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SECRETARY OF THE AIR FORCE**

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VOLUME 2**



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Flying Operations

***HC/MC-130--AIRCREW EVALUATION
CRITERIA***

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This volume implements AFD 11-2, *Aircraft Rules and Procedures*. It establishes evaluation criteria for initial and periodic aircrew qualification for all HC-130 and MC-130P rescue units and assigned Back-up Aircraft Inventory (BAI) aircraft. It is used in conjunction with AFI 11-202V2, *Aircrew Standardization/ Evaluation Program*, and MAJCOM supplements thereto. This publication applies to Air National Guard (ANG). For purpose of this publication, the ANG is considered a MAJCOM. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force. See paragraph 1.5 of this volume for guidance on submitting comments and suggesting improvements to this publication.

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SUMMARY OF CHANGES

Document is applicable to the HC-130P/N and Rescue MC-130P aircraft. All AFRC grading areas were incorporated. CDS is no longer a special mission qualification for Loadmasters. Table 4.1 for general criteria has been revised. Pilot initial and periodic INSTM/QUAL evals may be conducted in a WST. Pilot grading tolerances were updated. Guidance on MPD pilot qualifications and documentation was updated. Areas 226-229 for Loadmasters was added. New guidance for units conducting checkrides north of 60 degrees parallel has been incorporated. HAAR contact requirements for Pilots and Flight Engineers has changed. Glossary and References have been updated.

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Chapter 1

GENERAL INFORMATION

1.1. General. This volume provides flight examiners and aircrews with procedures and evaluation criteria/tolerances to be used during both flight and ground phases of initial and periodic evaluations. All HC-130P/N and MC-130P (Rescue units only) evaluations will be conducted according to this volume and AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, as supplemented. Specific areas for evaluation are prescribed to ensure an accurate assessment of the proficiency and capabilities of aircrews. Flight examiners use this AFI when conducting aircrew evaluations. Instructors use this AFI when preparing aircrews for qualification.

1.2. Applicability. This volume is applicable to all individuals performing crew duties on HC-130P/N and MC-130P (Rescue units) and assigned Back-up Aircraft Inventory (BAI) aircraft.

1.3. Key Words and Definitions.

1.3.1. "Will" and "Shall" indicate a mandatory requirement.

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

1.3.3. "May" indicates an acceptable or suggested means of accomplishment.

1.3.4. "Note" indicates operating procedures, techniques, etc., considered essential to emphasize.

1.3.5. DELETED.

1.4. Waivers. Waiver authority for the contents of this document is MAJCOM DO/XO. Forward waiver requests thru MAJCOM Stan/Eval channels.

1.5. Recommended Changes. Submit recommendations for changes to this volume on AF IMT 847, **Recommendation for Change of Publication**, IAW AFI 11-202 Vol 2 Attachment 5.

1.6. Procedures.

1.6.1. Flight examiners will use the criteria contained in this volume for conducting all flight, simulator, and emergency procedures evaluations. To ensure standard and objective evaluations, flight examiners will be thoroughly familiar with the prescribed evaluation criteria.

1.6.2. Unless specified, the examinee or flight examiner may fly in any seat that will best enable the examiner to conduct a thorough evaluation.

1.6.3. Before the Aircraft Commander Briefing, the evaluator will inform the aircraft commander of any special requirements. Flight examiners will brief the examinee on the conduct, purpose, and requirements of the evaluation, as well as all applicable evaluation criteria, prior to flight. The examinee will accomplish all required mission planning. If an Operations Planning Team (OPT) or Deployment Planning Team (DPT) accomplishes mission planning, the examinee is ultimately responsible for the accuracy and completeness

of all mission-planning paperwork. Flight examiners will be furnished a copy of necessary charts, flight logs, mission folders, and any additional items they deem necessary.

1.6.4. Flight examiners will not intentionally fail any equipment during flight evaluations, but may deny the use of systems not affecting safety of flight.

1.6.5. Under no circumstances will a pilot or flight engineer flight examiner allow the aircraft to slow to below one engine inoperative air minimum control speed (Vmca), regardless of airspeed tolerances listed for specific areas.

1.6.6. Flight examiners will thoroughly debrief/critique all aspects of the flight. During the critique, the flight examiner will review the examinee's overall rating, specific deviations, area/sub area grades assigned, and any additional training required.

1.6.7. When grading criteria specify that airspeed will be evaluated and the flight manual lists only minimum/maximum/recommended airspeed for that area, the examinee will brief the desired airspeed, if applicable.

1.7. Grading Instructions.

1.7.1. The grading system for most areas in this volume is a three-level system (Q/Q-/U). Areas identified as "Critical" in **Table 2.1** through **Table 2.7** have a two-level system (Q/U). A critical area is defined as an area or event in which unsatisfactory performance by the examinee could result in loss of life or damage to equipment. If the examinee receives a U in any critical area, assign an overall Qualification Level 3 (Q-3).

1.7.2. Required areas are indicated with an "R" in **Table 2.1** through **2.7** for specific evaluations. All required areas must be evaluated. Refer to crewmember specific chapter for additional guidance. Flight examiners may evaluate any other areas observed, at their discretion.

1.7.2.1. When it is impossible to evaluate a required area in the aircraft due to equipment malfunctions, operational requirements, scheduling restrictions, or weather, that area may be evaluated by an alternate method (simulator, procedural trainer, or verbal examination) unless otherwise noted. If, in the flight examiner's judgment, a required item cannot be adequately evaluated by an alternate method, complete the evaluation on an additional flight. If a required item is not accomplished, the evaluator will place a comment in the Additional Comments portion of the AF IMT 8, **Certificate of Aircrew Qualification**.

1.7.3. The flight examiner will compare the examinee's performance for each area with the standards provided in this volume and assign an appropriate grade for the area. Derive the overall flight evaluation grade from the area grades based on a composite for the observed events and tasks IAW AFI 11-202V2 and this volume.

1.7.3.1. To the maximum extent possible, flight examiners will use the grading criteria in this volume to determine individual area grades. Exercise judgment when the wording of areas is subjective and when specific areas are not covered.

1.7.3.2. Flight examiner judgment will be the determining factor in arriving at the overall grade.

1.7.3.3. Base tolerances for in-flight parameters on conditions of smooth air and a stable aircraft. Do not consider momentary deviations from tolerances, provided the examinee apply prompt corrective action and such deviations do not jeopardize flying safety. Consider cumulative deviations when determining the overall grade.

1.8. Additional Training.

1.8.1. Flight examiners are responsible for assigning additional training, at their discretion. Document additional training and completion IAW AFI 11-202V2, as supplemented. Any approved training device or medium may be used for additional training.

1.8.2. Additional training may be accomplished on the same flight as the evaluation, when unique situations present valuable training opportunities (i.e., crosswind landings). However, this option requires flight examiner discretion and judicious application. The examinee must be informed when the additional training begins and ends.

1.9. Unsatisfactory Performance.

1.9.1. Dependent upon the item requiring the recheck, rechecks may be accomplished on the ground or in flight, at the discretion of the flight examiner. Rechecks will normally be administered by a flight examiner other than the one who administered the original evaluation.

1.9.2. If the flight examiner observes an aircrew counterpart jeopardizing safe flight, the examiner will assume the duties of that aircrew member (provided the examiner's flight duty period [FDP] does not exceed AFI 11-202 Vol 3, Table 9.1 maximum FDP for an un-augmented crew). This does not mean the examiner must assume the examinee's position any time unsatisfactory performance is observed. If the examiner feels the examinee can continue safely with supervision, the examiner is not required to assume the examinee's duties. However, if the flight examiner assumes the examinee's duties, assign a Qualification Level 3 (Q-3) as the overall grade.

1.9.3. Evaluators must report deviations/discrepancies from established procedures/directives in any area, regardless of the individual's crew specialty, to squadron/group commander for evaluation and necessary action in accordance with MAJCOM supplement to AFI 11-202V2.

1.10. Emergency Procedures Evaluation (EPE). Conduct EPEs for all requisite flight evaluations. The EPE will include areas commensurate with the examinee's qualification and experience level.

1.10.1. Flight examiners may conduct EPEs verbally, inflight, in a simulator, or by another method determined by the examiner or unit stan/eval. Flight examiners determine EPE content and individual EPE areas. OGVs should develop EPE guides for each crew position flight examiner use. All crew positions with BOLDFACE procedures will accurately recite/write the applicable BOLDFACE procedures.

1.10.1.1. EPEs should be scenario driven, and tailored to the specific crew position. Emphasize emergency procedures and systems knowledge, related to the situation. For mission evaluations, evaluate mission-specific equipment and situations.

1.10.1.2. Examinees may use publications that are normally available in-flight. The examinee must recite all BOLDFACE items from memory and should provide the initial

steps of emergency procedures that, in the opinion of the examiner, would not allow time for reference.

1.10.2. EPEs will include sufficient inflight and ground emergencies to evaluate the examinee's knowledge of systems and procedures to the flight examiner's satisfaction.

1.10.3. Tailor mission evaluation scenarios to unit tasking and include areas not normally evaluated in flight, such as defensive systems operation (if applicable), threat interpretation, and evasive action (pilot/navigator mission evaluations only).

1.10.4. The following grading criteria will be used to grade individual items on EPEs for all crew positions (Exception--for BOLDFACE use grading criteria in Area 18).

1.10.4.1. Q-1. Satisfactory systems/procedural knowledge. Operated within prescribed limits and correctly diagnosed problems. Performed and/or explained proper corrective action, in the proper sequence, for each type of malfunction. Accomplished all required checklists and/or effectively used available aids. Thoroughly described the location, use and limitations of emergency equipment.

1.10.4.2. Q-2. Marginal systems/procedural knowledge. Slow to analyze problems or apply proper corrective actions. Did not effectively use checklist and/or available aids. Minor omissions or deviations in describing the location, use and limitations of emergency equipment.

1.10.4.3. Q-3. Unsatisfactory systems/procedural knowledge. Unable to analyze problem or take corrective action. Failed to accomplish required checklists and/or unable to locate information in available aids. Major omissions or deviations in describing the location, use and limitations of emergency equipment.

1.11. Special Qualifications. Special qualification evaluations are administered for event qualifications that are not universal to all crew positions in the airframe, to all members in that crew position, or to all units. Special qualification evaluations may be conducted separately or in conjunction with the qualification/mission evaluation. After initial qualification, special mission events will be incorporate into subsequent periodic qualification and/or mission evaluations IAW **Table 2.3 thru Table 2.7** and the applicable crew chapters of this instruction. There are no requisites for special qualification evaluations.

1.11.1. Refer to the appropriate crew position chapters of this instruction for any special qualifications evaluation requirements.

1.11.2. Special qualification evaluations will be annotated as a "SPOT" evaluation in a separate Flight Phase block of the AF Form 8. Further define the specific evaluation in the Mission Description section of the Comments block on the AF Form 8.

1.12. Instructor Certified Events. These are events that require certification of training by an instructor or flight examiner, not an evaluation as described in paragraph **1.11**. Document certification per MAJCOM supplement to AFI 11-202, Volumes 1 and 2. Refer to AFI 11-2HC-130, Volume 1, *HC-130 Aircrew Training*, for a listing of instructor certified events.

1.13. Examinations. All crew members will complete open and closed book examinations as a requisite to periodic evaluations. Navigators, flight engineers, airborne communication specialists, and loadmasters will complete combined QUAL/MSN examinations. Pilots must

complete separate open and closed book examinations as a requisite to periodic QUAL and MSN evaluations. Conduct requisite examinations IAW AFI 11-202, Volume 2, as supplemented.

1.13.1. (Added) **Examination Requirements.** Except for the instrument examination, open and closed book examinations will contain a minimum of 40 test questions.

1.13.2. (Added) Examination requirements for formal school initial, requalification and upgrade courses will be IAW approved syllabi of instruction.

Chapter 2

EVALUATION REQUIREMENTS

2.1. General.

2.1.1. All evaluations will follow the guidelines set in AFI 11-202V2, as supplemented, and this volume. **Table 2.1** through **Table 2.7** depict specific grading areas for all crew positions evaluations. Use criteria in the appropriate crew position chapter for evaluations.

2.1.2. Administer aircrew evaluations on any flight that as scheduled will accomplish all required items for that evaluation. Mission evaluations should be as realistic as possible with a minimum of simulated events. Do not deviate from peacetime restrictions.

2.1.3. In accordance with AFI 11-290, *Cockpit/Crew Resource Management Training Program*, crew resource management (CRM) skills will be evaluated during initial and periodic evaluations. CRM skills are integral to all phases of flight; therefore no specific area titled CRM exists. Document CRM discrepancies under the seven CRM skills areas: mission planning, airmanship/situational awareness, crew coordination, communication, risk management/decision making, task management, and briefing/debriefing. Evaluators should reference AF IMT 4031, **CRM Skills Criteria Training/ Evaluation Form** and AFI 11-290, *Cockpit/Crew Resource Management Training Program*, for further clarification.

2.1.3.1. (AFRC) In accordance with AFI 11-290 AFRC SUP 1, CRM skills are imbedded within specific grading criteria and include all of the skills listed on the AF IMT 4031, **CRM Skills Criteria Training/Evaluation Form**. Therefore, use of the AF IMT 4031 is unnecessary for evaluations in the HC-130 (see AFI 11-290 AFRC SUP 1).

2.2. Requirements.

2.2.1. Pilots require a combined QUAL/INSTM evaluation and a separate MSN evaluation.

2.2.2. Navigators, flight engineers, loadmasters, and airborne communications specialists receive a combined QUAL/MSN evaluation.

2.2.3. Instructor evaluations are conducted IAW AFI 11-202, Volume 2, as supplemented and **Chapter 3** of this instruction. Thoroughly evaluate the examinee's instructor knowledge and ability. Evaluate instructor candidates on a sortie with a representative sampling of unit's basic and/or mission maneuvers that permits accomplishment of all required instructor areas IAW **Table 2.2**.

2.3. Currency of Flight Publications. Evaluate all required in-flight publications, including checklists, for currency and accuracy on all flight evaluations. Required flying publications are specified in AFI 11-2HC-130, Volume 3, *HC-130--Operations Procedures*.

2.4. Formal Course Evaluations. Fly syllabus evaluations IAW syllabus mission profile guidelines if stated, or on a mission profile developed from syllabus training objectives. All required areas must be evaluated for the type of evaluation being flown, IAW guidance in this volume. Grade training objectives and related areas using the performance criteria in this volume. Formal course guidelines may be modified, based on local operating considerations or examiner judgment, to complete the evaluation.

2.4.1. DELETED

Table 2.1. General Grading Areas (All Crew Positions and All Evaluations).

	Notes	Grading Areas	
1		Safety - CRITICAL	R
2		Aircrew Discipline - CRITICAL	R
3		Airmanship/Situational Awareness - CRITICAL	R
4		Crew Coordination	R
5		Flight/Mission Planning	R
6		Knowledge of Directives	R
7		Preflight	R
8		Use of Checklist	R
9		Forms/Reports/Logs	R
10		Personal/Professional Equipment/Flight Publications	R
11	1	Emergency Equipment/Procedures	R
12	2	Briefings/Debriefings	R
13	3	Communications/Operations Security	R
14		Anti-Hijacking/Aircraft Security	R
15		Communication	R
16		Risk Management/Decision Making	R
17		Task Management	R
18		Bold Face - CRITICAL	R
19-20		Reserved for future use	
NOTES:			
1. Grade if observed. Not required if evaluated as part of the EPE.			
2. Required for all crew positions responsible for presenting briefings/debriefings.			
3. Required for mission evaluations only.			

Table 2.2. Instructor Evaluation Grading Areas (All Crew Positions).

	Notes	Grading Areas	
21		Mission Preparation	R
22		Instructional Ability	R
23		Instructor Knowledge	R
24		Briefings/Debriefings/Critique	R

	Notes	Grading Areas	
25		Demonstration of Maneuvers/Procedures	R
26-30		Reserved for future use	

Table 2.3. Pilot/Copilot Grading Areas.

	Notes	Grading Areas	INSTM/ QUAL	MSN	Right Seat NVG Airland
31		Reserved for future use			
32		Pre-Takeoff	R	R	
33		Takeoff	R	R	
34		Departure	R	R	
35		En route Navigation/Use of NAVAIDS	R	R	
36		Descent	R	R	
37		Holding/Procedure Turn	R		
38		Arrival Procedures (Instrument Flight Rules)	R		
39		Non-Precision Approach	R		
40		Circling/Side-Step Approach	R		
41	1	Precision Approach	R		
42		VFR Procedures/Patterns	R		
43	2	Engine-Out Approach	R		
44	5	50 and 100 Percent Flap Landing	R		
45	2	No Flap Landing	R		
46	2	Engine-Out Landing	R		
47		Touch-and-Go Landing	R		

48		Missed Approach/Go-Around	R		
49	2	Engine-Out Go-Around	R		
50		After Landing/Engine Shutdown	R	R	
51		Air Refueling (AR) Procedures (receiver)			
52		Communication/Interrogation Friend or Foe/Secure Interrogator Friend	R	R	
53		Reverse Taxi			
54		Defensive Systems/Tactics		R	
55		Threat Analysis/ Avoidance		R	
56		NVG Usage/Limitations		R	R
57		Airdrop Procedures		R	
58		Slowdown		R	
59		Escape		R	
60		Sea Rescue MA-1/2 Kit Deployment			
61		Parabundle Delivery			
62		Freefall Delivery			
63		Pararescue (PJ) Directed Airdrop			
64		Helicopter Air Refueling (HAAR) Procedures		R	
65	3, 4	NVG Airland		R	R
66	3	Tactical Recovery (SCA, overhead, downwind, random shallow/steep)		R	R
67	3, 4	Assault Procedures		R	
68	3, 4	Assault Takeoff		R	
69	3, 4	Assault Landing		R	

70		NVG Low level		R	
71-100		Reserved for future use			
<p>1. Do not evaluate a precision approach (PAR) as the only precision approach when the non-precision approach evaluated is the airport surveillance radar (ASR) and do not evaluate an ASR as the only non-precision approach when the precision approach evaluated is the PAR.</p> <p>2. If any of these events are not accomplished during an evaluation a CP basic qualification will be awarded.</p> <p>3. Mission Copilots are evaluated on non-flying duties only. EXCEPTION: During initial Right Seat NVG Airland special qualification evaluations and subsequent mission evaluations Right Seat NVG Airland qualified Mission CoPilots, are evaluated for flying duties in grading areas 65 and 66.</p> <p>4. Maximum effort takeoff and landing may be flown in conjunction with NVG airland operations.</p> <p>5. Both a 50 and a 100 percent landing will be accomplished inflight during INSTM/QUAL evaluations.</p>					

Table 2.4. Navigator Grading Areas.

