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SECRETARY OF THE AIR FORCE**

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Flying Operations

UH-1N AIRCREW EVALUATION CRITERIA

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This instruction implements AFGPD 11-2, *Aircrew Operations*, and AFGPD 11-4, *Aviation Service*. It establishes evaluation criteria for initial and periodic aircrew qualification for all UH-1N units. It is used in conjunction with Air Force Instruction (AFI) 11-202V2, *Aircrew Standardization/Evaluation Program*, and Major Command (MAJCOM) supplements thereto. This publication applies to the Air Force Reserve Command (AFRC) and to the Air National Guard (ANG). Submit suggested improvements to this instruction on AF Form 847, *Recommendation for Change of Publication*, through standardization/evaluation channels, to AFGSC/A3HT, 245 Davis Ave East, Suite 248, Building 5546 Barksdale AFB, LA 71110. The Privacy Act of 1974 applies to certain information gathered pursuant to this volume. This publication requires the collection and or maintenance of information protected by the Privacy Act of 1974. System of Records Notice F011 AF XO A, Aviation Resource Management System (ARMS) covers required information. The authority for maintenance of ARMS is Title 37 U.S.C. 301a (Incentive Pay), Public Law 92-204, Section 715 (Appropriations Act for 1973), Public Laws 93-570 (Appropriations Act for 1974), 93-294 (Aviation Career Incentive Act of 1974), and Executive Order 9397 as amended by Executive Order 13478, Amendments to Executive Order 9397 Relating to Federal Agency Use of Social Security Numbers, November 18, 2008. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, Management of Records, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at <https://www.my.af.mil/afrims/afrims/afrims/rims.cfm> The use of the name or mark of any

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SUMMARY OF CHANGES

This document has been substantially revised and must be completely reviewed. Major changes include: 1) Simulator deleted for Requalification Evaluations 2) Ground phase requirement added for Instrument Evaluations 3) 11-2UH-1N V3 and CL-1 added to required publications 4) Change to Senior Officer Requirements 5) **Table 1.1** Formation/NVG Formation Qualification added for all crew positions 6) **Table 1.1** Navigation removed 7) **Table 1.1** Non Hoist AIE certification added for Pilots 8) Pilot parameters for weigh and balance 9) National Airspace System added to Area-12 10) Verbiage added to address manual fuel during high density altitude operations 11) Change to Autorotation requirements 12) Instrument Departure parameters changed 13) PAR Approach added 14) Tactical Approach parameters changed 15) Live AIE added for initial evaluations and certifications 16) FE evaluated on AIE every recurring mission evaluation 17) FE parameter for Takeoff 18) Reporting requirements for Q-2/Q-3.

Chapter 1—GENERAL INFORMATION	5
1.1. General.	5
1.2. Responsibilities.	5
1.3. Evaluators.	5
1.4. Evaluation Procedures.	5
1.5. Grading Instructions.	6
1.6. Critical Areas.	7
1.7. Evaluations.	7
1.8. Ground Phase Requisites.	7
1.9. Examinations.	7
1.10. Emergency Procedures Evaluation (EPE).	7
1.11. Publications Check.	9
1.12. Cockpit/Crew Resource Management (CRM).	9
1.13. Formal Course Evaluations.	9
1.14. Mission Evaluations.	9
1.15. SPOT Evaluations.	10
1.16. Verbal Evaluation of Sub-areas.	10
1.17. Unsatisfactory Performance.	10
1.18. Additional Training.	11
1.19. Senior Officer Requirements.	11

