipment malfunctions preclude synchronous capability, alternate bombing meets the synchronous requirements of the evaluation.

Q Accomplished procedures and checklists prescribed by applicable directives to prearm, prepare for release, arm, and release all weapons accurately and efficiently. Properly configured weapons for release, and correctly analyzed malfunctions. Achieved all weapons release parameters.

- Q- Only minor deviations, omissions, and/or errors in weapon employment. All release parameters were met, safety was not compromised, and successful weapon employment objectives were achieved.
- U Not up to Q- standards.

Area 17. Formation:

- Q Accomplished inflight departure, join-up, and enroute procedures and responsibilities IAW applicable directives. Advised the pilot of the position of the other aircraft in the formation in a timely manner. Advised the pilot of altitude and/or position errors within 150 feet and one-half mile.
- Q- Accomplished inflight procedures IAW applicable directives with minor errors, deviations, or omissions not adversely affecting mission accomplishment. Advised the pilot of altitude and/or position errors within 200 feet and three-quarters of a mile.
- U Not up to Q- standards.

Area 18. Penetration Procedures. This area consists of actions required for penetration into the target area through the last weapon release.

- Q Initial equipment settings were accomplished IAW applicable mission materials and verified using the Equipment Set checklist. Receiver monitoring and procedures were accomplished IAW applicable directives.
- Q- Required actions and procedures were accomplished with minor deviations, omissions or errors which detracted from effective mission accomplishment.
- U Required procedures and actions were not accomplished or were accomplished with deviations, omissions, and/or errors that significantly detracted from mission effectiveness or prevented mission accomplishment.

Area 19. Expendable Procedures. All expendable procedures (actual or simulated) will be graded in this area.

- Q Procedures were accomplished in a timely manner IAW applicable directives with only minor deviations, omissions, and/or errors.
- Q- Procedures were accomplished according to applicable directives, with deviations, omissions, and/or errors which detracted from effective mission accomplishment.
- U Procedures were omitted or accomplished with deviations, omissions or errors that significantly detracted from mission effectiveness or prevented mission accomplishment.

Area 20. Airborne Interceptor (AI) Activity. This area consists of all actions taken against airborne interceptors.

- Q Countermeasures against AIs were in accordance with applicable directives. ECM was timely and correctly applied with only minor deviations, omissions, and/or errors. All threats were identified/countered consistent with ALQ-161 capabilities.
- Q- Required actions were accomplished, with minor deviations, omissions, and/or errors that detracted from effective mission accomplishment. Slow to identify/counter threats consistent with ALQ-161 capabilities.
- U Required actions were accomplished with major deviations, omissions, and/or errors that significantly detracted from mission effectiveness or prevented mission accomplishment. Failed to identify/counter threats consistent with ALQ-161 capabilities.

Area 21. Withdrawal Procedures. This phase includes all actions (except in response to a direct threat) after the last weapon release until reaching friendly airspace.

- Q All procedures required by applicable directives were accomplished with only minor deviations, omissions, and/or errors.
- Q- Required actions/procedures were incomplete or accomplished with deviations, omissions, and/or errors which detracted from effective mission accomplishment.

- U Required actions/procedures were not accomplished or were accomplished with deviations, omissions, and/or errors that significantly detracted from mission effectiveness or prevented mission accomplishment.

Area 22: Instructor Performance:

22A. Briefing/Debriefing:

- Q Presented a comprehensive, instructional briefing/debriefing which encompassed all mission events. Made use of available training aids/reference materials. Clearly defined all objectives.
- Q- Minor errors or omissions in briefing/ debriefing or mission critique. Occasionally unclear in analysis of events or maneuvers.
- U Major errors or omissions in briefing or debriefing. Analysis of events or maneuvers was incomplete, inaccurate or confusing. Did not use available training aids/reference materials effectively. Briefing/debriefing below the caliber expected of instructors. Failed to define mission objectives.

22B. Demonstration of Equipment Operation:

- Q Performed required operation within prescribed parameters. Provided concise, meaningful commentary. Demonstrated sound instructor proficiency.
- Q- Performed required operation with minor deviations from prescribed parameters. Commentary was sometimes unclear.
- U Was unable to properly perform required operations. Made major procedural errors. Did not provide adequate commentary. Demonstrated instructor proficiency below the caliber expected of instructors.

22C. Instructor Knowledge:

- Q Demonstrated in-depth knowledge of procedures, requirements, aircraft equipment operation, mission and tactics beyond that expected of non-instructors.
- Q- Deficiencies in depth of knowledge, comprehension of procedures, requirements, aircraft equipment operation, mission or tactics.
- U Unfamiliar with procedures, requirements, aircraft equipment operation, mission or tactics. Lack of knowledge in certain areas seriously detracted from instructor effectiveness.