	Notes	Grading Areas	QUAL/MSN
101	3	Flight Plan/Airdrop Data/Charts	R
102	3	Fuel Planning	R
103	3	Departure	R
104		Navigation Procedures	R
105	3	Radio Navigation	
106		Radar Navigation/Weather Avoidance	R
107		Navigation Systems	R
108	1/3	Deviation Check	
109	3	True Airspeed (TAS) Check	
110	3	Dead Reckoning (DR)/Rating of Navigational Computers	
111	3	Course and Estimated Time of Arrival (ETA) Tolerance	
112	3	Fuel Management/Range Control	
113	3	Descent/Approach/Landing	R
114		Communication Procedures/Radio Transmission Usage and Discipline	R
115	4	Self-Contained Approach (SCA) Procedures	R
116	2	SCA Time Control CRITICAL	R

	Notes	Grading Areas	QUAL/MSN
117		Defensive Systems/Tactics	R
118		Threat Analysis/Avoidance	R
119		Orbit Procedures	
120		Air Refueling (AR) Procedures (receiver)	
121	4	Helicopter Air Refueling (HAR) Procedures	R
122	2	Air Refueling Control Point (ARCP) Time Control-CRITICAL	R
123		Warnings/Advisories	R
124	4	In-Flight CARP Reevaluation	R
125	4	Slowdown	R
126	4	Drop Zone (DZ) Acquisition	R
127	4	DZ Alignment	R
128	2/4	Time-on-Target (TOT) CRITICAL	R
129	4	Airdrop Accuracy CRITICAL	R
130		Escape	R
131		Night Vision Goggle (NVG) Usage/Limitations	R
132		Search Data Computations	
133		Search Pattern	
134 -150		Reserved for future use.	
<ol style="list-style-type: none"> 1. Exempt for aircraft with dual inertial instead of compasses. 2. At a minimum, evaluate at least on of the following areas inflight: 122 or 128 or 116. 3. These basic qualification events will be demonstrated to the satisfaction of the evaluator during a ground evaluation or inflight. 4. Areas 115, 121 and 124-129 must be evaluated inflight at least every other evaluation. 			

Table 2.5. Flight Engineer Grading Areas.

	Notes	Grading Areas	QUAL/ MSN
151		AFTO IMT 781	R
152		Ground Support Equipment	R
153		Refuel/Defuel	
154		TOLD	R
155		Cockpit	R
156		Before Starting Engines/Starting Engines	R

157		Before Taxi/Taxi	R
158		Before Takeoff/Lineup	R
159		After Takeoff	R
160		En route	R
161		Descent/Before Landing	R
162		After Landing	R
163		Engine Shutdown	R
164		Before Leaving Airplane	R
165		Tactical Checklist	R
166		Postflight	R
167		Mission Procedures	R
168		Assault Takeoff/Landing	R
169		NVG Usage/Limitations	R
170		Air Refueling (AR) Systems/Procedures (receiver)	
171		Helicopter Air Refueling (HAR) Systems/ Procedures	R
172		Loss of Drogue	R
173		Search and Rescue (SAR) Operations	
174		Systems Knowledge	R
175-200		Reserved for future use	

Table 2.6. Loadmaster Mission/Qualification Grading Areas.

	Notes	Grading Areas	QUAL/ MSN
201		Life Support Equipment	R
202		Aircraft Configuration	R
203		Load Planning/Inspection	R
204		On/Off Loading Procedures	R
205		Supervisory Abilities	
206		Tie Down/Restraint	R

207		Winching Procedures	R
208		Hazardous Material	R
209		Aircraft Limitations	R
210		Passenger Handling	R
211		Border Clearance	R
212		Weight and Balance	R
213		Scanner Duties	R
214		Air Refueling (AR) Procedures (receiver)	
215		Engine Running Onload/Offload /	R
216		System Knowledge	R
217		Airdrop Rigging Procedures	R
218		Joint Airdrop Inspection	R
219		Coordinated Tasks Briefing	
220		Airdrop Knowledge	R
221		NVG Usage/Limitations	R
222		Helicopter Air Refueling (HAAR) Procedures	R
223		Combat Search and Rescue (CSAR)/Search Scanning Procedures	R
224		Pyrotechnics	R
225		Flare Launcher	R
226		Defensive Tactics/Threat Calls	R
227	1	FARP	R
228	1	Hot Refueling	R

229	1	Infiltration/Exfiltration Procedures	R
230-250		Reserved for future use.	
Note: 1) Only required if qualified/certified in this event.			

Table 2.7. Airborne Mission System Specialist (AMSS) Mission/Qualification Grading Areas.

	Notes	Grading Areas	QUAL/MSN
251		Life Support Equipment	R
252		Handling Classified Material CRITICAL	R
253		CSAR Communication Support	R
254		Knowledge Of Route Communications	R
255		International Civil Aviation Organization (ICAO) Operating Procedures	
256		Military Operating Procedures	R
257		Search/Orbit/Intercept Procedures	
258		Authentication Procedures CRITICAL	R
259		Crypto System Operations	R
260		Crypto Material Requirements	R
261		Frequency Management	R
262		Equipment Troubleshooting	
263		Knowledge/Operation of DF Equipment	
264		Systems Knowledge	R
265		DZ/LZ Communications	
266		NVG Usage/Limitations	R
267		Scanner Duties	R
268		DAMA/ Data System(s) Operations (If installed on unit aircraft)	R
269-300		Reserved for future use.	

2.5. (Added) AETC. AETC instructors (58 SOW) are considered dual qualified in the HC-130P and MC-130P RQS and SOF missions once they have completed the 58 SOW instructor

training program. AETC instructors (58 SOW) may receive their periodic evaluations in either the HC-130P or MC-130P.

2.6. (Added) **14 WPS.** HC/MC-130 (RQS) instructors are considered qualified in both the HC/MC-130 RQS and SOF missions (except formation) once they have completed the 58 SOW difference training program. Upon graduation from the weapons school program, individuals current and qualified in the MC-130 also current and qualified in the HC-130 and vice versa.

Chapter 3

ALL EVALUATIONS

3.1. General. The general and instructor grading criteria contained in this chapter apply to all crew positions and all evaluations.

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

3.3. Requirements. Evaluate all crewmembers on areas listed in **Table 2.1**, and instructors on areas listed in **Table 2.2**.

3.3.1. Aircrew members conducting evaluations in units north of the 60 degree parallel who enter their in phase period between 1 April and 30 September may conduct the periodic mission evaluation as a day visual route every other evaluation. An NVG low level in mountainous terrain will be conducted every other year (or evaluation). Every attempt should be made to conduct a NVG low level route every periodic evaluation.

3.4. General Grading Criteria.

3.4.1. Area 1. Safety - (CRITICAL).

3.4.1.1. Q. Was aware of and complied with all safety factors required for safe aircraft/equipment operation and mission accomplishment. Identified and assessed risk appropriately. Properly considered consequences of decisions.

3.4.1.2. U. Not aware of or did not comply with all safety factors required for safe aircraft/equipment operation or mission accomplishment. Failed to properly identify and assess risk. Failed to consider consequences of decisions. Operated the aircraft/equipment in a dangerous manner.

3.4.2. Area 2. Aircrew Discipline - (CRITICAL).

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

3.4.2.2. U. Failed to exhibit strict flight and crew discipline. Violated or ignored rules or instructions.

3.4.3. Area 3. Airmanship/Situational Awareness - (CRITICAL).

3.4.3.1. Q. Executed the assigned mission in a timely, efficient manner. Anticipated situations that would have adversely affected the mission, and corrected them. Made appropriate decisions based on available information. Recognized the need for action. Aware of performance of self and other flight members. Aware of on-going mission status. Recognized, verbalized and acted on unexpected events.

3.4.3.1.1. (AFRC) Q. Executed the assigned mission in a timely, efficient manner. Anticipated situations that would have adversely affected the mission, and corrected them. Made appropriate decisions based on available information. Recognized the need for action. Aware of performance of self and other flight members. Aware of on-going mission status. Recognized, verbalized and acted on unexpected events.

3.4.3.2. U. Decisions or lack thereof resulted in failure to accomplish the assigned mission. Did not recognize the need for action. Not aware of performance of self and other flight members. Not aware of on-going mission status. Failed to recognize, verbalize and act on unexpected events.

3.4.3.2.1. (AFRC) U. Decisions or lack thereof resulted in failure to accomplish the assigned mission. Did not recognize the need for action. Not aware of performance of self and other flight members. Not aware of on-going mission status. Failed to recognize, verbalize and act on unexpected events.

3.4.4. **Area 4--Crew Coordination.**

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

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

3.4.4.2. Q-. Crew coordination was limited though adequate to accomplish the mission. Provided limited direction/information when needed. Slow to adapt to meet new situational demands due to limited focus on task. Did not consistently seek inputs from other crew members. Limited effort to motivate crew members through positive statements.

3.4.4.2.1. (AFRC) Q-. Crew coordination was limited though adequate to accomplish the mission. Provided limited direction/information when needed. Slow to adapt to meet new situational demands due to limited focus on task. Did not consistently seek inputs from other crew members. Limited effort to motivate crew members through positive statements.

3.4.4.3. U. Did not provide direction/information when needed. Did not adapt to meet new situational demands and focus attention on the task. Did not ask for inputs. Made no effort to make positive statements to motivate crew members. Resulting lack of crew coordination resulted in significant degradation of mission accomplishment.

3.4.4.3.1. (AFRC) U. Did not provide direction/information when needed. Did not adapt to meet new situational demands and focus attention on the task. Did not ask for inputs. Made no effort to make positive statements to motivate crew members. Resulting lack of crew coordination resulted in significant degradation of mission accomplishment.

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

3.4.5.1. Q. Clearly defined the mission overview and mission goals. Provided specific information on what needed to be done. Solicited feedback from other crewmembers to ensure understanding of mission requirements. Thoroughly critiqued plans to identify potential problem areas and ensured all had an understanding of possible contingencies. Checked all factors applicable to flight such as FLIP, weather, notice to airman system

(NOTAMS), alternate airfields, flight logs, performance data, fuel requirements, and charts. When required, extracted necessary information from air tasking order/frag. Aware of the available alternatives if unable to complete the flight/mission as planned. Read and initialed all items in the flight crew information file (FCIF)/read files. Prepared at briefing time.

3.4.5.1.1. (AFRC) Q. Clearly defined the mission overview and mission goals. Provided specific information on what needed to be done. Solicited feedback from other crewmembers to ensure understanding of mission requirements. Thoroughly critiqued plans to identify potential problem areas and ensured all had and understanding of possible contingencies. Checked all factors applicable to flight such as FLIP, weather, notice to airman system (NOTAMS), alternate airfields, flight logs, performance data, fuel requirements, and charts. When required, extracted necessary information from air tasking order/frag. Aware of the available alternatives if unable to complete the flight/mission as planned. Read and initialed all items in the flight crew information file (FCIF)/read files. Prepared at briefing time.

3.4.5.2. Q-. Did not adequately define the mission overview and mission goals. Potential problem areas partially addressed or not at all. Did not adequately solicit feedback or critique the plans to ensure understanding of possible contingencies. Minor errors or omissions detracted from mission effectiveness, but did not affect mission accomplishment. Limited knowledge of performance capabilities or approved operating procedures/rules.

3.4.5.2.1. (AFRC) Q-. Did not adequately define the mission overview and mission goals. Potential problem areas partially addressed or not at all. Did not adequately solicit feedback or critique the plans to ensure understanding of possible contingencies. Minor errors or omissions detracted from mission effectiveness, but did not affect mission accomplishment. Limited knowledge of performance capabilities or approved operating procedures/rules.

3.4.5.3. U. Did not define the mission overview and goals. Lack of specific information on what needed to be done. Did not solicit feedback from other crewmembers to ensure understanding. Did not critique plans to identify potential problem areas. Major errors or omissions would have prevented a safe or effective mission. Unsatisfactory knowledge of operating data or procedures. Did not review or initial Go/No Go items. Not prepared at briefing time.

3.4.5.3.1. (AFRC) U. Did not define the mission overview and goals. Lack of specific information on what needed to be done. Did not solicit feedback from other crewmembers to ensure understanding. Did not critique plans to identify potential problem areas. Major errors or omissions would have prevented a safe or effective mission. Unsatisfactory knowledge of operating data or procedures. Did not review or initial Go/No Go items. Not prepared at briefing time.

3.4.6. **Area 6. Knowledge of Directives.**

3.4.6.1. Q. Prepared and completed mission in compliance with existing instructions and directives. Demonstrated knowledge of operating procedures and restrictions and where to find them in the correct publications.

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

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

3.4.7. Area 7. Preflight.

3.4.7.1. Q. Completed systems preflight/inspections IAW tech orders, checklists, and instructions. Individual technique complied with established procedures.

3.4.7.2. Q-. Minor deviations from established systems pre-flight/inspection. Individual technique was safe, but detracted from established procedures. Used individual technique instead of established procedure and was unaware of differences.

3.4.7.3. U. Failed to preflight critical component or could not conduct a satisfactory preflight/inspection. Individual techniques unsafe and/or in violation of established procedures.

3.4.8. Area 8. Use of Checklist.

3.4.8.1. Q. Consistently used the correct checklist and gave the correct response at the appropriate time throughout the mission.

3.4.8.2. Q-. Checklist responses were untimely and/or crewmember required continual prompting for correct responses.

3.4.8.3. U. Used incorrect checklist or consistently omitted checklist items. Was unable to identify the correct checklist to use for a given situation. Omitted or did not complete checklist(s) at the appropriate time.

3.4.9. Area 9. Forms/Reports/Logs.

3.4.9.1. Q. All required forms and/or flight plans were complete, accurate, readable, accomplished on time and IAW applicable directives. Related an accurate debrief of significant events to applicable agencies (Intel, Weather, Maintenance, etc.).

3.4.9.2. Q-. Minor errors on forms and/or flight plans did not affect conduct of the flight/mission. Incorrectly or incompletely reported some information due to minor errors, omissions, and/or deviations.

3.4.9.3. U. Did not accomplish required forms and/or flight plans. Omitted or incorrectly reported significant information due to major errors, omissions, and/or deviations.

3.4.10. Area 10. Personal/Professional Equipment/Flight Publications.

3.4.10.1. Q. Had all required personal and professional equipment. Displayed satisfactory knowledge of the care and use of such equipment and the contents of required publications. Required equipment inspections were current. Publications were current, contained all supplements/changes and were properly posted.

3.4.10.2. Q-. Did not have all required personal/professional equipment or had limited knowledge of the use or the content of required publications. Publications contained deficiencies that would not impact flight safety or mission accomplishment.

3.4.10.3. U. Did not have required personal/professional equipment essential for the mission. Unsatisfactory knowledge of the care and use of equipment or the content of required publications. Required equipment inspections were overdue or equipment was unserviceable. Publications were out dated and/or contained deficiencies that would impact flight safety or mission accomplishment.

3.4.11. Area 11. Emergency Equipment/Procedures.

3.4.11.1. Q. Satisfactory systems/procedural knowledge. Displayed satisfactory knowledge of location and use of emergency equipment. Operated within prescribed limits and correctly diagnosed problems. Performed/explained proper corrective action for each type of malfunction. Effectively used available aids.

3.4.11.2. Q-. Marginal systems/procedural knowledge. Limited knowledge of location and use of emergency equipment. Operated within prescribed limits but was slow to analyze problems or apply proper corrective actions. Did not effectively use, omitted, or deviated in use of checklist and/or available aids.

3.4.11.3. U. Unsatisfactory systems/procedural knowledge. Displayed unsatisfactory knowledge of emergency equipment. Exceeded flight manual limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

3.4.12. Area 12. Briefings/Debriefings.

3.4.12.1. Q. Contributed to the briefing content to ensure it included all applicable information. Briefings effectively organized and professionally presented in a logical sequence. Covered all pertinent items. Established objectives for the mission. Presented all training events and special interest items. Effectively used available briefing aids. Concluded briefing to allow crew transport on time. Debriefed mission using specific, non-threatening positive and negative feedback on team and individual performance. Provided specific ways to correct errors. Asked for inputs from others. Re-capped key points and compared mission results with mission objectives.

3.4.12.1.1. (AFRC) Q. Contributed to the briefing content to ensure it included all applicable information. Briefings effectively organized and professionally presented in a logical sequence. Covered all pertinent items. Established objectives for the mission. Presented all training events and special interest items. Effectively used available briefing aids. Concluded briefing to allow crew transport on time. Debriefed mission using specific, non-threatening positive and negative feedback on team and individual performance. Provided specific ways to correct errors. Asked for inputs from others. Re-capped key points and compared mission results with mission objectives.

3.4.12.2. Q-. Allowed omission of items pertinent but not critical to the mission. Events out of sequence, hard to follow, some unnecessary repetition. Some difficulty communicating clearly. Did not make effective use of available briefing aids. Limited

discussion of training events or special interest items. Dwelled on non-essential items. Not fully prepared for briefing. Debriefed mission without specific, non-threatening positive and negative feedback on individual and team performance. Did not consistently seek input from others. Incomplete or inadequate re-cap of key points and comparison of mission results to mission objectives.

3.4.12.2.1. (AFRC) Q-. Allowed omission of items pertinent but not critical to the mission. Events out of sequence, hard to follow, some unnecessary repetition. Some difficulty communicating clearly. Did not make effective use of available briefing aids. Limited discussion of training events or special interest items. Dwelled on non-essential items. Not fully prepared for briefing. Debriefed mission without specific, non-threatening positive and negative feedback on individual and team performance. Did not consistently seek input from others. Incomplete or inadequate re-cap of key points and comparison of mission results to mission objectives.

3.4.12.3. U. Failed to conduct/attend required briefings. Failed to use briefing aids. Omitted essential items or did not correct erroneous information that could affect mission accomplishment. Demonstrated lack of knowledge of subject. Briefing poorly organized and not presented in a logical sequence. Presented erroneous information that would affect safe/effective mission accomplishment. Presentation created doubts or confusion. Failed to discuss training events or special interest items. Late crew transport due to excessively long briefing. Did not provide non-threatening positive and negative feedback during debriefing. Did not seek input from others. Did not re-cap key mission points nor compare mission results to mission objectives.

3.4.12.3.1. (AFRC) U. Failed to conduct/attend required briefings. Failed to use briefing aids. Omitted essential items or did not correct erroneous information that could affect mission accomplishment. Demonstrated lack of knowledge of subject. Briefing poorly organized and not presented in a logical sequence. Presented erroneous information that would affect safe/effective mission accomplishment. Presentation created doubts or confusion. Failed to discuss training events or special interest items. Late crew transport due to excessively long briefing. Did not provide non-threatening positive and negative feedback during debriefing. Did not seek input from others. Did not re-cap key mission points nor compare mission results to mission objectives.

3.4.13. Area 13. Communications/Operations Security.

3.4.13.1. Q. Demonstrated thorough knowledge of communications/operations security procedures and courier procedures (if applicable). Had positive control of classified documents and information used throughout the mission. Properly stored, handled, and/or destroyed all classified equipment or information generated during the mission. Practiced sound COMSEC/OPSEC during all phases of the mission.

3.4.13.2. Q-. Limited knowledge of COMSEC/OPSEC procedures and/or courier procedures (if applicable). Limited knowledge of proper storage, handling, and destruction procedures would not have resulted in compromise of classified material, and did not impact mission accomplishment.

3.4.13.3. U. Unsatisfactory knowledge of COMSEC/OPSEC. Classified documents or information would have been compromised as a result of improper control by examinee. Unfamiliarity with COMSEC/OPSEC procedures had or could have had a negative impact on mission accomplishment.

3.4.14. Area 14. Anti-Hijacking/Aircraft Security.

3.4.14.1. Q. Explained proper anti-hijacking/aircraft security procedures.

3.4.14.2. Q-. Difficulty explaining proper anti-hijacking/aircraft security procedures.

3.4.14.3. U. Could not explain proper anti-hijacking/aircraft security procedures.

3.4.15. Area 15. Communication.

3.4.15.1. Q. Communicated using precise, standard terminology. Acknowledged all communications. Asked for/provided clarification when necessary. Stated opinions/ideas. Asked questions when uncertain. Advocated specific courses of action. Made positive statements to motivate flight members.

3.4.15.1.1. (AFRC) Q. Communicated using precise, standard terminology. Acknowledged all communications. Asked for/provided clarification when necessary. Stated opinions/ideas. Asked questions when uncertain. Advocated specific courses of action. Made positive statements to motivate flight members.

3.4.15.2. Q-. Unclear communication led to repetition or misunderstanding. Slow to ask for or give constructive feedback/clarifications. Inconsistent use of precise, standard terminology. Did not always state opinions/ideas, ask questions when uncertain or make positive statements to flight members.