	1.20.	AF IMT 3862, Flight Evaluation Worksheet.	11
	1.21.	Qualifications and Certifications.	11
Table	1.1.	Qualifications and Certifications1.	11
	1.22.	Waivers.	12
	1.23.	Deviations.	13
	1.24.	Supplements/Local Procedures.	13
Chapter 2—PILOT EVALUATIONS			14
	2.1.	General.	14
	2.2.	Evaluation Requirements.	14
Table	2.1.	Pilot QUAL/INSTM/MSN Event Requirements Table (T-2).	15
	2.3.	Flight Evaluation Criteria.	16
	2.4.	General Phase.	16
	2.5.	Qualification Phase.	24
	2.6.	Instrument Phase.	28
	2.7.	Mission Phase.	32
Chapter 3—FLIGHT ENGINEER (FE) EVALUATIONS			43
	3.1.	Crew Positions.	43
	3.2.	Evaluation Requirements.	43
Table	3.1.	Flight Engineer QUAL/MSN Event Requirements Table (T-2).	44
	3.3.	Flight Evaluation Criteria.	45
	3.4.	General Phase.	46
	3.5.	Qualification Phase:	53
	3.6.	Mission Phase.	56
Chapter 4—INSTRUCTOR EVALUATIONS			65
	4.1.	General.	65
	4.2.	Requirements.	65
Table	4.1.	Instructor Evaluation Event Requirements Table (all Crew Positions) (T-2)	65
	4.3.	Instructor Grading Criteria.	65
Chapter 5—FLIGHT EXAMINER OBJECTIVITY EVALUATIONS			68
	5.1.	General.	68
	5.2.	Requirements.	68
Table	5.1.	Flight Examiner Event Requirements Table (all Crew Positions) (T-2)	68

5.3. Evaluator Grading Criteria.	69
Chapter 6—LOCAL PROCEDURES	71
6.1. General.	71
Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION	72

Chapter 1

GENERAL INFORMATION

1.1. General. This instruction establishes requirements and grading criteria for ground and flight phases of initial, requalification and periodic flight evaluations. Aircrew evaluations will be conducted in accordance with (IAW) this instruction and AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, as supplemented. Specific areas for evaluation are prescribed to ensure an accurate assessment of proficiency and capabilities of aircrews. (T-1) Flight examiners and instructors will use this AFI while conducting/preparing for aircrew evaluations.

1.1.1. Due to the diverse nature of UH-1N units, all references to MAJCOM, NAF or a particular MAJCOM or NAF office are intended to mean that office or equivalent. MAJCOM supplements to this AFI will indicate if there is a different office of responsibility.

1.1.2. For purposes of this instruction, the Air Force District of Washington (AFDW) and Air National Guard (ANG) are considered a MAJCOM.

1.2. Responsibilities.

1.2.1. Air Force Global Strike Command (AFGSC).

1.2.1.1. Develops this instruction consistent with the USAF Standardization and Evaluation Program and unique requirements, according to AFDPD 11-2, *Aircrew Operations*. AFGSC will coordinate operational procedures, evaluation criteria and guidance published in this instruction with user MAJCOMs. (T-2)

1.2.1.2. Convene conferences and working groups, as necessary to review and improve UH-1N standardization/evaluation procedures. (T-2)

1.2.1.3. Develops, in coordination with user MAJCOMs, and publishes a UH-1N Master Question File (MQF). (T-2)

1.3. Evaluators.

1.3.1. Evaluators must be instructor qualified in a given event prior to acting as an evaluator in the event. (T-2)

1.3.2. Evaluators who subsequently add instructor certified events listed in AFI 11-2UH-1NV1, *UH-1N Helicopter Aircrew Training*, or qualifications are automatically certified to evaluate the new certification(s)/qualification(s). (T-2)

1.4. Evaluation Procedures.

1.4.1. Evaluators will use evaluation criteria contained in each crew chapter for conducting all flight and emergency procedures evaluations (EPEs). To ensure standard and objective evaluations, evaluators will be thoroughly familiar with the prescribed evaluation criteria.

1.4.2. Prior to the aircrew briefing, the evaluator will brief the examinee on specific evaluation areas, purpose and conduct of the evaluation, and, if applicable, will inform the Aircraft Commander of special requirements. The examinee will execute/delegate appropriate flight planning/mission preparation duties. Evaluators will be furnished copies of

mission materials to include necessary maps (only one map per aircraft is required), flight logs, etc.