22D. Ability to Instruct:

- Q Demonstrated sound instructor ability. Clearly defined all mission requirements and any required additional training/corrective action. Instruction was accurate, effective and timely.
- Q- Problems in communication or analysis degraded the effectiveness of instruction/evaluation.
- U Demonstrated inadequate ability to instruct/evaluate. Unable to perform, teach, or assess techniques, procedures, systems use, or tactics. Instruction was inaccurate, ineffective or untimely.

Area 23. Airmanship (Critical):

- Q Executed assigned mission in a timely, efficient manner. Demonstrated sound judgment and a keen sense of situational awareness. Conducted the flight with a sense of understanding and comprehension.
- U Ineffective decisions, or lack thereof, resulted in failure to accomplish the assigned mission. Poor situational awareness. Demonstrated poor judgment to the extent that safety could have been compromised.

Area 24. Safety (Critical):

- Q Aware of, and complied with, all safety factors required for safe operations and conduct of the mission.
- U Was not aware of, or did not comply with, all safety factors required for safe operations or conduct of the mission. Failed to correctly accomplish Boldface procedures. Endangered personnel or ignored flight manual warnings.

Area 25. Aircrew Discipline (Critical):

- Q** Demonstrated strict professional flight and crew discipline throughout all phases of the mission. Complied with frequency and geographical restrictions.
- U** Failed to exhibit strict flight or crew discipline. Violated or ignored rules or regulations.

DONALD W. SHEPPERD
Major General, USAF
Director, Air National Guard

OFFICIAL

DEBORAH GILMORE
Chief
Administrative Services

Attachment 1

REFERENCES, ABBREVIATIONS, ACRONYMS AND TERMS

References:

AFI 11-401	Flight Management
AFI 11-408	Aircrew Standardization/Evaluation Program, Organization, and Administration
AFI 11-215	Flight Manuals Program
AFMAN 11-201V2	Pilot's Written Instruction Examination

Abbreviations and Acronyms:

AFI	Air Force Instruction	IAW	In Accordance With
AFPD	Air Force Policy Directive	IFF	Identification Friend Or Foe
AFR	Air Force Regulation	ILS	Instrument Landing System
AI	Airborne Interceptor Activity	INTL	Initial
ANG	Air National Guard	INSTM	Instrument
ANGI	Air National Guard Instruction	INSTR	Instructor
AOA	Angle of Attack	IP	Instructor Pilot
ASR	Airport Surveillance Radar	IRC	Instrument Refresher Course
ATCAA	Air Traffic Control Assigned Airspace	KIAS	Knots Indicated Airspeed
ATD	Aircrew Training Device	MAJCOM	Major Command
AWACS	Airborne Warning And Control System	MCR	Multi-Command Regulation
CC	Commander	MDA	Minimum Descent Altitude
CF	Composite Force Squadron	MOA	Military Operating Area
COMM	Communication	MQF	Master Question File
CP	Co-Pilot	MR	Mission Ready
CRM	Cockpit Resource Management	MSN	Mission
DEG	Degree	MUTES	Multiple Threat Emission Systems
DH	Decision Height	N/A	Not Available
DO	Director Of Operations	NAF	Numbered Air Force
DOC	Designed Operational Capability	NGB	National Guard Bureau
DSO	Defensive Systems Officer	N/N	No-Notice
DTUC	Data Transfer Unit Cartridge	NOTAMS	Notice To Airmen
ECM	Electronic Counter Measure	NWS	Navigational Weapons Scoring
EFC	Expect Further Clearance	ODR	Optional Defense Run
EP	Emergency Procedures	OG	Operations Group
EMCOM	Emission Control	OPR	Office Of Primary Responsibility
EPE	Emergency Procedures Evaluation	OSO	Offensive Systems Officer
EW	Electronic Warfare	P	Pilot
FLT	Flight	PAR	Precision Approach Radar
GCI	Ground Control Intercept	QUAL	Qualification
IAS	Indicated Airspeed	Q	Qualified
		R	Required

ROE	Rules Of Engagement	U	Unqualified
SIF	Selective Identification Feature	VDP	Visual Descent Point
SIM	Simulator	VFR	Visual Flight Rule
SPINS	Special Instructions	WSO	Weapon System Officer
SQ	Squadron	WST	Weapons System Trainer
STAN/EVAL	Standardization/Evaluation		
SEFE	Standardization/Evaluation Flight Examiner		

TERMS: See AFI 11-408.

Explanation of Terms:

Deviation. Departure from standard procedures specified in applicable directives or instructions. Departure from standard procedures due to extenuating circumstances or valid mission requirements is not necessarily considered a deviation. In some cases, momentary deviations may be acceptable; however, cumulative momentary deviations will be considered in determining the overall qualification level.

Omission. To leave out a required action or annotation.

Error. Performing incorrect actions or recording incorrect information.

The following definitions apply to deviation, omission, and error:

Minor: Did not detract from mission accomplishment, adversely affect use of equipment, or violate safety.

Major: Detracted from mission accomplishment, adversely affected use of equipment, or violated safety.