3.4.15.2.1. (AFRC) Q-. Unclear communication led to repetition or misunderstanding. Slow to ask for or give constructive feedback/clarifications. Inconsistent use of precise, standard terminology. Did not always state opinions/ideas, ask questions when uncertain or make positive statements to flight members.

3.4.15.3. U. Failed to communicate effectively. Continuously interrupted others, mumbled, and/or conduct/attitude was detrimental to communication among crewmembers. Withheld information and failed to ask for/respond to constructive criticism. Failed to use precise, standard terminology. Did not acknowledge all communications. Did not state opinions, ask questions when unsure or attempt to motivate flight members using positive statements.

3.4.15.3.1. (AFRC) U. Failed to communicate effectively. Continuously interrupted others, mumbled, and/or conduct/attitude was detrimental to communication among crewmembers. Withheld information and failed to ask for/respond to constructive criticism. Failed to use precise, standard terminology. Did not acknowledge all communications. Did not state opinions, ask questions when unsure or attempt to motivate flight members using positive statements.

3.4.16. Area 16. Risk Management/Decision Making.

3.4.16.1. Q. Identified contingencies and alternatives. Gathered and cross checked relevant data before deciding. Clearly stated problems and proposed solutions. Used facts

to come up with solution. Involves and informs necessary crewmembers when appropriate. Coordinated mission crew activities to establish proper balance between command authority and crewmember participation, and acted decisively when the situation required.

3.4.16.1.1. (AFRC) Q. Identified contingencies and alternatives. Gathered and cross checked relevant data before deciding. Clearly stated problems and proposed solutions. Used facts to come up with solution. Involves and informs necessary crewmembers when appropriate. Coordinated mission crew activities to establish proper balance between command authority and crewmember participation, and acted decisively when the situation required.

3.4.16.2. Q-. Partially identified contingencies and alternatives. Made little effort to gather and cross check relevant data before deciding. Did not clearly state problems and propose solutions. Did not consistently use facts to come up with solution. Did not effectively inform necessary crewmembers when appropriate. Did not effectively coordinate mission crew activities to establish a proper balance between command authority and crewmember participation, and acted indecisively at times.

3.4.16.2.1. (AFRC) Q-. Partially identified contingencies and alternatives. Made little effort to gather and cross check relevant data before deciding. Did not clearly state problems and propose solutions. Did not consistently use facts to come up with solution. Did not effectively inform necessary crewmembers when appropriate. Did not effectively coordinate mission crew activities to establish a proper balance between command authority and crewmember participation, and acted indecisively at times.

3.4.16.3. U. Failed to identify contingencies and alternatives. Made no effort to gather and cross check relevant data before deciding. Did not inform necessary crewmembers when appropriate. Did not use facts to come up with solution. Avoided or delayed necessary decisions which jeopardized mission effectiveness. Did not coordinate mission crew activities to establish proper balance between command authority and crewmember participation; acted indecisively.

3.4.16.3.1. (AFRC) U. Failed to identify contingencies and alternatives. Made no effort to gather and cross check relevant data before deciding. Did not inform necessary crewmembers when appropriate. Did not use facts to come up with solution. Avoided or delayed necessary decisions which jeopardized mission effectiveness. Did not coordinate mission crew activities to establish proper balance between command authority and crewmember participation; acted indecisively.

3.4.17. **Area 17. Task Management.**

3.4.17.1. Q. Correctly prioritized multiple tasks. Used available resources to manage workload. Clearly communicated and acknowledged workload and task distribution. Demonstrated high level of vigilance in both high and low workload conditions. Prepared for expected or contingency situations. Avoided the creation of self-imposed workload/stress. Recognized and reported work overloads in self and others.

3.4.17.1.1. (AFRC) Q. Correctly prioritized multiple tasks. Used available resources to manage workload. Clearly communicated and acknowledged workload and task

distribution. Demonstrated high level of vigilance in both high and low workload conditions. Prepared for expected or contingency situations. Avoided the creation of self-imposed workload/stress. Recognized and reported work overloads in self and others.

3.4.17.2. Q-. Did not consistently and correctly prioritize multiple tasks. Did not effectively use available resources to manage workload. Did not clearly communicate and acknowledge workload and task distribution. Did not consistently demonstrate high level of vigilance in both high and low workload conditions. Slow to prepare for expected or contingency situations. Created some self-imposed workload/stress due to lack of planning. Slow to recognize and report work overloads in self and others.

3.4.17.2.1. (AFRC). Q-. Did not consistently and correctly prioritize multiple tasks. Did not effectively use available resources to manage workload. Did not clearly communicate and acknowledge workload and task distribution. Did not consistently demonstrate high level of vigilance in both high and low workload conditions. Slow to prepare for expected or contingency situations. Created some self-imposed workload/stress due to lack of planning. Slow to recognize and report work overloads in self and others.

3.4.17.3. U. Failed to correctly prioritize multiple tasks. Did not use available resources to manage workload. Did not communicate and acknowledge workload and task distribution. Did not demonstrate high level of vigilance in both high and low workload conditions. Extremely slow to prepare for expected or contingency situations. Created self-imposed workload/stress due to lack of planning. Failed to recognize and report work overloads in self and others.

3.4.17.3.1. (AFRC). U. Failed to correctly prioritize multiple tasks. Did not use available resources to manage workload. Did not communicate and acknowledge workload and task distribution. Did not demonstrate high level of vigilance in both high and low workload conditions. Extremely slow to prepare for expected or contingency situations. Created self-imposed workload/stress due to lack of planning. Failed to recognize and report work overloads in self and others.

3.4.18. Area 18. BOLDFACE – (CRITICAL).

3.4.18.1. Q. Able to recite/write emergency BOLDFACE items correctly with no discrepancies.

3.4.18.2. U. Unable to recite/write emergency BOLDFACE items correctly.

3.4.19. Area 19 - 20. Reserved for future use.

3.5. Instructor Grading Criteria.

3.5.1. Area 21. Mission Preparation.

3.5.1.1. Q. Thoroughly reviewed student's training folder. Ascertained student's present level of training. Assisted student in pre-mission planning and allowed student time for questions. Correctly prioritized training events. Gave student a clear idea of mission training objectives.

3.5.1.2. Q-. Did not thoroughly review student's training folder or correctly ascertain student's present level of training. Caused student to hurry pre-mission planning. Poorly prioritized training events. Training plan/scenario made poor use of time.

3.5.1.3. U. Did not review student's training folder. Did not ascertain student's present level of training. Did not assist student with pre-mission planning or did not allow time for questions. Did not prioritize training events. Failed to give student a clear idea of mission training objectives, methods, and sequence of events.

3.5.2. Area 22. Instructional Ability.

3.5.2.1. Q. Demonstrated excellent instructor ability and communicated effectively. Provided appropriate guidance when necessary. Planned ahead, and instruction was accurate, effective, and timely. Identified and corrected potentially unsafe maneuvers/situations.

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

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

3.5.3. Area 23. Instructor Knowledge.

3.5.3.1. Q. Demonstrated a high level of knowledge of all applicable aircraft systems, techniques, procedures, missions, and tactics to be performed. Possessed a high level of knowledge of all applicable publications and procedures, and understood how to apply both to enhance mission accomplishment. Completed appropriate training records accurately. Comments were clear and pertinent.

3.5.3.2. Q-. Minor errors/deficiencies in knowledge of above areas did not affect safety or adversely affect student progress. Minor errors or omissions in training records. Comments were incomplete or slightly unclear.

3.5.3.3. U. Lack of knowledge of publications or procedures seriously detracted from instructor effectiveness. Could not apply knowledge of above areas. Did not complete required forms or records. Comments were invalid, unclear, or did not accurately document performance.

3.5.4. Area 24. Briefings/Debriefings/Critique.

3.5.4.1. Q. Briefings were well organized, accurate, and thorough. Reviewed student's present level of training and defined mission events to be performed. Showed an excellent ability during the critique to reconstruct the flight, offer mission analysis, and provide guidance where appropriate. Training grade reflected the actual performance of the student relative to the standard. Pre-briefed the student's next mission, if required.

3.5.4.2. Q-. Minor errors or omissions in briefings and/or critique did not affect safety or adversely affect student progress.

3.5.4.3. U. Briefings/debriefings were marginal or non-existent; major errors or omissions in briefings/debriefings. Did not review student past performance. Analysis of events or maneuvers was incomplete, inaccurate, or confusing. Training grade did not reflect actual performance of student. Overlooked or omitted major discrepancies. Incomplete pre-briefing of student's next mission, if required.

3.5.5. Area 25. Demonstration of Maneuvers/Procedures.

3.5.5.1. Q. Effectively demonstrated procedures and techniques. Provided concise, meaningful, and timely in flight commentary. Had thorough knowledge of applicable aircraft systems, procedures, publications, and instructions.

3.5.5.2. Q-. Performed required maneuvers/procedures with minor deviations from prescribed parameters. In flight commentary was sometimes unclear or poorly timed, interfering with student performance. Discrepancies in the above areas did not adversely affect safety or student progress.

3.5.5.3. U. Was unable to properly perform required maneuvers/procedures. Made major procedural errors. Did not provide in flight commentary and/or in flight commentary was incorrect or unsafe. Depth of knowledge about applicable aircraft systems, procedures, and/or proper source material was insufficient.

3.5.6. Areas 26 - 30. Reserved for future use.

Chapter 4

PILOT/COPILOT EVALUATIONS

4.1. The criteria contained here and in [Chapter 3](#) apply to all pilot flight evaluations.

Table 4.1. General Criteria.

Q	Altitude	+/- 100 feet
	Airspeed	+10/- 5knots (but not less than Vmca)
	Course	+/- 5 degrees
	TACAN Arc	+/- 2 NM
Q-	Altitude	+/- 200 feet
	Airspeed	+15/- 10 knots (but not less than Vmca)
	Course	+/- 10 degrees
	TACAN Arc	+/- 3 NM
U		Exceeded Q- limits

4.1.1. DELETED.

4.1.2. DELETED.

4.1.3. DELETED.

4.2. Objective. IAW the guidelines of this instruction, the examinee must satisfactorily demonstrate the ability to perform all duties safely and effectively, including the operation of appropriate aircraft systems, IAW applicable technical orders, directives and published procedures.

4.3. Requirements.

4.3.1. **Instrument/Qualification.** See [Table 2.3](#) for required evaluation areas.

4.3.1.1. Initial/Re-Qualification Evaluations.C-130 basic initial/re-qualification, aircraft commander upgrade, and instructor upgrade are conducted at Little Rock and Kirtland AFBs. Initial/re-qualification and aircraft commander upgrade evaluations update the eligibility for instrument/qualification evaluations. If an initial or re-qualification (return to active flight duties) evaluation is administered in-unit, all required areas from [Table 2.3](#) must be evaluated. The unit commander determines the minimum events due to “Q-3” or “out of eligibility” re-qualification. Instructor upgrades evaluations may update the eligibility for instrument/qualification if requirements in paragraph [4.3.1.2](#) are met. Evaluations may be conducted in the HC-130 WST (TVC 1 approved tasks).

4.3.1.2. Periodic Instrument/Qualification Evaluations. Instrument evaluations may not be conducted separately from qualification evaluations. Pilot instrument/qualification evaluations should include approaches to airfields other than home station or deployed locations, if possible. Do not complete a periodic instrument qualification evaluation unless, as a minimum, the following are observed in flight: an instrument takeoff, one precision approach; one non-precision approach; holding or procedure turn; circling and VFR pattern; touch and go procedures; both a 100 and 50 percent flap landing; a simulated 3-engine instrument approach, landing, and go-around (MPD pilot, AC, and IP only); and a no flap approach and landing (MPD pilot, AC and IP only). Basic qualified pilots will conduct their periodic QUAL/INSTM evaluation from the left seat and Basic qualified copilots will conduct their QUAL/INSTM from the right seat. Evaluations may be conducted in the HC-130 WST (TVC 1 approved tasks).

4.3.1.2.1. (Added) MPD pilots will conduct their periodic QUAL/INSTM evaluations from the left seat and will be coded as FP in the crew position block of the AF Form 8.

4.3.2. **Mission.** See [Table 2.3](#) for required evaluation areas.

4.3.2.1. **Requirements for All Mission Evaluations.** The requirements listed below in paragraphs [4.3.2.1.1](#) thru [4.3.2.1.6](#) are applicable to all initial/requalification and periodic mission evaluations.

4.3.2.1.1. DELETED.

4.3.2.1.2. HAAR will include a rendezvous and joinup with an actual helicopter; completion of the pre-contact, contact and post air refueling checklist; and a minimum of one wet/dry contact. *EXCEPTION:* The requirement for a wet/dry contact may be waived by the evaluator if they determine that receiver ability precluded a successful probe to drogue contact.

4.3.2.1.3. Maximum Effort Procedures. If a landing zone is not available, a larger runway with clearly identifiable 500 foot touchdown zone may be used. This event is normally accomplished as part of the mission evaluation. Mission Copilots do not fly these events and are graded while performing non-flying duties only. NVG takeoff/landing may be credited if flown to max effort standards. One go-around is permitted, provided the aircraft does not touch down short of the zone.

4.3.2.1.4. (Added) At a minimum, NVG airland requires both an NVG landing and takeoff. Normal or maximum effort procedures may be used.

4.3.2.1.5. Mission CP will be evaluated on non-flying duties for tactical recoveries, maximum effort and NVG airland events.

4.3.2.1.6. (Added) Document which tactical events were flown and the type of terrain (mountainous or non-mountainous) in which the mission was flown in the comments section of the AF Form 8.

4.3.2.2. **Initial/Re-qualification Mission Evaluations.** Initial/re-qualification mission qualification is conducted at Kirtland AFB or in-unit with MAJCOM waiver and updates the eligibility for the mission evaluation. If an initial or re-qualification (return to active flight duties) evaluation is administered in-unit, all required areas from [Table 2.3](#) must be

evaluated. The inflight evaluation profile will include an NVG low-level route flown in mountainous terrain to a time on target/arrival (TOT/TOA) event, an HAAR, a computed air release point (CARP) airdrop, a tactical recovery/SCA, NVG airland and a maximum effort takeoff and landing.

4.3.2.2.1. MPD pilots receiving initial mission qualification at Kirtland AFB or in-unit with MAJCOM approved waiver will fly all syllabus training and initial mission evaluation sorties from the right seat and will be coded as MC in the crew position block on the AF Form 8.

4.3.2.3. (Added) **Periodic Mission Evaluations.** The inflight evaluation profile will include an NVG modified-contour low level flown to a time on target/arrival (TOT/TOA) event, a maximum effort takeoff and landing, a tactical recovery, NVG airland and either an HAR or a computed air release point (CARP) airdrop. HAR will be evaluated inflight at least every other periodic evaluation.

4.3.2.3.1. (Added) The low level will be flown in mountainous terrain at least every other periodic evaluation.

4.3.2.3.2. (Added) Until such time that the HC-130 MQT syllabus reflects the integration of the MPD concept, MPD pilots will continue to be evaluated on right-seat mission qualification duties. MPD pilots or basic aircraft commanders, who have not completed mission aircraft commander upgrade at Kirtland AFB or in unit with MAJCOM waiver, will fly periodic mission evaluations from the right seat and will be coded as MC in the crew position block on the AF Form 8.

4.3.3. **Special Qualifications Evaluations.**

4.3.3.1. (Added) **Right Seat NVG Airland Special Qualification.** MPD pilots and copilots designated by the unit commander may be qualified in Right Seat NVG Airland. See AFI 11-2HC-130V1 for upgrade criteria. Upgrade will be conducted IAW approved MAJCOM syllabus. This special qualification evaluation may be conducted separately or in conjunction with a reoccurring mission evaluation. See [Table 2.3](#) for required evaluation areas. Document this evaluation IAW [Paragraph 1.11.2](#).

4.3.3.1.1. As a minimum, this special mission evaluation flight profile will consist of a tactical recovery to a non-assault NVG landing, both a 50 and 100 percent flap NVG landing, NVG touch and go procedures, an NVG go around and a non-assault NVG takeoff.

4.3.3.1.2. On subsequent mission evaluations, right seat NVG airland qualified MPD pilots and copilots will be evaluated on flying duties for NVG airland and Tactical approach. The flight profile will include all events listed in [Paragraph 4.3.3.1.1](#).

4.4. Grading Criteria. See [Table 2.3](#) for applicability to instrument/qualification or mission evaluations.

4.4.1. **Areas 1 through 20--** use general evaluation grading criteria in [Chapter 3](#) of this volume.

4.4.2. **Areas 21 through 30--** use instructor evaluation grading criteria in [Chapter 3](#) of this volume (if applicable).

4.4.3. Area 31. Reserved for future use.**4.4.4. Area 32. Pre-Takeoff.**

4.4.4.1. Q. Established and adhered to station, starting engines, taxi, and take-off times to assure thorough preflight, check of personal equipment, crew/passenger briefings, etc. Accurately determined readiness of aircraft for flight. Completed all systems preflight/postflight inspections and checklists IAW flight manual. Conducted taxi operations according to flight manual, AFI 11-218, *Aircraft Operations and Movement on the Ground*, and published procedures.

4.4.4.2. Q-. Same as above except for minor procedural deviations that did not detract from mission effectiveness.

4.4.4.3. U. Failed to accurately determine readiness of aircraft for flight. Major deviations or omissions occurred which could have jeopardized safety. Crew errors directly contributed to a late takeoff that degraded the mission or made it ineffective.

4.4.5. Area 33. Takeoff.

4.4.5.1. Q. Maintained smooth, positive aircraft control throughout takeoff. Performed takeoff in accordance with flight and performance manual procedures.

4.4.5.2. Q-. Minor deviations from published procedures, which did not affect safety of flight. Control was somewhat rough or erratic. Hesitant in application of procedures or corrections.

4.4.5.3. U. Takeoff was potentially dangerous. Exceeded aircraft/systems limitations. Failed to establish proper climb attitude. Excessive deviation from intended flight path. Violated flight and/or performance manual procedures.

4.4.6. Area 34. Departure.

4.4.6.1. Q. Performed departure as published/directed and complied with all restrictions or controlling agency instructions. Made all required reports. Applied course/heading corrections promptly. Demonstrated smooth, positive aircraft control.

4.4.6.2. Q-. Minor deviations in navigation occurred during departure. Slow to comply with controlling agency instructions or unsure of reporting requirements. Slow to apply course/heading corrections. Aircraft control was not consistently smooth and positive.

4.4.6.3. U. Failed to comply with published/directed departure, or controlling agency instructions. Accepted an inaccurate clearance. Aircraft control was erratic.

4.4.7. Area 35. En Route Navigation/Use of NAVAIDS

4.4.7.1. Q. Satisfactory capability to navigate using all available means. Used appropriate navigation procedures. Ensured nav aids were properly tuned, identified, and monitored. Complied with clearance instructions. Aware of position at all times. Remained within the confines of assigned airspace. Fix to fix within 1 NM (if applicable).

4.4.7.2. Q-. Minor errors in procedures/use of navigation equipment. Some deviations in tuning, identifying, and monitoring nav aids were observed. Slow to comply with

clearance instructions. Had some difficulty in establishing exact position and course. Slow to adjust for deviations in time and course. Fix to fix within 3 NM (if applicable).

4.4.7.3. U. Major errors in procedures/use of navigation equipment. Did not ensure navigational aids (NAVAIDS) were tuned, identified and monitored. 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 Q- criteria.

4.4.8. Area 36. Descent.

4.4.8.1. Q. Performed descent as directed. Complied with all restrictions. Properly set altimeters and tuned, identified, and monitored all NAVAIDS.

4.4.8.2. Q-. Performed descent as directed with minor deviations that did not compromise mission safety. Slow to comply with controller instructions, set proper altimeter setting. Delayed tuning, identifying, or monitoring proper NAVAIDS. Slow to make corrections.