1.4.3. Evaluators will ensure all required training and documentation is complete prior to conducting an evaluation. (T-3)

1.4.4. Unless specified, the examinee or evaluator may fly in any seat (within their crew qualification), to include the cabin, that will best enable the evaluator to conduct a thorough evaluation. **EXCEPTION:** During pilot initial or requalification evaluations a qualified evaluator will be at a set of controls. (T-2)

1.4.5. Evaluators will not intentionally fail any equipment during flight evaluations, but may deny the use of systems not affecting safety of flight. (Exception: During evaluations conducted in ATDs, equipment may be failed or disabled.) (T-2)

1.4.6. Evaluators will use a locally produced AF IMT 3862, *Flight Evaluation Worksheet*, or equivalent, while performing the flight evaluation/emergency procedure evaluation (EPE). (T-3)

1.4.7. When it is impossible or impractical to evaluate a required area in flight, the Flight Evaluator (FE) may elect to evaluate area(s) by an alternate method (simulator, procedural trainer, or verbal examination following guidance in para. 1.16. Verbal Evaluation of Sub-areas). Alternate methods are not authorized for initial evaluations.

1.4.8. During an actual emergency, the evaluator will determine when to terminate an evaluation.

1.4.9. The evaluator will thoroughly debrief all aspects of the evaluation. This debrief will include the overall rating, specific deviations, area grades assigned (if other than qualified), and required additional training (if applicable). (T-2)

1.5. Grading Instructions. To ensure standard and objective evaluations, evaluators will be thoroughly familiar with the prescribed evaluation criteria. Evaluator judgment will be the determining factor in arriving at the overall grade.

1.5.1. Grading instructions and performance criteria are contained in AFI 11-202V2 and crew chapters in this instruction.

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

1.5.3. Areas not applicable to the unit or mission need not be performed; however, all areas performed will be graded. (T-2)

1.5.4. The evaluator will compare examinee performance for each required area accomplished during the evaluation with the evaluation criteria provided in each crew chapter and assign an appropriate grade. Derive the overall flight evaluation grade from the area grades based on observed events and tasks IAW this publication.

1.5.5. Evaluator judgment will be exercised when the wording of areas is subjective and when specific situations are not covered.

1.5.6. The AF Form 8, Section IV., Examiner's Remarks, A. Mission Description., will be of sufficient content to verify that the required areas for the evaluation were completed.

1.6. Critical Areas. Critical areas require adequate accomplishment by the aircrew member in order to successfully achieve the mission objectives. If an aircrew member receives an unqualified grade in any critical area, the overall grade for the evaluation will also be unqualified. (T-1) Critical areas are identified by (**CRITICAL**) in the area title.

1.7. Evaluations. Evaluators will conduct flight evaluations as specified in AFI 11-202V2, the specific crew position chapter and associated tables of this volume. (T-2) The evaluator will not conduct two consecutive evaluations in the simulator. (T-2) (**EXCEPTION:** Instrument (INSTM) evaluations). Examinees must accomplish Initial Qualification (QUAL), Initial Mission (INIT MSN) and Requalification (RQ QUAL or RQ MSN) evaluations in the aircraft. (T-2)

1.8. Ground Phase Requisites. IAW AFI 11-202V2 and MAJCOM supplements, during all qualification evaluations, crewmembers are required to complete a Qualification Open Book examination, Qualification Closed Book examination, EPE and Boldface examination. (T-1) All pilots must complete an Instrument examination during all instrument evaluations. (T-1) All crew members must complete a Mission Open Book and EPE during all mission evaluations. (T-1)

1.9. Examinations. Conduct examinations IAW AFI 11-202V2 and MAJCOM supplements. (T-1)

1.9.1. Units may generate a unique test for each crew member using appropriate computer software programs. The minimum numbers of test questions are:

1.9.1.1. Qualification Open Book examination (Qual Open), (Pilot (P)/Flight Engineer (FE)) — 50 questions.

1.9.1.2. Qualification Closed Book examination (Qual Closed) (P/FE) — 25 questions.

1.9.1.3. Mission Open Book examination (Msn Open) (P/FE) — 50 questions.

1.9.1.4. Instrument Open Book examination (Instrument)(P) — 50 questions.

1.9.1.5. Flight Surgeon — as required by AFMOA/SG3P.

1.9.2. Boldface Exam. IAW T.O. 1H-1(U)N-1 and AFI 11-202V2.

1.9.2.1. Q. Able to recite/write the proper emergency boldface actions in the correct sequence with no discrepancies (spelling error is ok as long as intent does not change).