4.4.8.3. U. Performed descent with major deviations. Failed to follow controller instructions. Failed to tune, identify, or monitor NAVAIDS or set altimeters properly. Erratic corrections were observed.

4.4.9. Area 37. Holding/Procedure Turn.

4.4.9.1. Q. Performed entry and holding in accordance with published procedures and directives. Tuned, identified, and monitored proper NAVAIDS. Holding pattern limits exceeded by not more than:

4.4.9.1.1. VOR Leg timing +/- 15 seconds

4.4.9.1.2. TACAN +/- 1 NM

4.4.9.2. Q-. Performed entry and holding procedures with minor deviations. Delayed tuning, identifying, or monitoring proper NAVAIDS. Holding pattern limit exceeded by not more than:

4.4.9.2.1. VOR Leg timing +/- 30 seconds

4.4.9.2.2. TACAN +/- 2 NM

4.4.9.3. U. Holding was not in accordance with technical orders, directives, or published procedures. Failed to tune, identify, or monitor NAVAIDS. Exceeded Q- holding pattern limits.

4.4.10. Area 38. Arrival Procedures (Instrument Flight Rules).

4.4.10.1. Subarea 38a. Instrument Approach Procedure/Penetration (Initial Approach Fix to Final Approach Fix/Descent Point).

NOTE:

Use area 37 criteria and the criteria below for procedure turn approaches.

4.4.10.1.1. Q. Performed the approach procedure/penetration as published/directed and IAW applicable directives. Tuned, identified, and monitored proper NAVAIDS at the appropriate time. Complied with all restrictions. Made smooth and timely corrections.

4.4.10.1.2. Q-. Performed the approach procedure/penetration with minor deviations. Delayed tuning, identifying, and monitoring proper NAVAIDS. Complied with all restrictions. Slow to make corrections.

4.4.10.1.3. U. Performed the approach procedure/penetration with major deviations. Failed to tune, identify, and monitor NAVAIDS, resulting in major deviations and/or unsafe conditions. Erratic corrections. Failed to comply with restrictions.

4.4.10.2. Subarea 38b. Instrument Pattern/Radar Vectors to Final.

4.4.10.2.1. Q. Performed procedures IAW applicable directives. Smooth and timely response to controller instructions.

4.4.10.2.2. Q-. Performed procedures with minor deviations. Slow to respond to controller instructions.

4.4.10.2.3. U. Performed procedures with major deviations/erratic corrections. Failed to comply with controller instructions.

4.4.11. Area 39. Non-Precision Approach.

4.4.11.1. Q. Approach was IAW published procedures. Used appropriate descent rate to arrive at minimum decision altitude (MDA) at or before visual descent point (VDP). Position permitted a safe landing.

4.4.11.1.1. Airspeed	+10/-5 knots
4.4.11.1.2. Heading	+/-5 degrees (ASR)
4.4.11.1.3. Course	+/-5 degrees at MAP
4.4.11.1.4. Localizer	Less than one dot deflection
4.4.11.1.5. MDA	+100/-0 feet

4.4.11.2. Q-. Performed approach with minor deviations. Arrived at MDA at or before the MAP, but past the VDP. Initiated missed approach/go-around as directed or appropriate.

4.4.11.2.1. Airspeed	+15/-5 knots
4.4.11.2.2. Heading	+/-10 degrees (ASR)
4.4.11.2.3. Course	+/-10 degrees at MAP
4.4.11.2.4. Localizer	Within two dots deflection
4.4.11.2.5. MDA	+150/-50 feet

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

4.4.12. Area 40. Circling/Side-Step Approach.

4.4.12.1. Q. Properly identified aircraft category for the approach and remained within the lateral limits for that category. Complied with controller's instructions. Attained

runway alignment without excessive bank angles. Did not descend from the MDA until in a position to place the aircraft on a normal glide path or execute a normal landing.

4.4.12.1.1. Airspeed +10/-5 knots

4.4.12.1.2. Altitude +100/-0 feet

4.4.12.2. Q-. Slow to comply with controller's instructions. Attained runway alignment but occasionally required excessive bank angles or maneuvering.

4.4.12.2.1. Airspeed +15/-5 knots

4.4.12.2.2. Altitude +150/-50 feet

4.4.12.3. U. Did not properly identify aircraft category or exceeded the lateral limits of circling airspace. Did not comply with controller's instructions. Excessive maneuvering to attain runway alignment was potentially unsafe. Descended from the MDA before the aircraft was in position for a normal glide path or landing. Exceeded Q- criteria.

4.4.13. Area 41. Precision Approach.

4.4.13.1. Subarea 41a. Precision Approach Radar (PAR)

4.4.13.1.1. Q. Approach was IAW published procedures. Smooth and timely response to azimuth and glide slope or controller's instructions. Complied with decision height. Position would have permitted a safe landing. Maintained glide path with only minor deviations.

4.4.13.1.1.1. Airspeed +10/-5 knots

4.4.13.1.1.2. Heading Within 5 degrees of controller instructions.

4.4.13.1.2. Q-. Performed approach with minor deviations. Slow to make corrections or react to controller's instructions. Position permitted a safe landing. Improper glide path control. Initiated missed approach as directed or at decision height +50/-0 feet, if applicable.

4.4.13.1.2.1. Airspeed +15/-5 knots

4.4.13.1.2.2. Heading Within 10 degrees of controller's instructions.

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

4.4.13.2. Subarea 41b. Instrument Landing System (ILS) Approach.

4.4.13.2.1. Q. Performed procedures as published and IAW applicable directives. Smooth and timely corrections to azimuth and glide slope. Complied with decision height and position permitted a safe landing.

4.4.13.2.1.1. Airspeed +10/-5 KIAS

4.4.13.2.1.2. Glide slope/azimuth within one dot

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

4.4.13.2.2.1. Airspeed +15/-5 KIAS

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

4.4.13.2.2.3. Azimuth within two dots

4.4.13.2.3. U. Performed procedures with major deviations. Erratic course/glide slope corrections. Did not comply with decision height or position would not have permitted a safe landing. Exceeded Q- criteria.

4.4.14. Area 42. VFR Procedures/Patterns.

4.4.14.1. Q. Adhered to published restrictions/local guidance. Performed traffic pattern and turn to final/final approach IAW flight manual procedures. Aircraft control was smooth and positive. Did not over/under-shoot final approach. Constantly cleared area of intended flight.

4.4.14.1.1. Airspeed +10/-5 knots

4.4.14.1.2. Pattern Altitude +/- 100 feet

4.4.14.2. Q-. Minor deviations from published restrictions/local guidance. Performed traffic pattern and turn to final/final approach with minor deviations to procedures. Aircraft control was safe but not consistently smooth and positive. Over/under-shot final approach slightly but was able to intercept a normal glide path. Adequately cleared area of intended flight.

4.4.14.2.1. Airspeed +15/-5 knots

4.4.14.2.2. Pattern Altitude +/- 200 feet

4.4.14.3. U. Major/unsafe deviations from published restrictions/local guidance. Did not perform traffic pattern and turn to final/final approach IAW technical orders, directives or published procedures. Displayed erratic aircraft control. Over/under-shot final approach by a wide margin requiring a go-around or potentially unsafe maneuvering on final. Did not clear area of intended flight. Exceeded Q- criteria.

4.4.15. Area 43. Engine Out Approach--use approach criteria for the type of approach being flown and the following.

4.4.15.1. Q. Performed procedures IAW the flight manual and associated directives. Individual technique complied with established procedures. Proper control inputs were used to correct asymmetric condition. Aircraft was properly trimmed. Proper consideration was given to maneuvering with regard to the "dead" engine.

4.4.15.2. Q-. Minor deviations in procedures/aircraft control allowed the aircraft to occasionally be in uncoordinated flight. Unnecessary maneuvering due to minor errors in planning or judgment.

4.4.15.3. U. Major/unsafe deviations from procedures. Individual technique unsafe or in violation of established procedures. Aircraft was not properly trimmed. Aircraft control

was erratic and consistently resulted in uncoordinated flight. Maneuvering with regard to the "dead" engine was potentially unsafe.

4.4.16. **Area 44. 100/50 Percent Flap Landing.**

4.4.17. **Area 45. No Flap Landing.**

4.4.18. **Area 46. Engine-Out Landing.**

4.4.19. **Areas 44 through 46** - use the following criteria.

NOTE:

The following criterion is written to generally apply to all landings. Flight examiners must apply these criteria judiciously to allow for the unique characteristics of each type of landing. Where runway configuration, arresting cable placement, or flight manual limitations require an adjustment to the desired touchdown point, a simulated runway threshold will be identified and the grading criteria applied accordingly. For instrument approaches, the examinee should utilize a normal glide slope from either the decision height or from a point where visual acquisition of the runway environment is made.

4.4.19.1. Q. Performed landing as published/directed. Crossed threshold at threshold speed +/- 5 knots at proper attitude. Smooth and positive aircraft control throughout the roundout and flare. Touched down with no crab, and not more than 15 feet left or right of centerline. Complied with flight manual procedures for the use of brakes and reverse thrust. Met the following criteria:

4.4.19.1.1. Touchdown Speed +/-5 knots

4.4.19.1.2. Touchdown Point: 1000' – 2000' from the actual/simulated runway threshold

4.4.19.2. Q-. Performed landing with minor deviations to procedures as published/directed. Crossed threshold at threshold speed +10/-5 knots slightly high or low but no compromise of safety. Touched down not more than 25 feet left or right of centerline. Exceeded Q criteria but not the following:

4.4.19.2.1. Touchdown speed +10/-5 knots

4.4.19.2.2. Touchdown point: 0" - 1000" or 2001" - 3000" from the actual/simulated runway threshold

4.4.19.3. U. Landing not performed as published/directed. Crossed threshold excessively high or low and more than +10/-5 knots. Touched down excessively crabbed and more than 25 feet left or right of centerline. Failed to comply with flight manual procedures for the use of brakes and reverse thrust. Exceeded Q- criteria.

4.4.20. **Area 47. Touch and Go Landing (touchdown through lift-off).**

4.4.20.1. Q. Performed procedures in a timely manner and IAW the flight manual and local directives. Smooth and positive control. Maintained runway centerline within 15 feet left or right throughout the touch and go.

4.4.20.2. Q-. Performed procedures with minor deviations. Aircraft control was safe but not consistently smooth and positive. Delayed accomplishment of required checklists. Consistently left or right of centerline but within 25 feet.

4.4.20.3. U. Major deviations to procedures. Displayed erratic/unsafe aircraft control. Excessively delayed and/or misapplied required checklists. Allowed aircraft to drift/remain more than 25 feet left or right of centerline.

4.4.21. Area 48. Missed Approach/Go-Around.

4.4.21.1. Q. Executed missed approach IAW published procedures and restrictions. Initiated and performed go-around promptly. Complied with controller's instructions. Applied smooth control inputs. Attained and maintained a positive climb.

4.4.21.2. Q-. Executed missed approach with minor deviations to published procedures/directives. Was slow or hesitant to initiate go-around. Slow to respond to controller's instructions. Slightly over-controlled the aircraft.

4.4.21.3. U. Did not execute missed approach IAW technical orders, directives or published procedures. Did not comply with controller's instructions. Deviations or misapplication of procedures could have led to an unsafe condition. Exceeded Q- criteria.

4.4.22. Area 49. Engine-Out Go-Around--use Area 43 criteria and the following.

4.4.22.1. Q. Applied smooth, coordinated control inputs. Rudder and aileron inputs were in the correct direction. Maneuvering appropriate with regard to the "dead" engine. Individual technique complied with established procedures.

4.4.22.2. Q-. Rudder and aileron inputs were in correct direction but some over/under control. Individual techniques were safe, but detracted from the maneuver.

4.4.22.3. U. Rudder and/or aileron inputs were incorrect. Maneuvering with regard to the "dead" engine potentially unsafe. Failed to comply with/consider minimum control speeds. Individual technique unsafe or violated established procedures.

4.4.23. Area 50. After Landing/Engine Shutdown.

4.4.23.1. Q. Appropriate after-landing/engine shutdown checks and aircraft taxi procedures accomplished IAW published procedures.

4.4.23.2. Q-. Minor deviations or omissions were made to published procedures.

4.4.23.3. U. Appropriate after-landing/engine shutdown checks or aircraft taxi procedures were not IAW technical orders, directives or published procedures. Major deviations or omissions occurred which could have jeopardized safety.

4.4.24. Area 51. Air Refueling (AR) Procedures (Copilots will be evaluated while maintaining pre-contact position only)

4.4.24.1. Q. Rendezvous effectively accomplished using proper procedures. Demonstrated effective/appropriate use of radio communications for briefed emission control (EMCON) level. Expeditiously established and maintained proper position. Aircraft control was positive and smooth. Maintained the contact position for 10 minutes (at least 5 minutes continuous) with no more than one pilot-induced disconnect. For copilots, maintained the precontact position for at least two minutes.

4.4.24.2. Q-. Rendezvous delayed by improper techniques, procedures or radio communications. Slow to recognize and apply needed corrections to establish and maintain proper position. Aircraft control was not always positive and smooth, but

adequate. Accomplished published/directed procedures with deviations or omissions that did not affect the successful completion of air refueling. Maintained the contact position for at least 10 minutes with no more than two pilot-induced disconnects.

4.4.24.3. U. Displayed lack of knowledge or familiarity with procedures to the extent that air refueling was or could have been jeopardized. Failed rendezvous as a result of improper procedures. Spent excessive time in trail. Aircraft control in the pre-contact/refueling position was erratic or unsafe. Made deviations or omissions that affected flight safety and/or the successful completion of the air refueling. Used unacceptable procedures. Performance caused more than two pilot-induced disconnects and/or delayed mission accomplishment. For copilots, unable to safely maintain the precontact position.

4.4.25. Area 52. Communication/Interrogator Friend or Foe/Secure Interrogator Friend (Comm/IFF/SIF).

4.4.25.1. Q. Complete knowledge of and compliance with correct Comm/IFF/SIF procedures. Transmissions were concise with proper terminology. Complied with and acknowledged all required instructions. Thoroughly familiar with all communications security requirements, HAVE QUICK and secure voice equipment. Correctly authenticated.

4.4.25.2. Q-. Occasional deviations from procedures that required retransmissions or resetting codes. Slow in initiating and/or missed several required radio calls. Transmissions contained extraneous matter, were not in proper sequence, or used non-standard terminology. Displayed limited knowledge of communication security requirements, HAVE QUICK and secure voice equipment. Required numerous attempts to complete authentication.

4.4.25.3. U. Incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Omitted numerous required radio calls. Displayed inadequate knowledge of communications security requirements, HAVE QUICK and secure voice equipment. Was unable to properly authenticate.

4.4.25.4. Area 53. Reverse Taxi.

4.4.25.4.1. Q. Complied with all directives concerning reverse taxi. Adequately briefed procedures and complied with loadmaster (LM) directions. Aircraft control/throttle technique was smooth and positive.

4.4.25.4.2. Q-. Minor deviations to reverse taxi procedures. Briefing hard to follow but no compromise of safety. Slow to respond to LM directions. Some over/under control.

4.4.25.4.3. U. Major deviations to procedures/directives. Failed to brief procedures and/or briefing created doubts or confusion. Failed to respond to LM directions. Aircraft control was unsafe or could have resulted in damage to the aircraft or property, or injury to personnel.

4.4.26. Area 54. Defensive Systems/Tactics.

4.4.26.1. Q. Demonstrated satisfactory knowledge of defensive systems and thorough knowledge of tactics applicable to the mission. Applied appropriate tactics to avoid the

threat and minimize exposure. Made timely and appropriate inputs to crew during mission.

4.4.26.2. Q-. Limited knowledge of defensive systems. Minor errors in tactics selection. Was unfamiliar with the appropriate tactic for a given scenario. Did not make timely inputs to crew during mission.

4.4.26.3. U. Knowledge of defensive systems was unsatisfactory. Major errors in tactics selection would have resulted in an unsuccessful mission.

4.4.27. Area 55. Threat Analysis/Avoidance.

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

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

4.4.27.3. U. Was unable to plot a given threat. Did not avoid lethal range of given threat system. Did not execute an effective evasive maneuver when given an immediate threat. Failed to ensure mission effectiveness by not adequately analyzing or degrading threat(s). Not aware of appropriate tactics for specific threats or terrain.

4.4.28. Area 56. NVG Usage/Limitations.

4.4.28.1. Q. Correctly described the use/limitations of night vision goggles (NVGs). Properly preflighted, handled, and used NVGs during the flight.

4.4.28.2. Q-. Made minor omissions or deviations in describing the use/limitations of NVGs. Did not properly preflight, handle, or use NVGs during the flight, but caused no damage to equipment. Mission success not negatively affected.

4.4.28.3. U. Procedures for using NVGs were incorrect. Caused damage to equipment. Mission unsuccessful as a result of improper NVG usage.

4.4.29. Area 57. Airdrop Procedures.

4.4.29.1. Q. Correctly identified the DZ and made appropriate corrections to fine-tune the track. Track was IAW mission plan or as updated by crew. Aircraft configuration was correct.

4.4.29.1.1. Airspeed. +/- 5 knots.

4.4.29.1.2. Altitude + 50/- 0 feet.

4.4.29.2. Q-. Identified the DZ late despite clear marking and sufficient landmarks. Alignment was satisfactory but tended to angle. Minor errors in aircraft configuration but would not impede mission accomplishment.

4.4.29.2.1. Airspeed. + 10/- 5 knots.

4.4.29.2.2. Altitude. + 100/- 50 feet.

4.4.29.3. U. Was unable to identify DZ due to poor technique or pilot error. Did not fly proper alignment, or was unaware of alignment error. Mission not accomplished due to aircraft configuration, poor DZ acquisition, alignment, or deviation from procedures, caused by pilot error or omission. Did not recognize a no-drop situation. Exceeded Q-criteria.

4.4.30. **Area 58. Slowdown.** Use Area 35 criteria (as appropriate).

4.4.30.1. Q. Had thorough knowledge of slowdown procedures. Complied with all published/ briefed procedures.

4.4.30.2. Q-. Limited knowledge of slowdown procedures. Minor deviations did not affect mission accomplishment.

4.4.30.3. U. Had unsatisfactory knowledge of slowdown procedures. Major deviations adversely affected mission accomplishment.

4.4.31. **Area 59. Escape.** Use Area 35 criteria (as appropriate).

4.4.31.1. Q. Aircraft configuration was correct. In addition, the following parameters were not exceeded.

4.4.31.1.1. Airspeed. +/- 5 knots.

4.4.31.1.2. Altitude. + 50/- 0 feet.

4.4.31.2. Q-. Minor errors in aircraft configuration but would not impede mission accomplishment or safety. In addition, the following parameters were not exceeded.

4.4.31.2.1. Airspeed. + 10/- 5 knots.

4.4.31.2.2. Altitude. + 100/- 50 feet.

4.4.31.3. U. Aircraft configuration was not correct or Q- tolerances were exceeded.

4.4.32. **Area 60. Sea Rescue Kit Delivery.** Use Area 57 criteria (as appropriate).

4.4.32.1. Q. Correctly delivered Sea Rescue Kit, bracketing the survivor within 100 feet. Kit was delivered on the correct side (upwind or downwind). Displayed thorough knowledge of delivery method.

4.4.32.2. Q-. Airdrop within 300 feet of the survivor, properly bracketed on correct side (upwind or downwind). Difficulty flying the required procedure, but able to deliver kit safely.

4.4.32.3. U. Delivery not IAW flight manual, directives, or published procedures. Airdrop greater than 300 feet from the survivor. Kit delivered to incorrect side (upwind or downwind). Aircraft was flown in an erratic manner. Exceeded Q- criteria.

4.4.33. **Area 61. Parabundle Airdrop.** Use area 57 criteria.

4.4.34. **Area 62. Freefall Delivery.** Use area 57 criteria.

4.4.35. **Area 63. Pararescue (PJ) Directed Airdrop.**

4.4.35.1. Q. Correctly followed briefed airdrop procedures. Flew stable platform, effectively coordinated airdrop with jumpmaster.

4.4.35.2. Q-. Minor deviations to published/briefed procedures, but able to complete airdrop safely. Erratic aircraft control caused problems with jumpmaster's directions.

4.4.35.3. U. Airdrop not IAW flight manual, directives, or published procedures. Unable to coordinate with jumpmaster to successfully accomplish the airdrop. Exceeded Q-criteria.

4.4.36. Area 64. Helicopter Air to Air Refueling (HAAR).

4.4.36.1. Q. Performed aerial rendezvous, join-up, and disconnect procedures as published/ directed. Maintained positive aircraft control throughout the refueling event. Responded quickly and accurately to situations requiring an emergency breakaway. Correctly performed emergency breakaway or verbally evaluated event to the satisfaction of the evaluator.

4.4.36.1.1. Airspeed. +/- 5 knots. No lower than MOS.

4.4.36.1.2. Heading/Course. +/- 10 degrees.

4.4.36.1.3. Altitude. +/- 100 feet.

4.4.36.2. Q-. Performed procedure with minor deviations. Slow to make aircraft attitude corrections. Aircraft control was not consistently smooth and positive. Emergency breakaway performed with minor discrepancies not affecting safety or verbally evaluated event with minor discrepancies noted.

4.4.36.2.1. Airspeed. + 10/- 5 knots. No lower than MOS

4.4.36.2.2. Heading/Course. +/- 20 degrees.

4.4.36.2.3. Altitude. +/- 150 feet.

4.4.36.3. U. Refueling not performed IAW flight manual, directives, or published procedures. Made erratic corrections throughout the aerial refueling. Did not respond accurately to situation requiring emergency breakaway. Performed emergency breakaway with major discrepancies or verbally evaluated event with major errors noted. Exceeded Q- criteria.

4.4.37. **Area 65. NVG Airland.** NVG airland may be evaluated utilizing normal or maximum effort procedures.

4.4.37.1. For non-assault NVG airland operations use areas for detailed criteria: Area 23 – Takeoff, Area 44 – 100/50 Percent Landing, Area 47 – Touch-and-Go Landing, and Area 48 – Missed Approach/Go-Around. If using assault procedures during NVG airland procedures, additionally use the Areas 67 through 69.

4.4.37.2. Q. Takeoff, landing, and missed approach criteria listed were not exceeded. Displayed satisfactory knowledge of NVG airland procedures. Thoroughly analyzed departure/landing runway and surrounding terrain.

4.4.37.3. Q-. Minor deviations in knowledge or published procedures. Errors did not affect safety or mission accomplishment.

4.4.37.4. U. Procedures not IAW flight manual, directives, or published procedures. Unable to analyze NVG airland constraints or verbalize concerns posed by terrain or

other factors. Could not describe or apply above terms. Displayed unsatisfactory knowledge of NVG airland procedures. Major errors impacting safety and mission accomplishment.

4.4.38. Area 66 Tactical. SCAs, overhead/downwind approaches and random steep/shallow approaches are all considered tactical recoveries for the purpose of evaluations.

4.4.38.1. Q. Followed procedures as briefed and IAW flight manual, directives, or published procedures. Displayed smooth, positive control throughout the recovery. Aircraft was in position to intercept glide path for normal landing. Gave proper consideration to threat location and adjusted pattern accordingly. Constantly cleared area of intended flight.

4.4.38.2. Q-. Performed recovery with minor deviations to published procedures. Aircraft control was not consistently positive and smooth. Over/under-shot final approach slightly but was able to intercept glide path for normal landing.

4.4.38.3. U. Recovery not performed IAW flight manual, directives or published procedures. Displayed erratic aircraft control. Over/under-shot final approach, requiring a go-around or potentially unsafe maneuvering to intercept final. Failed to consider threat location or proximity and/or maneuvering could have placed the aircraft within lethal range of given threat system. Did not clear area of intended flight.

4.4.39. Area 67. Assault Procedures.

4.4.39.1. Q. Displayed satisfactory knowledge of assault procedures. Could describe and apply terms such as acceleration check speed, minimum field length for maximum effort take-off (MFLMETO), three-engine Vmca, etc. Thoroughly analyzed departure/landing runway and surrounding terrain. Reviewed all applicable TOLD and thoroughly briefed crew on their duties.

4.4.39.2. Q-. Minor deviations in knowledge or published procedures. Minor errors in describing or applying above terms. Minor errors or omissions in TOLD or crew briefing.

4.4.39.3. U. Procedures not IAW flight manual, directives, or published procedures. Unable to analyze assault zone constraints or verbalize concerns posed by terrain or other factors. Could not describe or apply above terms. Major errors in TOLD data review or crew briefing. Displayed unsatisfactory knowledge of assault procedures.

4.4.40. Area 68. Assault Takeoff.

4.4.40.1. Q. Maintained smooth positive control throughout departure roll and takeoff. Climbed on speed and decreased angle or attack once clear of obstacle.

4.4.40.2. Q-. Control inputs were abrupt. Minor deviations from published/briefed procedures did not jeopardize safety.

4.4.40.3. U. Takeoff was not IAW with flight manual, directives, or published procedures. Did not use Vmca when conditions permitted. Raised flaps too quickly with relation to airspeed. Performance of maneuver jeopardized safety.

4.4.41. Area 69. Assault Landing.

4.4.41.1. Q. Maintained smooth approach path. Used proper aim points with positive corrections, as necessary. Touched down on centerline within the zone (defined as the first 500 feet of usable runway) without excessive bouncing or crab. Maintained runway centerline during rollout.

4.4.41.1.1. Airspeed. +/- 5 knots.

4.4.41.2. Q-. Minor deviations to published procedures. Aim point wandered or corrections were not smooth or timely. Landed in zone but had excessive bouncing or crab. Touchdown was no more than 10 feet from centerline.

4.4.41.2.1. Airspeed. + 10/- 5 knots.

4.4.41.3. U. Touchdown short of the landing zone. Touchdown beyond the landing zone and did not execute a go-around. Exceeded Q- criteria.

4.4.42. **Area 70. NVG Low Level**

4.4.42.1. Q. Planned and flew a route to minimize risk to aircraft and crew for a given mission using NVG procedures IAW governing directives/procedures. Avoided excessive or numerous low altitude warnings. Appropriately assisted navigator with TOT/TOA control. Maintained airspeed commensurate with navigator inputs. Flew appropriate profile for terrain and environmental conditions.

4.4.42.2. Q-. Had numerous low altitude warnings but no significant compromise to safety. Minor deviations from published directives/procedures and airspeed profile.

4.4.42.3. U. Had excessive amount and/or excessively low altitude warnings. Major deviations from established directives and procedures which jeopardized safety or mission effectiveness.

4.4.43. **Areas 71-100. Reserved for future use.**

Chapter 5

NAVIGATOR EVALUATIONS

5.1. General. The criteria contained here and in [Chapter 3](#) apply to all navigator flight evaluations.

5.2. Objective. The examinee must satisfactorily demonstrate the ability to perform all navigator duties safely and effectively, including the operation of appropriate aircraft systems, IAW applicable flight manuals, and directives.

5.3. Requirements.

5.3.1. Qualification/Mission Evaluations. See [Table 2.4](#) for required evaluation areas. The HAR rendezvous can be to an actual helicopter/tiltrotor aircraft or another C-130 flying HAR airspeed. Annotate on the AF Form 8 the type of drop conducted, drop score, TOT/TOA, type of LL flown and if it was conducted in mountainous terrain.

5.3.1.1. Initial/Requalification Qualification/Mission. Required inflight evaluation profile will include at least 30 minutes of NVG low level to a time on target/arrival (TOT/TOA) event. A tactical event is considered to be HAR, airdrop or SCA. Though only one TOT/TOA is required, all three events must be observed. Mountainous low level is required on all initial evaluations and requalification evaluations where the crewmember was unqualified for greater than six months. Evaluators will determine threats for the mission evaluation profile. A minimum of one pre-briefed threat will be placed on the low-level route. Additionally, at least one non-preplanned threat will be given in flight.

5.3.1.2. Periodic Qualification/Mission. Required inflight evaluation profile is the same as initial/requalification evaluations noted above with the following exceptions: Only two tactical events are required, all three are preferable. The third event, if not observed in flight, will be evaluated through an alternate method. Do not miss the same tactical event on consecutive evaluations (e.g. if SCAs were verbally evaluated on the examinees last evaluation, then an SCA must be demonstrated in flight on the next evaluation). NVG low level in mountainous terrain must be conducted at least every other evaluation. Specific areas identified as basic qualification events ([Table 2.4](#)) will be demonstrated to the satisfaction of the evaluator during a ground evaluation or inflight.

5.3.1.3. Simulator Evaluations. Navigators with at least three years of experience in the HC-130 aircraft may accomplish periodic qualification evaluations in the simulator (OFT, WST, or SNS); however, use simulators as a last resort to perform evaluations. Do not conduct consecutive qualification evaluations in the simulator. (EXCEPTION: Formal school NRQ (basic re-qualification) students will normally accomplish evaluations in the SNS).

5.3.2. Special Qualification Evaluations. Currently, there are no special qualifications.

5.4. Grading Criteria.

5.4.1. Areas 1 through 20 --use general grading criteria in [Chapter 3](#) of this volume.

5.4.2. **Areas 21 through 30** --use instructor evaluation grading criteria in **Chapter 3** of this volume (if applicable).

5.4.3. Area 101. Flight Plan/Airdrop Data/Charts.

5.4.3.1. Q. Completed a flight plan in its entirety with time errors not exceeding 3 minutes of total time to destination, or satisfactorily demonstrated manual flight planning procedures at the discretion of the evaluator. Calculated air release point (CARP) data completed in entirety with negligible errors. Selected current navigation charts of a proper scale and type of the sortie profile. Charts were constructed IAW current directives. Plotting errors did not exceed 3 NM. Demonstrated proper manual flight planning procedures, if required.

5.4.3.2. Q-. Minor errors or omissions that would not have adversely affected mission accomplishment. Time errors did not exceed 5 minutes. Plotting errors did not exceed 5nm.

5.4.3.3. U. Flight plan was not completed. Could not demonstrate manual procedures, or failed to review computer flight plan. Navigator flight plan and CARP data contained major errors/omissions. Selected an improper or obsolete chart. Exceeded Q- criteria.

5.4.4. Area 102. Fuel Planning.

5.4.4.1. Q. Demonstrated satisfactory knowledge of the type and use of data contained in fuel planning instructions. "En route fuel" computation errors did not exceed 3%. Correctly computed and performed fuel management procedures. Correctly computed an Equal Time Point (ETP), when required. Correctly constructed a range control chart (optional at the discretion of the evaluator). Manual fuel planning procedures were demonstrated at the discretion of the evaluator.

5.4.4.2. Q-. Displayed limited knowledge of fuel planning instructions. "En route fuel" computation errors did not exceed 5%. Fuel management procedures and/or ETP computed with minor mathematical errors or omissions that would not adversely affect mission accomplishment. If constructed, the range control chart had minor errors or omissions.

5.4.4.3. U. Displayed inadequate knowledge of fuel planning instructions. Fuel computations and/or ETP were not completed or contained major errors or omissions. If constructed, range control chart had major errors and omissions. Exceeded Q- criteria.

5.4.5. Area 103. Departure.

5.4.5.1. Q. Monitored headings, airspeeds, altitudes and aircraft position throughout departure. Used an instrument departure procedure and/or appropriate scale departure area chart. Provided headings, estimated time of arrival (ETA), and other required information in a timely manner. Monitored appropriate radios and clearances to ensure crew compliance. Provided updated information when the clearance caused a change in the planned departure. Ensured terrain clearance during departure by use of all available aids and the area chart.

5.4.5.2. Q-. Monitored aircraft position, but slow to provide headings, ETA, or other required information. Performance did not degrade mission accomplishment or compromise flight safety.

5.4.5.3. U. Did not monitor departure headings, airspeeds or altitudes. Unaware of aircraft position and unable to provide updated information when required. Did not use an instrument departure procedure and/or an appropriate scale departure area chart. Allowed major deviations that degraded mission accomplishment or compromised safety. Did not ensure terrain clearance during the departure. No area chart available.

5.4.6. Area 104. Navigation Procedures.

5.4.6.1. Q. Certain of exact aircraft position. Remained within 3nm of course centerline or planned deviation (Exceptions: Threat avoidance, weather deviation, ATC assigned heading, time control, etc.). Thorough knowledge of en route time status in relation to objective area. Complied with all altitude restrictions. Adhered to all airspace restrictions.

5.4.6.2. Q-. Uncertain of exact aircraft position due to marginal navigational procedures. Flew 3 to 5 nm from course without the above exceptions. Better awareness of required timing events or en route time status could have avoided excessive, unplanned maneuvering.

5.4.6.3. U. Exceeded 5nm during en route navigation without the above exceptions. Was unable to maintain position awareness throughout most of the route. Unable to accurately assess required timing or unaware of mission time status, jeopardizing mission accomplishment. Violated airspace restrictions. Poor airspeed control resulted in numerous or extreme airspeed adjustment. Descended below minimum altitude restrictions.

5.4.7. Area 105. Radio Navigation.

5.4.7.1. Q. Accurately tuned, identified, and interpreted readings of TACANs, VORs or NDBs. Consistently selected stations that afforded the best LOPs. Position accuracy within 4nm.

5.4.7.2. Q-. Better use of radio aids could have enhanced navigation. Displayed weakness in fixing or plotting procedures. Position accuracy did not exceed 8nm.

5.4.7.3. U. Unable to accurately tune and identify radio aids. Did not understand VOR/TACAN/NDB bearing procedures or was unable to obtain position by means of radio aids. Position error greater than 8 nm.

5.4.8. Area 106. Radar Navigation/Weather Avoidance.

5.4.8.1. Q. Demonstrated thorough knowledge and understanding of radar equipment. Used correct procedures for radar operation and weather avoidance procedures. Radar Fix position error did not exceed 5nm (if observed). Maintained proper distance from adverse weather.

5.4.8.2. Q-. Demonstrated adequate knowledge of equipment, but occasionally used improper operating procedures. Did not update radar/weather analysis while avoiding known weather. Had difficulty identifying radar returns. Radar fix position error did not exceed 10nm (if observed). Weather avoidance was safe with minor deviation from prescribed procedures.

5.4.8.3. U. Displayed unsatisfactory knowledge of radar equipment. Used improper operating procedures that were potentially harmful to system components. Failed to

correctly interpret scope returns. Displayed unsatisfactory knowledge of weather avoidance procedures. Radar fix position error greater than 10nm (if observed).

5.4.9. Area 107. Navigation Systems.

5.4.9.1. NOTE: All references to navigation systems refer to actual systems onboard unit aircraft (i.e., INS, SCNS, DOP or Global Positioning System (GPS)).

5.4.9.2. Q. Had a thorough knowledge of onboard navigation system operating procedures. Effectively used navigation systems to direct the aircraft and update system as required.

5.4.9.3. Q-. Had only a basic knowledge of onboard navigation systems. Made minor errors in operation/interpretation of navigation system data. More selective updating could have increased system effectiveness.

5.4.9.4. U. Displayed inadequate knowledge of onboard navigation system procedures. Improper operation procedures could have resulted in damage to equipment or affected mission accomplishment. Failed to update or correctly interpret navigation system data.

5.4.10. Area 108. Deviation Check.

5.4.10.1. Q. Correctly computed compass deviation within 2 degrees of actual.

5.4.10.2. Q-. Minor errors in readings or computations. Computations were within 3 degrees of actual.

5.4.10.3. U. Did not accomplish deviation check or exceeded Q- criteria.

5.4.11. Area 109. True Airspeed (TAS) Check.

5.4.11.1. Q. TAS check accomplished on time and error did not exceed 5 knots.

5.4.11.2. Q-. Minor errors in readings or computations. Error did not exceed 10 knots. Completed TAS check late.

5.4.11.3. U. Did not accomplish TAS check or error exceeded 10 knots.

5.4.12. Area 110. Dead Reckoning (DR)/Rating of Navigational Computers.

5.4.12.1. Q. Made effective use of DR/Rating of navigational computers during aircraft positioning. Computed and plotted positions within 5 nm, selecting the most reliable information.

5.4.12.2. Q-. Occasionally did not identify the navigational computer providing the most reliable information or used improper DR procedures resulting in erroneous ETAs or headings. Computed or plotted position error did not exceed 10nm.

5.4.12.3. U. Was unable to use DR/Rate navigational computers effectively. Computed or plotted position error exceeded Q- criteria.

5.4.13. Area 111. Course and Estimated Time of Arrival (ETA) Tolerance.

5.4.13.1. Q. Remained within 10nm of course centerline, or within tolerances specified for Required Navigation Performance (RNP) airspace (if applicable), whichever is less. ETAs/RETAs were within 2 minutes of actual times of arrival (ATAs). Accurately determined course deviation for weather.

5.4.13.2. Q-. Remained within 15nm of course centerline, or within tolerances specified for RNP airspace (if applicable), whichever is less. ETAs/RETAs were within 3 minutes of ATAs.

5.4.13.3. U. Exceeded Q- criteria and/or evaluator had to alter aircraft heading to remain within course tolerance, clear special use airspace, or correctly deviate around weather.

5.4.14. Area 112. Fuel Management/Range Control.

5.4.14.1. Q. Maintained fuel management/range control IAW directives. Kept pilot advised of fuel status.

5.4.14.2. Q-. Adequate fuel management/range control with minor computation errors noted. Did not adequately update the pilot on fuel status.

5.4.14.3. U. Failed to demonstrate an understanding of fuel management/range control procedures. Fuel computations not accomplished or contained significant errors. Failed to inform pilot of fuel status.

5.4.15. Area 113. Descent/Approach/Landing.

5.4.15.1. Q. Monitored aircraft position, approach instructions and primary approach navigation aids. Furnished headings, ETAs and other information to the pilot as required. Thoroughly understood approach and missed approach procedures. Ensured terrain clearance during approach by use of all available aids and area chart.

5.4.15.2. Q-. Monitored aircraft position but did not fully understand approach instructions/procedures. Slow to provide headings, ETAs or other appropriate information.

5.4.15.3. U. Failed to monitor aircraft position. Did not ensure terrain clearance during the approach. Did not use appropriate chart.

5.4.16. Area 114. Communication Procedures/Radio Transmission – Usage and Discipline.

5.4.16.1. Q. Complete knowledge of and compliance with communications procedures. Radio communications (both inter- and intra-cockpit) were concise, accurate, and effectively used to direct actions by the crew to update appropriate agencies of the tactical situation.

5.4.16.2. Q-. Minor terminology errors or omissions occurred, but did not significantly detract from situational awareness, threat warning, or mission accomplishment. Extraneous comments over primary and secondary radios presented minor distractions.

5.4.16.3. U. Unsatisfactory knowledge of or failure to comply with communications procedures. Radio communications over primary/secondary radios were inadequate or excessive. Inaccurate or confusing terminology significantly detracted from situational awareness, threat warning, or mission accomplishment.

5.4.17. Area 115. Self-Contained Approach (SCA) Procedures.

5.4.17.1. Q. Complied with all published procedures. Successfully directed the aircraft to SCA minimums so that a safe landing could be made. Used proper terminology; instructions were clear and concise during the entire approach.

5.4.17.2. **Q-**. Briefing was incomplete or deviated from established procedures. Required excessive course corrections on final approach, but directed the aircraft to a point where a safe landing could be made.