1.9.2.2. U. Failed to recite/write emergency boldface items in the correct sequence. Discrepancies in the procedure.

1.10. Emergency Procedures Evaluation (EPE). The purpose of the EPE is to discuss systems knowledge and evaluate emergency procedures, allowing for an in-depth investigation of systems knowledge and scenario driven circumstances. An EPE is a requisite for all QUAL and MSN evaluations. (T-1) This evaluation will include areas commensurate with the examinee's Ready Aircrew Program (RAP) training level. EPEs may be performed individually or as a crew, in-flight, in a simulator, verbally, or by another method determined by the examiner or unit

standardization/evaluation. Operations Group standardization/evaluation may develop EPE guides for each crew position for flight examiner use.

1.10.1. EPEs should be scenario driven, tailored to the specific crew position, and emphasize emergency procedures, special interest items and systems knowledge. Evaluators may use one continuous scenario throughout the EPE or different scenarios for each emergency procedure.

1.10.2. Examinees may use publications that are normally available in flight. The examinee must recall all boldface items from memory IAW AFI 11-202V2. (T-1)

1.10.3. Include the following items on all EPEs: (T-2)

1.10.3.1. Aircraft general knowledge including operation of systems, limitations, and capabilities.

1.10.3.2. Crew coordination and risk management.

1.10.3.3. Mission evaluation scenarios should be tailored to unit tasking and any current special interest items. The following additional items will be included on the EPE given as a requisite to the mission evaluation: (T-2)

1.10.3.3.1. Mission equipment malfunctions and emergencies.

1.10.3.3.2. Evasive action/threat reaction/degradation, as applicable to unit mission.

1.10.4. The following additional items will be included on pilot EPEs given as a requisite for the QUAL/INSTM combined evaluation. (T-2)

1.10.4.1. Procedures and publications required to proceed to alternate/divert airfields.

1.10.4.2. Unusual attitude recoveries. This also fulfills the Area 31 (Unusual Attitudes) requirement if accomplished in a simulator.

1.10.5. The evaluator will assign an overall grade (1, 2, or 3) for the EPE in the Qualification Ground Phase Block of the AF Form 8 IAW the qualification levels in paragraphs 1.10.5.1. – 1.10.5.3. (T-1)

1.10.5.1. **(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.

1.10.5.2. **(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.

1.10.5.3. **(3)** Unsatisfactory systems/procedural knowledge. Failed 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. Publications Check. Units may specify additional publications to be evaluated in a unit supplement. The personal copies of flight publications that are issued (electronic or paper copy) by MAJCOMS that will be checked for currency and proper posting are: (T-2)

1.11.1. T.O. 1H-1(U)N-1, *UH-1N Flight Manual* (All)

1.11.2. T.O. 1H-1(U)N-1 CL-1, *Pilot's Flight Crew Checklist* (All)

1.11.3. T.O. 1H-1(U)N-1 CL-2, *Crewmember's Flight Crew Checklist* (All, if applicable to unit assigned mission equipment)

1.11.4. T.O. 1H-1(U)N-5, *Basic Weight Checklist and Loading Data* (FE)

1.11.5. AFI 11-2UH-1NV3, *UH-1N Helicopter Operations Procedures* (All)

1.11.6. AFI 11-2UH-1NV3 CL-1, *UH-1N Helicopter Crew Briefing Guides and Checklists* (All)

1.11.7. AFI 11-202V3, *General Flight Rules* (All)

1.11.8. AFMAN 11-217V1, *Instrument Flight Procedures* (Pilot)

1.11.9. Local in-flight guide/SOPs (All, if applicable)

1.11.10. AFMAN 11-217V2, *Visual Flight Procedures* (Pilot)

1.12. Cockpit/Crew Resource Management (CRM). In accordance with AFI 11-290, *Cockpit/Crew Resource Management Training Program*, crew resource management skills will be evaluated during initial and periodic evaluations. (T-1) CRM skills are integral to all phases of flight; therefore, no specific area titled CRM exists. CRM skills are imbedded within specific grading criteria (mission planning, airmanship/situational awareness, crew coordination, communication, risk management/decision making, task management, and briefing/debriefing) 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.