5.4.17.3. **U**. Had unsatisfactory knowledge of SCA procedures. Unable to direct the aircraft to a point from which a safe landing could be made.

5.4.18. Area 116. SCA Time Control (CRITICAL)

5.4.18.1. **Q**. Time on target (TOT) +/- 30 seconds.

5.4.18.2. **U**. Exceeds Q criteria.

5.4.19. Area 117. Defensive Systems/Tactics.

5.4.19.1. **Q**. Had thorough knowledge of necessary defensive systems/tactics applicable to the mission. Applied appropriate tactics to avoid the threat and minimize exposure. Made timely and appropriate inputs to crew during mission.

5.4.19.2. **Q-**. Limited knowledge of defensive systems. Minor errors in tactics selection. Was unfamiliar with the appropriate tactic for a given scenario. Did not make timely inputs to crew during mission.

5.4.19.3. **U**. Knowledge of defensive systems was unsatisfactory. Major errors tactics selection would have resulted in an unsuccessful mission.

5.4.20. Area 118. Threat Analysis/Avoidance.

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

5.4.20.2. **Q-**. Made minor errors in plotting and avoiding a given threat. Minor errors in threat analysis or tactics selection.

5.4.20.3. **U**. Was unable to plot and avoid a given threat. Failed to ensure mission effectiveness by not adequately analyzing or degrading threat(s). Did not execute an effective evasive maneuver when given an immediate threat. Not aware of appropriate tactics for specific threats or terrain.

5.4.21. Area 119. Orbit Procedures.

5.4.21.1. **Q**. Thorough knowledge of orbit procedures. Arrived at planned orbit area within 5 minutes of coordinated mission timing. Accurately flew orbit pattern and accomplished computations without significant errors or omissions. Properly coordinated mission location with MCC/DABS. Properly calculated bingo fuel to planned recovery/abort base.

5.4.21.2. **Q-**. Adequate knowledge of orbit procedures. Minor deviations from published procedures. Arrived at planned orbit area within 10 minutes of coordinated mission timing. Excessive time devoted to performing computations. Minor coordination errors or omissions with the MCC/DABS. Made minor miscalculation of bingo fuel to the planned recovery/abort base.

5.4.21.3. U. Unsatisfactory knowledge of orbit procedures. Arrived at planned orbit area in excess of 10 minutes of coordinated mission timing. Displayed lack of coordination with MCC/DABS. Unable to perform orbit pattern; jeopardized mission accomplishment. Selected an inappropriate abort base or failed to calculate a bingo fuel to safely arrive at an abort base with required fuel reserves. Failed to position the aircraft within planned orbit area.

5.4.22. Area 120. Air Refueling (AR) Procedures.

5.4.22.1. Q. Effectively accomplished rendezvous and air refueling procedures. Planned optimum use of all available rendezvous aids. Thorough and complete knowledge of in flight air refueling procedures. Arrived at the coordinated air refueling point within 2 minutes of planned control time. Properly calculated bingo fuel to the planned abort base.

5.4.22.2. Q-. Overlooked use of some rendezvous aids, resulting in a delayed or inefficient rendezvous. Knowledge was sufficient to accomplish rendezvous and air refueling. Arrived at the coordinated air refueling point within 5 minutes of planned control time. Made minor miscalculations of bingo fuel to the planned abort base.

5.4.22.3. U. Displayed lack of knowledge or familiarity with the checklist, equipment, and procedures. Limited use of rendezvous aids adversely affected the rendezvous. Arrived at the coordinated air refueling point in excess of 5 minutes from planned control time. Selected an inappropriate abort base or failed to calculate a bingo fuel to safely arrive at an abort base with required fuel reserves. Failed to position the aircraft within the boundaries of the designated air-refueling track.

5.4.23. Area 121. Helicopter Air Refueling (HAR) Procedures.

5.4.23.1. Q. Effectively accomplished rendezvous and air refueling procedures. Used available navigation systems to acquire, identify, and accurately locate the air-refueling receiver. Provided timely and accurate advisories to direct aircraft to 1nm range. Made distance advisories to the pilot to 1nm range and confirmed visual contact. Continued to provide advisories as needed. Performed timely and accurate No Visual Contact or Contact Lost procedure (as required).

5.4.23.2. Q-. Made limited use of navigational systems and experienced difficulty acquiring, identifying, and accurately locating the receiver. Provided limited advisories, but was able to accomplish the rendezvous to 1nm. Provided limited advisories when needed and was frequently prompted by other crewmembers.

5.4.23.3. U. Failed to use available navigation systems to acquire, identify, and accurately locate the receiver by 1nm. Failed to direct the aircraft to a successful rendezvous. Failed to execute the correct No Visual Contact or Contact Lost procedure in a timely manner (as required).

5.4.24. Area 122. Air Refueling Control Point (ARCP) Time Control (CRITICAL).

5.4.24.1. Q. Arrived at the ARCP on time to 1 minute late.

5.4.24.2. U. Exceeded Q criteria.

5.4.25. Area 123. Warnings/Advisories.

5.4.25.1. Q. In-flight warnings/advisories provided clear and concise information in a timely manner.

5.4.25.2. Q-. In-flight warnings/advisories contained minor errors or omitted non-critical information.

5.4.25.3. U. Did not provide required in-flight warnings/advisories.

5.4.26. Area 124. Inflight CARP Reevaluation.

5.4.26.1. Q. CARP properly reevaluated in-flight.

5.4.26.2. Q-. CARP not properly reevaluated, but airdrop was successful.

5.4.26.3. U. CARP not reevaluated in-flight leading to a no-drop, unsuccessful drop or negatively affecting the airdrop.

5.4.27. Area 125. Slowdown.

5.4.27.1. Q. Had thorough knowledge of slowdown procedures. Complied with all published/ briefed procedures.

5.4.27.2. Q-. Limited knowledge of slowdown procedures. Minor deviations did not affect mission accomplishment or formation integrity.

5.4.27.3. U. Had unsatisfactory knowledge of slowdown procedures. Major deviations adversely affected mission accomplishment or formation integrity.

5.4.28. Area 126. Drop Zone (DZ) Acquisition.

5.4.28.1. Q. Timely identification of the DZ allowed for a smooth approach to the objective area.

5.4.28.2. Q-. Late identification of the DZ caused an abrupt change in procedures or course into the objective area, but did not affect mission accomplishment.

5.4.28.3. U. Did not identify the DZ or late identification negatively affected mission accomplishment.

5.4.29. Area 127. DZ Alignment.

5.4.29.1. Q. Directed the aircraft to an optimum DZ alignment from slowdown through escape. Clearly communicated desired aircraft position to the crew.

5.4.29.2. Q-. Slow in establishing or maintaining effective DZ alignment, but did not adversely impact mission accomplishment.

5.4.29.3. U. Failed to establish effective DZ alignment that contributed to an unsuccessful airdrop/no-drop condition.

5.4.30. Area 128. Time on Target (TOT) (CRITICAL).

5.4.30.1. Q. TOT +/- 30 seconds.

5.4.30.2. U. Exceeded Q criteria.

5.4.31. Area 129. Airdrop Accuracy (CRITICAL).

5.4.31.1. Q. Drop score of 300 meters or less.

5.4.31.2. U. Exceeded Q criteria.

5.4.32. Area 130. Escape.

5.4.32.1. Q. Escape and recovery executed IAW published or briefed procedures.

5.4.32.2. Q-. Minor errors in escape and/or recovery procedures that did not affect mission accomplishment.

5.4.32.3. U. Major deviations from procedures that negatively affected mission accomplishment, formation integrity or flight safety.

5.4.33. Area 131. Night Vision Goggle (NVG) Usage/Limitations.

5.4.33.1. Q. Correctly described the use/limitations of night vision goggles (NVGs). Properly preflighted, handled, and used NVGs during the flight.

5.4.33.2. Q-. Made minor omissions or deviations in describing the use/limitations of NVGs. Did not properly preflight, handle, or use NVGs during the flight, but caused no damage to equipment. Mission success not negatively affected.

5.4.33.3. U. Procedures for using NVGs were incorrect. Caused damage to equipment. Mission unsuccessful as a result of improper NVG usage.

5.4.34. Area 132. Search Data Computations.

5.4.34.1. Q. Checked all factors pertaining to search mission, such as weather and sea conditions, objective size, search time, and aircraft endurance. Selected an appropriate search pattern and accurately computed information such as track spacing, search altitude, and search speed.

5.4.34.2. Q-. Only the minimum information necessary to conduct the search was checked.

5.4.34.3. U. Inadequate knowledge of mission data; failed to check factors applicable to flight. Computations contained major errors or omissions. Poor planning degraded mission accomplishment or compromised safety.

5.4.35. Area 133. Search Pattern.

5.4.35.1. Q. Thorough understanding of search patterns. Monitored aircraft position throughout the pattern and allowed only minor deviations from centerline. Able to break out of search pattern for a possible sighting and reenter at original location to resume pattern.

5.4.35.2. Q-. Adequate knowledge of search patterns. Allowed aircraft to deviate from course line on numerous occasions and was slow to correct back to course. Excessive time devoted attempting to reenter pattern.

5.4.35.3. U. Inadequate knowledge of search patterns. Unsure of aircraft position during search pattern. Major deviations from course compromised mission accomplishment. Unable to breakout and reenter pattern.

5.4.36. Areas 134 - 150. Reserved for future use.

Chapter 6

FLIGHT ENGINEER EVALUATIONS

6.1. General. The criteria contained in this chapter and **Chapter 3** applies to all flight engineer flight evaluations.

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

6.3. Requirements.

6.3.1. **Mission/Qualification Evaluations.** See **Table 2.5** for required evaluation areas.

6.3.1.1. **Initial/Re-qualification.** Required events include a complete preflight, an NVG low level mission to include, operation of aircraft systems and flight engineer duties including an SCA utilizing the infil/exfil checklists and a night helicopter air refueling. The HAAR portion will include, as a minimum, completion of checklist and a contact. Actual fuel transfer is preferred but not required.

6.3.1.2. **Periodic.** Required events include a preflight appropriate to the status of the aircraft (or a complete preflight when directed by the evaluator), an NVG low level mission to include, operation of aircraft systems and flight engineer duties including an SCA utilizing the infil/exfil checklists or night helicopter air refueling. The helicopter air refueling portion, if evaluated, will include completion of all checklist and a contact as a minimum. **EXCEPTION:** The requirement for a wet/dry contact may be waived by the evaluator if weather, equipment malfunction, or receiver ability precluded a successful probe to drogue contact. Actual fuel transfer is not required. Helicopter air refueling must be evaluated in-flight at least every other mission evaluation.

6.4. Grading Criteria.

6.4.1. **Areas 1 through 20** --use general grading criteria in **Chapter 3** of this volume.

6.4.2. **Areas 21 through 30** --use instructor evaluation grading criteria in **Chapter 3** of this volume (if applicable).

6.4.3. Area 151. AFTO IMT 781.

6.4.3.1. Q. Identified and reported discrepancies in a clear, concise, accurate, and timely manner IAW T.O. 00-20-5, *Aircraft, Drone, Aircrew Training Devices, Engines, Air Launched Missile Inspections, Flight Reports, and Supporting Maintenance Documents*; and other applicable directives.

6.4.3.2. Q-. Some information reported incorrectly or incompletely due to errors, omissions, or deviations. Limited knowledge of proper discrepancy reporting IAW T.O. 00-20-5.

6.4.3.3. U. Did not identify or report discrepancies; omitted or incorrectly reported significant information due to errors, omissions, or deviations.

6.4.4. Area 152. Ground Support Equipment.

6.4.4.1. Q. Accomplished or demonstrated a satisfactory knowledge of positioning, normal operation, and emergency shutdown of required ground support equipment with no errors, omissions, or deviations.

6.4.4.2. Q-. Accomplished or demonstrated a limited knowledge of positioning, normal operation, and emergency shutdown of required ground support equipment with minor errors, omissions, or deviations that did not jeopardize safety.

6.4.4.3. U. Failed to accomplish or demonstrate adequate knowledge of positioning, normal operation, and emergency shutdown of required ground support equipment that did or could have jeopardized safety.

6.4.5. Area 153. Refuel/Defuel.

6.4.5.1. Q. Demonstrated a satisfactory knowledge of or accomplished refuel/defuel operations with no errors, omissions, or deviations from established procedures. Maintained fuel balance limits and adhered to existing published safety precautions. Demonstrated a working knowledge of the aircraft the refueling/defueling system and a satisfactory knowledge of concurrent refueling procedures and appropriate safety precautions IAW T.O. 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*.

6.4.5.2. Q-. Demonstrated a limited knowledge of or accomplished refuel/de-fuel operations with minor errors, omissions, or deviations that did not jeopardize safety. Limited knowledge of the aircraft refueling/de-fueling system and components.

6.4.5.3. U. Demonstrated inadequate knowledge of or failed to accomplish refuel/de-fuel operations, made errors, omissions, or deviations that would have jeopardized safety. Demonstrated inadequate knowledge of concurrent refueling operations and appropriate safety precautions.

6.4.6. Area 154. Take-off and Landing Data (TOLD).

6.4.6.1. Q. Correctly computed the TOLD data using applicable performance data and corrections for existing field conditions. Transcribed Mini TOLD data correctly. Was fully knowledgeable of takeoff and landing performance data.

6.4.6.1.1. TOLD criteria:

6.4.6.1.1.1. Required Airspeeds +/- 2 knots.

6.4.6.1.1.2. Required Distances +/- 200 feet.

6.4.6.1.1.3. Predicted Takeoff Torque +/- 200 in/lbs.

6.4.6.2. Q-. Minor errors in the use of applicable performance charts, computing the performance data, or correcting for existing field conditions resulting in data exceeding Q criteria. Incorrectly transcribed Mini TOLD data. Had some knowledge of takeoff and landing performance data. Would not have compromised safety of flight.

6.4.6.2.1. TOLD criteria:

6.4.6.2.1.1. Required Airspeeds +/- 4 knots.

6.4.6.2.1.2. Required Distances +/- 400 feet.

6.4.6.2.1.3. Predicted Takeoff Torque +/- 400 in/lbs.

6.4.6.3. U. Failed to compute TOLD data, omitted necessary corrections for existing field conditions, or errors in computing performance data resulted in airspeeds and/or distances exceeding Q- criteria. Limited knowledge of takeoff and landing performance data. Did or could have compromised safety of flight.

6.4.7. Area 155. Cockpit.

6.4.8. Area 156. Before Starting Engines/Starting Engines.

6.4.9. Area 157. Before Taxi/Taxi.

6.4.10. Area 158. Before Takeoff/Lineup

6.4.11. Area 159. After Takeoff.

6.4.12. Area 160. Enroute.

6.4.13. Area 161. Descent/Before Landing.

6.4.14. Area 162. After Landing.

6.4.15. Area 163. Engine Shutdown.

6.4.16. Area 164. Before Leaving Aircraft.

6.4.17. Area 165. Tactical Checklist.

6.4.18. Areas 155 through 165 – use the following criteria.

6.4.18.1. Q. Accomplished required checklists without errors, omissions, or deviations. Backed up pilots on flight parameters (i.e. altitudes, airspeeds, and clearances). Satisfactorily monitored engine/system indicators. Fully knowledgeable of performance charts and procedures required to obtain and record in-flight performance data. Fuel system usage and configuration was IAW flight manual and applicable directives. Recognized and corrected minor omissions or deviations. Recognized, reported, and properly documented out of limit conditions or malfunctions.

6.4.18.2. Q-. Accomplished required checklists with minor errors, omissions, or deviations. Backed up pilots on flight parameters (i.e. altitudes, airspeeds, and clearances) with some deviations. Monitored engine/system indicators with some deviations. Limited knowledge of performance charts and procedures required to obtain and/or record in-flight performance data. Limited knowledge of fuel system usage and configuration caused deviations from flight manual and applicable directives. Slow to recognize, report, and/or document out of limit conditions or malfunctions.

6.4.18.3. U. Failed to accomplish required checklists or made numerous errors, omissions, or deviations. Failed to back up pilots on flight parameters (i.e. altitudes, airspeeds, and clearances). Failed to monitor engine/system indicators. Inadequate knowledge of performance charts and/or procedures required to obtain data for two or three engines operating. Had inadequate knowledge of fuel system usage and configuration. Allowed limitations to be exceeded, which, without correction, would cause damage to equipment.

6.4.19. Area 166. Postflight.

6.4.19.1. Q. Accomplished required checklists without errors, omissions, or deviations. Insured aircraft properly configured for parking. [i.e. nose gear pin, ground wires (if applicable), intakes, door locks]

6.4.19.2. Q-. Accomplished required checklists with minor errors, omissions, or deviations. Minor errors insuring aircraft properly configured for parking.

6.4.19.3. U. Failed to accomplish required checklists. Did not insure aircraft was properly configured for parking.

6.4.20. Area 167. Mission Procedures.

NOTE:

Flight Engineers will be verbally evaluated on mission knowledge. Actual mission profiles will be flown to the maximum extent possible. Applicable mission requirements will be published in the local unit supplement to AFI 11-202V2.

6.4.20.1. Q. Was fully knowledgeable of unit mission procedures. Was knowledgeable of mission events. Demonstrated adequate situational awareness.

6.4.20.2. Q-. Had limited knowledge of unit mission procedures. Demonstrated limited knowledge of mission events. Limited situational awareness.

6.4.20.3. U. Inadequate knowledge of unit mission procedures. Had inadequate knowledge of mission events. Had inadequate situational awareness.

6.4.21. Area 168. Assault Takeoff/Landing.

6.4.21.1. Q. Was fully knowledgeable of assault takeoff and landing procedures IAW applicable

directives. TOLD data computed within Q tolerances as stated in area 154.

6.4.21.2. Q-. Limited knowledge of assault takeoff and landing procedures. TOLD data computed within Q- tolerances as stated in area 113.

6.4.21.3. U. Had inadequate knowledge of assault takeoff and landing procedures. TOLD data exceeded Q- tolerances as stated in area 113.

6.4.22. Area 169. Night Vision Goggle (NVG) Usage/Limitations.

6.4.22.1. Q. Correctly described the use/limitations of night vision goggles (NVGs). Properly preflighted, handled, and used NVGs during the flight.

6.4.22.2. Q-. Minor omissions or deviations in describing the use/limitations of NVGs. Did not properly pre-flight, handle, or use NVGs during the flight, but caused no damage to equipment. Mission success not negatively affected.

6.4.22.3. U. Procedures for using NVGs were incorrect. Caused damage to equipment. Mission unsuccessful as a result of improper NVG usage.

6.4.23. Area 170. Air Refueling (AR) System/Procedures.

6.4.23.1. Q. Was fully knowledgeable of AR operations and procedures. Performed all pre-refueling, refueling, and post-refueling checks in accordance with applicable checklist and directives. Satisfactorily managed/monitored fuel systems and on load/off load distribution in accordance with procedures and techniques outlined in the flight

manual, checklist and other directives. Correctly identified and located system components, explained and related their functions, and specified the limitations. Stated correct system status and its effect on related systems. Recognized malfunctions and applied proper corrective action(s).

6.4.23.2. Q-. Limited knowledge of AR operations and procedures. Performed pre-refueling, refueling and post-refueling checks with some minor deviations/omissions that did not affect successful accomplishment of air refueling. Limited management/monitoring of fuel systems and on load distribution in accordance with procedures and techniques outlined in the flight manual, checklist and other directives. Limited knowledge of identification, location, functions, and limitations of system components. Stated correct system status, but could not determine its effect on related systems. Delay in recognizing malfunctions and/or applying proper corrective action(s).

6.4.23.3. U. Inadequate knowledge of AR operations and procedures. Deviations/omissions could have affected successful accomplishment of the air-refueling mission. Inadequate knowledge of fuel system management or exceeded wing fuel balance limitations. Could not identify, locate, or relate systems functions and limitations. Could not determine status of system or its effect on related system. Failed to recognize malfunctions and/or apply corrective action(s).

6.4.24. Area 171. Helicopter Air to Air Refueling (HAAR) System/Procedures.

6.4.24.1. Q. Was fully knowledgeable of HAAR operations and procedures. Performed all pre-refueling, refueling, and post-refueling checks in accordance with applicable checklist and directives. Satisfactorily managed/monitored fuel systems and on load/off load distribution in accordance with procedures and techniques outlined in the flight manual, checklist and other directives. Correctly identified and located system components, explained and related their functions, and specified the limitations. Stated correct system status and its effect on related systems. Recognized malfunctions and applied proper corrective action(s).

6.4.24.2. Q-. Limited knowledge of HAAR operations and procedures. Performed pre-refueling, refueling, and post-refueling checks with some minor deviations/omissions that did not affect successful accomplishment of air refueling. Limited management/monitoring of fuel systems and on load/off load distribution in accordance with procedures and techniques outlined in the flight manual, checklist and other directives. Limited knowledge of identification, location, functions, and limitations of system components. Stated correct system status, but could not determine its effect on related systems. Delay in recognizing malfunctions and/or applying proper corrective action(s).

6.4.24.3. U. Inadequate knowledge of HAAR operations and procedures. Deviations/omissions could have affected successful accomplishment of the air-refueling mission. Inadequate knowledge of fuel system management or exceeded wing fuel balance limitations. Could not identify, locate, or relate systems functions and limitations. Could not determine status of system or its effect on related system. Failed to recognize malfunctions and/or apply corrective action(s).

6.4.25. Area 172. Loss of Drogue.

6.4.25.1. Q. Analyzed malfunctions and directed steps for completing the emergency procedure in the correct sequence without delay. Used available checklists.

6.4.25.2. Q-. Analyzed malfunctions. Made minor deviations in describing or accomplishing the steps of the emergency procedure. Delayed, omitted or deviated in use of the appropriate checklist. Safety was not compromised.

6.4.25.3. U. Failed to analyze a malfunction. Procedures were incorrect or omitted. Delayed response. Failed to use appropriate checklist.

6.4.26. Area 173. Search and Rescue (SAR) Operations.

6.4.26.1. Q. Was fully knowledgeable of search procedures. Performed search checklist IAW applicable directives. Search performance data computed within TOLD criteria listed in area 113.

6.4.26.2. Q-. Limited knowledge of search procedures. Minor deviations, errors, or omissions in search checklist that would have not adversely affected mission accomplishment. Search performance data computed within TOLD criteria listed in area 113.

6.4.26.3. U. Had inadequate knowledge of search procedures. Was responsible for significant deviations, errors, and/or omissions in the search checklist that would have adversely affected the safe or timely accomplishment of the mission. Failed to compute TOLD card, omitted necessary corrections for existing conditions, or errors in computing performance data resulted in airspeeds and/or torque exceeding Q- criteria listed in area 113.

6.4.27. Area 174. Systems Knowledge.

6.4.27.1. (Added) Q. Demonstrated a thorough knowledge of systems operation, to include operating limits. Operated/monitored system IAW flight manual and governing directives. Able to immediately apply appropriate procedure(s) for malfunctions and quickly locate published information in manuals and instructions for those items not requiring memorization.

6.4.27.2. (Added) Q-. Limited knowledge of system operation, to include operating limits. Operated/monitored system but did not immediately apply appropriate procedure(s) for malfunctions. Some difficulty in locating published information in manuals and instructions for items not requiring memorization.

6.4.27.3. (Added) U. Lacked knowledge of system operation, to include operating limits. Could not correctly operate/monitor systems IAW flight manual and governing directives. Did not apply appropriate procedure(s) for malfunctions. Could not locate published information in manuals and instructions for items not requiring memorization.

6.4.28. Area 175-200. Reserved for future use.

Chapter 7

LOADMASTER EVALUATIONS

7.1. General. The criteria contained in this chapter and **Chapter 3** applies to all loadmaster evaluations.

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

7.3. Requirements. See **Tables 2.1, 2.2 (instructor), and 2.6** for required evaluation areas.

7.3.1. Initial/Requalification QUAL/MSN. The examinee will accomplish an aircraft preflight (evaluator discretion as to how much), completion of applicable weight and balance forms, a minimum of 30 minutes of NVG low level with the examinee scanning, an NVG helicopter air refueling (with a contact), an NVG airdrop, and an aircraft post-flight. The low level should be flown to either the airdrop or helicopter air refueling. The airdrop will be a CRL, static line personnel, or Container Delivery System (CDS). Examinee will demonstrate knowledge of emergency procedures associated with each method of deployment. The evaluator will enter a detailed mission description on the AF Form 8.

7.3.2. Periodic QUAL/MSN. All evaluations should be scheduled with the minimum of NVG HAAR and at least one type of night airdrop (CRL, CDS, or static line personnel). The examinee will accomplish the applicable aircraft preflight (evaluator discretion as to how much) and aircraft weight and balance computations (an automated Form F may be completed for the flight with evaluator approval but a manual pencil and paper form F will be evaluated; it may be completed any time while in phase with an evaluator). A minimum of 30 minutes of NVG low level will be flown with the examinee scanning and a threat should be called while inflight. At the minimum, one of the following events will be accomplished: NVG HAAR (with a contact), night airdrop (CRL, CDS, or Static line personnel only), or infil/exfil (tactical car/truck/HUMVEE only; land, load/offload on runway, takeoff). Any other events performed for the mission (FARP, hot gas, rescue drops, HALO, etc.) will be evaluated; any events not performed will be verbally evaluated. The evaluator will enter a detailed mission description on the AF Form 8.

7.3.3. (Added) **Special Qualification Evaluations.**

7.3.3.1. (Added) **CDS Special Qualification.** Loadmasters require a special qualification evaluation to conduct container delivery system (CDS) airdrop. Upgrade will be conducted IAW approved MAJCOM syllabus. This special qualification evaluation may be conducted separately or in conjunction with an initial, requalification, or periodic QUAL/MSN evaluation. See **Table 2.6** for required grading areas. Document this evaluation IAW **Paragraph 1.11.2**. Qualified loadmaster may be evaluated on CDS airdrops during subsequent QUAL/MSN evaluations IAW **Paragraph 7.3.2**.

7.4. Grading Criteria.

7.4.1. **Areas 1 through 13** - use general grading criteria in **Chapter 3** of this volume.

7.4.2. **Areas 21 through 30** use instructor evaluation grading criteria in **Chapter 3** of this volume (if applicable).

7.4.3. Area 201. Life Support Equipment.

7.4.3.1. Q. Located, inspected, distributed and/or demonstrated the proper use of life support or emergency equipment. Knowledge of equipment was satisfactory.

7.4.3.2. Q-. Difficulty locating, inspecting, and/or demonstrating the proper use of life support or emergency equipment. Knowledge of equipment was adequate, but needs improvement.

7.4.3.3. U. Failed to inspect, distribute and/or demonstrate the proper use of life support or emergency equipment. Knowledge of equipment was unsatisfactory.

7.4.4. Area 202. Aircraft Configuration.

7.4.4.1. Q. Ensured the aircraft was properly configured to accommodate mission requirements. Familiar with various configurations as outlined in applicable directives and properly stowed configuration items that were not used.

7.4.4.2. Q-. Difficulty configuring the aircraft but did not impede mission. Limited knowledge of various configurations as outlined in applicable directives.

7.4.4.3. U. Failed to ensure proper aircraft configuration or caused mission delays. Had unsatisfactory knowledge of configurations. Failed to properly stow configuration items.

7.4.5. Area 203. Load Planning/Inspection.

7.4.5.1. Q. Accurately planned a passenger/cargo load and met aircraft CG limits. Inspected load for proper preparation and documentation.

7.4.5.2. Q-. Difficulty planning a passenger/cargo load to meet CG limits. Difficulty inspecting load for proper preparation and documentation.

7.4.5.3. U. Unable to plan a passenger/cargo load and meet CG limits. Failed to inspect load for proper preparation and documentation.

7.4.6. Area 204. On/Off Loading Procedures.

7.4.6.1. Q. Correctly on/off loaded the aircraft safely and in a timely manner.

7.4.6.2. Q-. Difficulty correctly on/off loading the aircraft.

7.4.6.3. U. Failed to correctly or safely on/off load the aircraft. Loading procedures caused undue delay.

7.4.7. Area 205. Supervisory Abilities.

7.4.7.1. Q. Established and maintained control of personnel during loading operations. Safety was not compromised.

7.4.7.2. Q-. Established and maintained control of personnel, but made minor supervisory errors. Safety was not compromised.

7.4.7.3. U. Did not establish or maintain control of personnel and/or safety was compromised.

7.4.8. Area 206. Tie Down/Restraint.

7.4.8.1. Q. Correctly calculated and applied correct amount of restraint to a given item. Understood and could state the principals of restraint.

7.4.8.2. Q-. Difficulty calculating or applying the correct amount of restraint. Did not fully understand the principals of restraint.

7.4.8.3. U. Failed to correctly calculate or apply the correct amount of restraint. Did not understand and could not state the principals of restraint.

7.4.9. Area 207. Winching Procedures.

7.4.9.1. Q. Correctly demonstrated and/or explained winching procedures.

7.4.9.2. Q-. Difficulty demonstrating and/or did not completely explain correct winching procedures. Safety was not compromised.

7.4.9.3. U. Failed to demonstrate and/or did not explain correct winching procedures. Safety was compromised.

7.4.10. Area 208. Hazardous Material.

7.4.10.1. Q. Understood hazardous cargo procedures. Could comply with the provisions of AFMAN 24-204(I), *Preparing Hazardous Materials for Military Air Shipments* and/or follow the procedures for air movement of hazardous cargo under tactical, contingency or emergency conditions.

7.4.10.2. Q-. Understood hazardous cargo procedures, but made minor deviations stating them. Could comply with the provisions of AFMAN 24-204(I), and/or follow the procedures for air movement of hazardous cargo under tactical, contingency or emergency conditions.

7.4.10.3. U. Did not understand hazardous cargo procedures in AFMAN 24-204(I).

7.4.11. Area 209. Aircraft Limitations.

7.4.11.1.

NOTE:

Limitations may include, but are not limited to cargo floor; roller; station; compartment; pallet weight, height and nets; loading aids.

7.4.11.2. Q. Correctly stated, understood, and could apply the correct limitations associated with the aircraft, on/off loading, and associated equipment.

7.4.11.3. Q-. Had difficulty stating various limitations. Had difficulty locating correct limitations in the loading manual.

7.4.11.4. U. Failed to state various limitations, or could not locate correct limitations in the loading manual.

7.4.12. Area 210. Passenger Handling.

7.4.12.1. Q. Correctly briefed and performed passenger handling procedures.

7.4.12.2. Q-. Had difficulty briefing and/or performing passenger handling procedures.

7.4.12.3. U. Failed to brief and/or did not perform proper passenger handling procedures.

7.4.13. Area 211. Border Clearance.

7.4.13.1. Q. Correctly followed command guidelines. Completed/explained border clearance requirements IAW current directives.

7.4.13.2. Q-. Difficulty explaining border clearance requirements. Minor mistakes degraded effectiveness.

7.4.13.3. U. Could not accurately complete forms. Unaware of command guidance, or could not explain requirements.

7.4.14. Area 212. Weight and Balance.

7.4.14.1. Q. Knowledge of aircraft limitations and weight and balance directives was satisfactory. Completed DD Form 365-4, **Weight and Balance Clearance Form F - Transport/Tactical**, legibly and accurately with only minor errors.

7.4.14.1.1. Takeoff or landing gross weights. +/- 500 lbs.

7.4.14.1.2. Percent of MAC. +/- 0.5 percent.

7.4.14.1.3. Aircraft gross takeoff limits. Not exceeded.

7.4.14.1.4. Center of gravity limitations. Not exceeded.

7.4.14.2. Q-. Limited knowledge of aircraft limitations and weight and balance directives. Had difficulty completing DD Form 365-4 legibly. Form F contained errors within criteria listed below.

7.4.14.2.1. Takeoff or landing gross weights. +/- 501 to 1,000 lbs.

7.4.14.2.2. Percent of MAC. +/- 0.6 to 1.0 percent.

7.4.14.2.3. Aircraft gross takeoff limits. Not exceeded.

7.4.14.2.4. Center of gravity limitations. Not exceeded.

7.4.14.3. U. Knowledge of aircraft limitations and weight and balance directives was inadequate. Failed to complete DD Form 365-4 accurately. Exceeded Q- criteria.

7.4.15. Area 213. Scanner Duties.

7.4.15.1. Q. Periodically performed scanner duties by monitoring aircraft interior and exterior for abnormal conditions.

7.4.15.2. Q-. Did not scan in a timely manner to recognize abnormal conditions.

7.4.15.3. U. Failed to perform scanner duties by monitoring or making periodic checks of the aircraft interior and exterior for abnormal conditions.

7.4.16. Area 214. Air Refueling (AR) System/Procedures.

7.4.16.1. Q. Knowledge of aerial refueling procedures was satisfactory. Adequate knowledge of air refueling system components and locations. Accomplished all air refueling procedures without error, including leak checks during contact, IAW with approved checklist and directives. Properly configured the aircraft prior to completion of the preparation for contact checklist.

7.4.16.2. Q-. Limited knowledge of aerial refueling procedures. Limited knowledge of air refueling system components and locations. Accomplished air-refueling procedures with minor errors, omissions, or deviations. Performed limited checks during contact. Performed aircraft configuration with minor errors or omissions that did not affect successful mission accomplishment.

7.4.16.3. U. Had inadequate knowledge of aerial refueling procedures. Inadequate knowledge of air refueling system components and/or locations. Accomplished air-refueling procedures with major errors, omissions, or deviations critical to safety of flight. Failed to properly configure aircraft before completion of preparation for contact checklist. Failed to perform required checks during contact.

7.4.17. Area 215. Engine Running Onload/Offload / Infiltration/Exfiltration.

7.4.17.1. Q. Followed/explained proper procedures for engine running on/off loading and/or NVG infiltration/exfiltration operations.

7.4.17.2. Q-. Difficulty following/explaining proper procedures for engine running on/off loading and/or NVG infiltration/exfiltration operations.

7.4.17.3. U. Did not follow/explain proper procedures for engine running on/off loading and/or NVG infiltration/exfiltration operations.

7.4.18. Area 216. Systems Knowledge.

7.4.18.1.

NOTE:

As a minimum, evaluate the following areas (as applicable): QUAL: Oxygen; Ramp and Door; roller conveyors/dual rails, hydraulics. MSN: Static line retriever(s), ADS system, and aft anchor cable supports.

7.4.18.2. Q. Displayed satisfactory knowledge of systems, ensuring satisfactory operation within prescribed limits. Explained proper corrective action for each type of malfunction.

7.4.18.3. Q-. Difficulty in displaying a satisfactory knowledge of systems. Slow to analyze problems or apply proper corrective actions.

7.4.18.4. U. Failed to display a satisfactory knowledge of systems. Unable to analyze problems or apply proper corrective actions.

7.4.19. Area 217. Airdrop Rigging Procedures.

7.4.19.1. Q. Correctly rigged and identified key airdrop components.

7.4.19.2. Q-. Difficulty rigging and/or identifying key airdrop components.

7.4.19.3. U. Failed to rig and/or identify key airdrop components.

7.4.20. Area 218. Joint Airdrop Inspection.

7.4.20.1. Q. Correctly completed/explained the joint airdrop inspection (if required).

7.4.20.2. Q-. Had difficulty completing/explaining the joint airdrop inspection (if required).

7.4.20.3. U. Failed to or had extreme difficulty completing/explaining the joint airdrop inspection (if required).

7.4.21. Area 219. Coordinated Tasks Briefing.

7.4.21.1. Q. Correctly briefed the coordinated tasks IAW current directives. (if required)

7.4.21.2. Q-. Had difficulty briefing the coordinated tasks IAW current directives. (if required)

7.4.21.3. U. Failed to accomplish the coordinated tasks briefing IAW current directives. (if required)

7.4.22. Area 220. Airdrop Knowledge.

7.4.22.1.

NOTE:

Evaluate the following areas: Personnel (Static line and High Altitude Low Opening (HALO)), CRL, CDS, door bundle, SATB and any other mission specific airdrop event. Unless an aerial refueling is performed, mission performance during an airdrop other than SATB will be evaluated. The other areas will be verbally evaluated.

7.4.22.2. Q. Correctly demonstrated airdrop procedures for the event being flown, if performed. Knowledge of and airdrop load information and procedures for other types of loads were satisfactory.

7.4.22.3. Q-. Had difficulty demonstrating and/or understanding airdrop procedures and airdrop load information.

7.4.22.4. U. Could not demonstrate and/or understand airdrop procedures and airdrop load information.

7.4.23. Area 221. NVG Usage/Limitations.

7.4.23.1. Q. Correctly described the use/limitations of NVGs.

7.4.23.2. Q-. Minor omissions or deviations in describing the use/limitations of NVGs. Did not properly pre-flight, handle, or use NVGs during the flight, but caused no damage to equipment. Mission success was not negatively affected.

7.4.23.3. U. Procedures for using NVGs were incorrect. Caused damage to equipment. Mission unsuccessful as a result of improper NVG usage.

7.4.24. Area 222. Helicopter Air to Air Refueling (HAAR) System/Procedures.

7.4.24.1.

NOTE:

An actual HAR will be demonstrated unless a mission airdrop is performed. If an HAR is not demonstrated on one evaluation, it will be performed on the next mission evaluation.

7.4.24.2. Q. Knowledge of aerial refueling procedures was satisfactory. During fuel transfer operations, relayed light signals without errors, deviations or omissions. Transmitted clear, concise, timely information to the pilot concerning helicopter position throughout the refueling maneuver. Ensured emergency equipment was properly

configured for the aerial refueling. Successfully demonstrated breakaway procedures or verbally evaluated to the satisfaction of the evaluator.

7.4.24.3. Q-. Limited knowledge of aerial refueling procedures. Minor deviations, errors or omissions in relaying light signals during operations. Transmissions concerning helicopter position were not always clear and concise. At times used non-standard terminology. Slight deviations and errors in configuring emergency equipment for the aerial refueling. Emergency breakaway performed with minor discrepancies that did not affect safety or verbally evaluated event with minor discrepancies noted.

7.4.24.4. U. Had inadequate knowledge of aerial refueling procedures. Significant deviations, errors or omissions in relaying light signals during operations. Transmissions concerning helicopter position were unclear or erroneous. Failed to configure emergency equipment properly for the aerial refueling. Performed emergency breakaway with major discrepancies or verbally evaluated event with major errors noted.

7.4.25. Area 223. Combat Search and Rescue (CSAR)/Search Scanning Procedures.

7.4.25.1. NOTE: Evaluate both threat and SAR scanning procedures.

7.4.25.2. Q. Knowledge of CSAR/search scanning procedures was satisfactory.

7.4.25.3. Q-. Limited knowledge of CSAR/search procedures. Minor difficulties in keeping scanners motivated. Did not adversely affect the mission.

7.4.25.4. U. Knowledge of CSAR/search procedures was unsatisfactory. Adversely affected the mission or jeopardized safety.

7.4.26. Area 224. Pyrotechnics.

7.4.26.1. Q. Had thorough knowledge of pyrotechnics. Could identify the appropriate pyrotechnics for the mission. Knowledge of ground and in-flight emergency procedures was satisfactory.

7.4.26.2. Q-. Limited knowledge of pyrotechnics. Did not always correctly identify the most efficient pyrotechnics for the mission, but safety was not affected.