1.13. Formal Course Evaluations. Conduct evaluations IAW syllabus mission profile guidelines, or on a mission profile developed from syllabus training objectives. Formal course guidelines may be modified based on local operating considerations or evaluator judgment. Grade training objectives and related areas using the performance criteria in this volume. (T-3)

1.14. Mission Evaluations. Mission evaluations will normally be flown using unit formations and tactics. Examinees will be evaluated in the position of their highest qualification. If briefed, at the evaluator's discretion, portions may be flown in another position, but the emphasis is to have examinees evaluated at their highest qualification level. (T-2)

1.14.1. Evaluations during exercises or non-contingency deployments are encouraged. Evaluations during contingencies are authorized with the concurrence of OG/CC or equivalent. (T-3)

1.14.2. CMR aircrew should accomplish their periodic mission evaluation during the unit's most demanding sortie (i.e. Night Vision Goggles (NVG) tactical, NVG Formation/Tactical, etc.). At a minimum, aircrews will be evaluated on NVG mission events every other mission evaluation cycle. (T-2)

1.14.3. For CMR aircrew to complete an evaluation, all areas in the crew event tables (**Table 2.1**, **Table 3.1**, and **Table 4.1**), annotated with an “R” must be accomplished. BMC aircrew will only be evaluated on those missions routinely performed and in those areas which they are qualified to perform unsupervised. Only those areas the examinee is qualified/certified to perform or areas gaining requalification in will be evaluated. (T-2)

1.14.4. Evaluation profiles will be based on Designed Operational Capability (DOC) tasking, training sorties, and operational missions normally flown by the unit. (T-1)

1.14.5. All aircrew will complete a mission evaluation prior to being designated as BMC. (T-2)

1.14.6. Difference Qualification. Upon successful completion of the Qualification (QUAL) and Instrument (INSTM) flight evaluations, existing Mission (MSN) qualifications and certifications (except FCF and evaluator certification) transfer between H-1 series aircraft (or as specified by MAJCOM supplement).

1.15. SPOT Evaluations. Any flight examiner may administer an aircrew SPOT evaluation. Instructional ability should be evaluated during the SPOT evaluation (if applicable). If the examiner is administering a SPOT evaluation to a person in another aircrew specialty, only boldface, safety/judgment, aircrew discipline, and airmanship/situational awareness will be evaluated. (T-2)

1.16. Verbal Evaluation of Sub-areas.

1.16.1. For initial evaluations, all required items must be performed by actual demonstration. (T-2)

1.16.2. During requalification/periodic/recurring evaluations, when it is impossible or impractical to evaluate a required area in-flight, the evaluator may elect to evaluate the area(s) by an alternate method (simulator, procedural trainer, or verbal examination). Document why required area(s) were not evaluated in-flight and the alternate method of evaluation used in the additional comments paragraph of the examiner’s remarks section of the AF Form 8, *Certificate of Aircrew Qualification*. (T-2) If, in the evaluator’s judgment, a required item cannot be adequately evaluated by an alternate method, complete the evaluation on an additional flight.

1.17. Unsatisfactory Performance.

1.17.1. If a flight examiner observes an aircrew member jeopardizing safety, the examiner will assume the duties of that aircrew member if in like crew position. (T-1) If not in like crew position, the flight may continue if crew compliment allows. This does not mean the examiner must assume the examinee’s position any time unsatisfactory performance is observed.

1.17.1.1. 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. (T-2)

1.17.2. Evaluators must report unsatisfactory deviations/discrepancies from established procedures/directives in any area, regardless of the individual’s crew specialty, to the

squadron commander, operations officer and/or group commander, along with evaluator's recommendation for corrective action, IAW AFI 11-202V2 and MAJCOM supplement. (T-2)

1.17.3. Notify the examinee's squadron commander and/or operations officer, if available, whenever less than Qualification Level "Q-1" performance is observed. (T-2)

1.18. Additional Training. Flight examiners are responsible for assigning additional training at their discretion. Document additional training and completion IAW AFI 11-202V2 and MAJCOM supplement. (T-2) Any approved training device or medium may be used for additional training.