7.4.26.3. U. Lacked knowledge of pyrotechnics. Could not identify appropriate pyrotechnics for the mission. Inadequate knowledge of emergency procedures; safety was compromised.

7.4.27. Area 225. Flare Launcher.

7.4.27.1. Q. Satisfactorily demonstrated proper management and operation of systems. Correctly identified and located system components, explained and related the functions and specified the limitations.

7.4.27.2. Q-. Minor deviations in management or operation of systems. Minor omissions or deviations in identifying, locating, explaining, or relating system functions.

7.4.27.3. U. Performed improper management or operation of the system. Could not identify, locate, or explain system functions and limitations.

7.4.28. Area 226. Defensive Tactics/Threat Calls.

7.4.28.1. . Q. Satisfactory knowledge of defensive tactics employed by HC -130 aircraft. Properly identified threats and the maneuvers required to defeat them. Explained proper scanning techniques from the troop doors and ramp and door.

7.4.28.2. Q-. Limited knowledge of proper scanning techniques. Limited ability to identify threats and the maneuvers required to defeat them.

7.4.28.3. U. . Had inadequate knowledge of proper scanning techniques. Could not identify threats, or state maneuvers to defeat the threat.

7.4.29. Area 227. Forward Area Refueling Point (FARP).

7.4.29.1. Q. Satisfactorily demonstrated or explained knowledge of Hot Refueling Supervisor (HRS) and Panel Operator (PO) duties, FARP equipment, and emergency procedures. Satisfactorily performed or explained all items associated with HRS or PO duties, exercised sound crew coordination principles, and situational awareness.

7.4.29.2. Q-. Minor deviations in knowledge associated with HRS and PO duties and FARP equipment. Minor omissions in procedures during performance of HRS or PO duties.

7.4.29.3. U. Lacks adequate knowledge to safely perform FARP duties to include HRS/PO duties, FARP equipment, and/or emergency procedures. Could not perform HRS or PO duties to the extent of creating unnecessary delays and/or jeopardizing FARP completion. Could not exercise sound crew coordination and/or situational awareness

7.4.30. Area 228. Hot Refueling.

7.4.30.1. Q. Safely performed or explained all hot refueling procedures in a safe manner and in compliance with all established procedures/applicable directives.

7.4.30.2. Q-. Minor deviations from established procedures/applicable directives. Deviations did not affect safety of the refueling operation.

7.4.30.3. U. Unable to perform or explain refueling operation safely or in accordance with established procedures/applicable directives.

7.4.31. Area 229. Infiltration/Exfiltration Procedures

7.4.31.1. Q. Followed/explained proper procedures for NVG infiltration/exfiltration operations.

7.4.31.2. Q. Difficulty following/explaining proper procedures for NVG infiltration/exfiltration operations.

7.4.31.3. U. Did not follow/explain proper procedures for NVG infiltration/exfiltration operations or safety compromised the operation.

7.4.32. Areas 229 through 250. Reserved for future use.

Chapter 8

AIRBORNE MISSION SYSTEM SPECIALIST (AMSS) EVALUATIONS

- 8.1. General.** The criteria contained here and in **Chapter 3** apply to all ACS flight evaluations.
- 8.2. Objective.** The examinee must satisfactorily demonstrate the ability to perform required ACS duties safely and effectively, including the operation of appropriate aircraft/mission specific system IAW applicable flight manuals, instructions and directives.
- 8.3. Requirements.** Evaluations must reflect a sampling of different events during an actual CSAR. An NVG profile is required.
- 8.3.1. **Mission/Qualification Evaluations.** See **Table 2.7** for required areas. As a minimum, accomplish an NVG low-level route to an air refueling, helicopter air refueling, airdrop, or SCA.
- 8.4. ACS Grading Criteria.**
- 8.4.1. **Areas 1 through 20** --use general grading criteria in **Chapter 3** of this volume.
- 8.4.2. **Areas 21 through 30** --use instructor evaluation grading criteria in **Chapter 3** of this volume (if applicable).
- 8.4.3. **Area 251. Life Support Equipment.**
- 8.4.3.1. Q. Could locate, inspect, distribute and/or demonstrate the proper use of life support equipment.
- 8.4.3.2. Q-. Had difficulty locating, inspecting, and/or demonstrating the proper use of life support equipment.
- 8.4.3.3. U. Failed to inspect, distribute, and/or demonstrate the proper use of life support equipment.
- 8.4.4. **Area 252. Handling Classified Material -(CRITICAL).**
- 8.4.4.1. Q. Knowledge of directives governing storage, handling and destruction of classified/Communication Security (COMSEC) material was satisfactory. Applied and ensured compliance with governing directives. Used sound judgment in all aspects of receiving, storing and destroying classified/COMSEC material.
- 8.4.4.2. U. Lacked knowledge of directives governing storage, handling and destruction of classified/COMSEC material. Did not apply and/ or did not ensure others complied with governing directives. Lack of judgment in receiving, storing or destroying classified/COMSEC material.
- 8.4.5. **Area 253. CSAR Communications Support.**
- 8.4.5.1. Q. Thorough knowledge of terms, mission planning, communications, chart preparation and checklists associated with CSAR. Applied knowledge of mission planning to assist in mission accomplishment safely. Complied with published procedures. Identified and tuned proper frequencies in a timely manner. Monitored and responded to transmissions in a timely manner. Transmitted clear, concise information

using proper terminology. Ensured complete Communication Electronic Operation Instructions (CEOI) was developed for command/control and tactical objective area.

8.4.5.2. Q-. Limited knowledge of terms, mission planning, communications, chart preparation and checklists associated with CSAR. Applied knowledge of mission planning to assist in mission accomplishment safely. Complied with most published procedures. Identified and tuned proper frequencies, but not in a timely manner. Monitored and responded to transmissions but not in a timely manner. Transmitted clear, concise information using proper terminology. CEOI had minor errors, which did not affect safety or mission/task accomplishment.

8.4.5.3. U. Lacked knowledge of terms, mission planning, communications, chart preparation and checklists associated with CSAR. Lack of knowledge of mission planning affected mission/task safety. Failed to comply with published procedures. Failed to identify proper frequencies. Missed incoming transmissions or responses were erroneous or incorrect. CEOI had major errors, which affected mission/task safety.

8.4.6. Area 254. Knowledge of Route Communications.

8.4.6.1. Q. Complete familiarity with FLIP en route, tactical en route and objective area procedures, frequencies and radio requirements. Ensured complete CEOI was developed for ATC/ICAO, command/control and tactical objective area. Used sound judgment in developing communications plan to aid in mission safety and completion.

8.4.6.2. Q-. Limited knowledge of FLIP en route, tactical en route and objective area procedures, frequencies and radio requirements. CEOI had minor errors not critical to mission accomplishment. Selection of times/locations for transmissions indicated lack of awareness of safety/security for aircraft but did not compromise mission accomplishment.

8.4.6.3. U. Lacked knowledge of FLIP en route, tactical en route and objective area procedures, frequencies and radio requirements. Major errors in CEOI compromised mission safety and/or accomplishment. Lack of judgment in selecting radio transmission times/locations such that mission could have been jeopardized.

8.4.7. Area 255. ICAO Operating Procedures.

8.4.7.1. Q. Knowledge and understanding of ICAO publications and procedures was thorough. Complied with published procedures. Transmitted clear, concise information using proper format/terminology. Identified and tuned proper frequencies in a timely manner. Monitored and responded to transmissions in a timely manner.

8.4.7.2. Q-. Limited knowledge and understanding of ICAO publications and procedures. Complied with most published procedures. Transmissions were not always clear and concise. At times used non-standard formats/terminology. Slow to identify and tune proper frequencies. Missed no more than 5% of incoming transmissions and failed to respond in a timely manner.

8.4.7.3. U. Lacked knowledge or understanding of ICAO publications and procedures. Failed to comply with published procedures. Transmissions were unclear or erroneous. Used non-standard terminology. Failed to identify proper frequencies. Missed more than 5 percent of incoming transmissions or response was incorrect or inappropriate.

8.4.8. Area 256. Military Operating Procedures.

8.4.8.1. Q. Thorough knowledge and understanding of command and control, and of communications publications, and procedures. Complied with published procedures. Transmitted clear, concise information using proper terminology. Identified and tuned proper frequencies in as timely manner. Monitored and responded to transmissions in a timely manner.

8.4.8.2. Q-. Limited knowledge and understanding of command, control and communications publications and procedures. Complied with most published procedures. Transmissions were not always clear and concise, with non-standard terminology. Identified and tuned proper frequencies but not in a timely manner. Missed no more than 5 percent of transmissions designated for the aircraft or failed to respond in a timely manner.

8.4.8.3. U. Lacked knowledge and understanding of command, control and communications publications and procedures. Failed to comply with published procedures. Transmissions were unclear or erroneous, with non-standard terminology. Failed to identify proper frequencies. Missed more than 5 percent of transmissions designated for the aircraft; response was incorrect or inappropriate.

8.4.9. Area 257. Search/Orbit/Intercept Procedures.

8.4.9.1. Q. Demonstrated thorough knowledge of types of search pattern and intercepts, search/orbit altitudes and procedures, and communications as outlined in applicable directives. Was easily able to locate information in applicable directives. Applied knowledge in assisting mission/task accomplishment.

8.4.9.2. Q-. Limited knowledge of types of search patterns and intercepts, search/orbit altitudes and procedures, and communications as outlined in applicable directives. Had difficulty in finding information in applicable directives. Was unable to apply knowledge in assisting mission/task accomplishment.

8.4.9.3. U. Inadequate knowledge of types of search patterns and intercepts, search/orbit altitudes and procedures, and communications as outlined in applicable directives. Could not find information in applicable directives. Negatively affected mission accomplishment.

8.4.10. Area 258. Authentication Procedures -CRITICAL.

8.4.10.1. Q. Knowledge of authentication materials and procedures was thorough. When required, authentication was correct and timely. Correct authentication materials were always readily at hand.

8.4.10.2. U. Knowledge of authentication materials and procedures was unsatisfactory. Authentication was incorrect or excessively slow. Authentication materials were not readily available or were incorrect.

8.4.11. Area 259. Cryptological System Operations.

8.4.11.1. Q. Knowledge of applicable cryptological systems was thorough. Full knowledge of keying devices and materials. With use of a guide, was able to key all

systems without error. Knowledgeable of HAVE QUICK system and initialization procedures.

8.4.11.2. Q-. Was familiar with applicable cryptological systems, keying devices and materials. With use of guide, was able to key most systems with minor error. Knowledgeable of HAVE QUICK system but has difficulty during initialization procedures.

8.4.11.3. U. Lacked knowledge of applicable cryptological systems, keying devices or keying materials. Unable to key most systems without error. Lacked knowledge of HAVE QUICK system or required assistance in initialization procedures.

8.4.12. Area 260. Cryptological Material Requirements.

8.4.12.1. Q. Identified, requested and obtained all cryptological material required for the mission.

8.4.12.2. Q-. Identified cryptological material required for mission, but was slow in requesting/obtaining material or did so only after being prompted.

8.4.12.3. U. Failed to identify, request or obtain all cryptological materials required for the mission.

8.4.13. Area 261. Frequency Management.

8.4.13.1. Q. Knowledge of frequencies and associated agencies, which radios to use, and when to change frequencies was thorough. Complied with all ICAO, ATC, ACP, JANAP, COMSEC directives, CEOI, and interphone procedures. Applied knowledge to stay ahead of aircraft. Used excellent judgment in when and how to communicate so that essential crew communications are not interrupted. Safety of aircraft/mission not compromised by blocking critical transmissions.

8.4.13.2. Q-. Limited knowledge of frequencies and associated agencies, which radios to use and when to change frequencies; however, could locate the information in a reasonable time. Complied with most ICAO, ATC, ACP, JANAP, COMSEC directives, CEOI, and interphone procedures. Demonstrated limited knowledge to keep up with aircraft. Minor errors in timing of communications. Minor interruptions of other crew positions did not detract from safety or task accomplishment.

8.4.13.3. U. Had unsatisfactory knowledge of frequencies and associated agencies, which radios to use and when to change frequencies. Did not comply with ICAO, ATC, ACP, JANAP, COMSEC directives, CEOI or interphone procedures. Numerous omissions in complying with directives. Was unable to keep up with aircraft. Made transmissions without regard to other radio/interphone activities. Missed/incorrect transmissions or interruption of other transmissions/receptions compromised safety or mission/task accomplishment.

8.4.14. Area 262. Equipment Troubleshooting.

8.4.14.1. Q. Knowledge of radio communication and navigation equipment was thorough. Able to analyze and isolate malfunctions. Immediately identified work-around solutions if they existed.

8.4.14.2. Q-. Had an adequate knowledge of radio communications and navigation equipment. Occasionally able to identify work-around solutions if they existed.

8.4.14.3. U. Lacked knowledge of radio communications and navigation equipment. Was unable to identify malfunctioning equipment.

8.4.15. Area 263. Knowledge/Operation of Direction Finding (DF) Equipment

8.4.15.1. Q. Thorough knowledge and understanding of DF equipment. Operated throughout the mission. Acquisition of signal, run-ins, and headings were timely. Properly called station passage. Able to analyze/isolate malfunctions and immediately develop work around solutions.

8.4.15.2. Q-. Limited knowledge and understanding of DF equipment. Operated with hesitation throughout the mission. Acquisition of signal, run-ins, and headings were slow. Station passage was early or late. Slow to analyze/isolate malfunctions, or develop work around procedures.

8.4.15.3. U. Lacked knowledge and understanding DF Equipment, its subsystems, or procedures outlined in applicable instructions and manuals. Operated incorrectly throughout the mission. Acquisition of signal, run-ins, and headings were confusing. Station passage was significantly early or late. Did not properly analyze/isolate malfunctions or develop work around solutions.

8.4.16. Areas 264. Systems Knowledge.

8.4.16.1.

NOTE:

Evaluate the following areas: SCNS; HF, VHF, UHF equipment; satellite communications, secure communications; FM radio(s); interphone system; public address; IFF/SIF equipment; navigation equipment; emergency locator beacon (ELT).

8.4.16.2. Q. Thorough knowledge of system operation, to include operating limits. Operated/monitored system operation and warning devices to maintain secure operation. Able to quickly locate published information in manuals and instructions for those items not requiring memorization.

8.4.16.3. Q-. Limited knowledge of system operation, to include operating limits. Operated/monitored system but did not immediately apply appropriate procedure(s) for malfunctions. Some difficulty in locating published information in manuals and instructions for items not requiring memorization.

8.4.16.4. U. Lacked knowledge of system operation, to include operating limits. Could not correctly operate/monitor system or did not apply appropriate procedure(s) for malfunctions. Could not locate published information in manuals and instructions for items not requiring memorization.

8.4.17. Area 265. DZ/LZ Communications.

8.4.17.1. Q. Monitored aircraft position; well ahead and prepared to contact the DZ/LZ at the earliest possible time. Always had multiple radio frequencies available to establish contact. Ensured contact throughout objective area operations. Communications were clear and concise.

8.4.17.2. Q-. Monitored aircraft position and was prepared to make contact with the DZ/LZ prior to arrival. Usually had multiple radio frequencies available to establish contact. Ensured contact throughout objective area operations. Communications were clear but excessively long.

8.4.17.3. U. Failed to monitor aircraft position; not prepared to make contact with the DZ/LZ prior to arrival. Failed to have multiple radio frequencies available to establish contact. Did not ensure contact throughout objective area operations. Communications were not clear and concise.

8.4.18. Area 266. NVG Usage/Limitations.

8.4.18.1. Q. Correctly described the use/limitations of night vision goggles (NVGs). Properly preflighted, handled, and used NVGs during the flight.

8.4.18.2. Q-. Minor omissions or deviations in describing the use/limitations of NVGs. Did not properly preflight, handle, or use NVGs during the flight, but caused no damage to equipment. Mission success not negatively affected.

8.4.18.3. U. Procedures for using NVGs were incorrect. Caused damage to equipment. Mission unsuccessful as a result of improper NVG usage.

8.4.19. Area 267. Scanner Duties.

8.4.19.1. Q. Thorough knowledge of scanning procedures for threats, calling out threats and appropriate aircraft defensive maneuvers. Assisted loadmaster/navigator as required. Understood appropriate defensive countermeasures.

8.4.19.2. Q-. Limited knowledge of scanning procedures for threats, calling out threats or appropriate aircraft defensive maneuver. Assisted loadmaster/navigator when prompted. Had some understanding of appropriate defensive countermeasures.

8.4.19.3. U. Lacked knowledge of scanning procedures for threats, calling out threats or appropriate aircraft defensive maneuver. Did not assist loadmaster/navigator. Lacked understanding of appropriate defensive countermeasures.

8.4.20. Area 268. DAMA/Data System(s) Operations.

8.4.20.1. (Added) Q. Knowledgeable of DAMA/Data operations, system and initialization procedures. With use of a guide, was able to communicate on system without error.

8.4.20.2. (Added) Q-. Knowledgeable of DAMA/Data system but has difficulty during initialization procedures. With use of guide, was able to communicate on the system with minor errors.

8.4.20.3. (Added) U. Lacked knowledge of DAMA/Data system or required assistance in initialization procedures. Unable to communicate on the system without errors.

8.4.21. Areas 269-300. Reserved for future use.

8.5. DELETED.

CARROL H. CHANDLER, Lt General, USAF
DCS, Operations, Plans & Requirements

Attachment 1

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Abbreviations and Acronyms

AFI - Air Force instruction

ANG - Air National Guard

ARCP - air refueling control point

ASR - airport surveillance radar

CARP - computed air release point

CDS - container delivery system

CEOI - communication electronic operating instructions

COMSEC - communications security

CRL - container ramp load

CRM - crew resource management

CSAR - combat search and rescue

DF - direction finding

DR - dead reckoning

ECU - environmental control unit

ELT - emergency locator transmitter

EMCON - emission control

EP - emergency procedures

EPE - emergency procedures evaluation

ETA - estimated time of arrival

FCIF - flight crew information file

FTU - Formal Training Unit

GPS - global positioning system

HAAR - helicopter air to air refueling

HHQ - higher headquarters

HQ - headquarters
IAW - in accordance with
ICAO - International Civil Aviation Organization
IFF - identification, friend or foe
ILS - instrument landing system
INS - inertial navigation system
IP - instructor pilot
KIAS - knots indicated airspeed
MAJCOM - major command
MDA - minimum descent altitude
MPD - mobility pilot development
MSN - mission
N/A - not available or not applicable
NRQ - navigator re-qualification nm nautical mile
NOTAM - notice to airman
OGV - operations group standardization/evaluation
ORM - operational risk management
PAR - precision approach
QUAL - qualification
RNP - required navigation performance
SAR - search and rescue
SATB - standard airdrop training bundle
SCA - self-contained approach
SCNS - self-contained navigation system
SINGARS - single channel ground/air radio system
SNS - satellite navigation station
STAN/EVAL - standardization/evaluation
TAS - true airspeed
TOLD - take-off and landing data
TOT - time on target
VDP - visual descent point
VFR - visual flight rules

VOR - very high frequency omni-directional range station

WST - weapons system trainer□

Terms

Deviation— Performing an action not in sequence with current procedures, directives, or instructions. Performing action(s) out of sequence due to unusual or extenuating circumstances is not considered a deviation. In some cases, momentary deviations may be acceptable; however, cumulative momentary deviations will be considered in determining the overall qualification level.

Major Error— Departure from standard procedures. Performing incorrect actions or recording incorrect information. Error detracted from mission accomplishment, adversely affected use of equipment, or violated safety.

Minor Error— Departure from standard procedures. Performing incorrect actions or recording incorrect information. Error did not detract from mission accomplishment, adversely affect use of equipment, or violate safety.