1.18.1. Additional training may be accomplished on the same flight as the evaluation, provided the unique situation presents a valuable training opportunity and the discrepancy requiring the additional training will not result in overall Q-3 evaluation. This option requires flight examiner discretion and judicious application. The examinee must be informed when the additional training begins and ends. (T-2)

1.19. Senior Officer Requirements. Follow guidance contained in AFI 11-202, Volume 1.

1.19.1. Senior Officers meeting the criteria outlined in AFI 11-202V1, may complete a qualification evaluation. Requisites include Open and Closed Book examinations, instrument examination, Boldface, and EPE. The evaluation shall be accomplished from the left seat. Evaluate appropriate areas in GENERAL, QUALIFICATION, and INSTRUMENT. The evaluation should consist of a variety of instrument approaches and VFR patterns. Autorotation and simulated single engine failure are not required. Annotate the AF Form 8 as a QUAL/INSTM evaluation with an expiration date, crew position —FP, and include a restriction in the comment section, —fly only under the direct supervision of a qualified Instructor Pilot.

1.20. AF IMT 3862, *Flight Evaluation Worksheet*. Units will use AF IMT 3862, or electronic equivalent, as an evaluation worksheet. (T-2)

1.20.1. Units may create separate AF IMT 3862, or electronic equivalent, for each evaluation and crew position. (i.e. Pilot QUAL/INSTM, FE QUAL, etc.). Copy each title, area number and text (in the order illustrated), and shade the appropriate blocks. Units may add special interest items and/or local evaluation requirements as necessary.

1.20.2. The AF IMT 3862, or electronic equivalent, signed by the evaluator, will serve as a temporary evaluation certificate. (T-2) File the worksheet in the aircrew member's Flight Evaluation Folder (FEF) immediately after the flight evaluation as a temporary record of the evaluation results. Maintain until the finished AF Form 8 is added to the FEF, then dispose of properly.

1.21. Qualifications and Certifications. [Table 1.1](#) lists qualifications and certifications for the UH-1N. Units will use the abbreviations listed in [Table 1.1](#) on the AF Form 8 and the AF Form 4348, *USAF Aircrew Certifications* or on a unit certification document. (T-2)

Table 1.1. Qualifications and Certifications¹

<i>QUALIFICATIONS²</i>		
<i>Event Name</i>	<i>Abbreviation</i>	<i>Position</i>
Aerial Gunnery	GUN	FE

NVG Aerial Gunnery	NGUN	FE
Formation	FORM	All
NVG Formation	NFORM	All
Hoist	HST	FE
NVG Hoist	NHST	FE
Instructor	INSTR	All
Remote	REM	All
NVG Remote	NREM	All
Tactical	TAC	All
NVG Tactical	NTAC	All
CERTIFICATIONS		
<i>Event Name</i>	<i>Abbreviation</i>	<i>Position</i>
Aircrew Chemical Defense Ensemble	ACDE	All
Aircraft Commander	AC	Pilot
Alternate Insertion and Extraction	AIE	Pilot
Block 1	BLK1	All
Cargo Sling	SLNG	All
Close Combat Attack	CCA	All
Control Burn	CBN	All
NVG Emergency Procedures	NEP	All
Evaluator	EVL	All
Fast Rope	FR	FE
Fire Bucket	FB	All
Functional Check Flight (AC)	FCF/AC	Pilot
Functional Check Flight (P/FE)	FCF/(P/FE)	All
Hot Refuel	HR	All
HTAWS/TCAD	HTAWS	Pilot
Local Mission Certification	LMC	All
Minor Maintenance	MMX	FE
Mission Commander Certification	MCC	Pilot
Parachute Drop	PARA	All
Rappel	RPL	FE
Rope Ladder	RL	FE
Shipboard Operations	SBO	All
Water Operations	WO	All
NVG Water Operations	NWO	All
NOTES:		
1. Does not apply to Flight Surgeons and Aerial Photographers.		
2. Evaluations completed with NVGs qualify/credit corresponding day events.		

1.22. Waivers. Waiver authority for this publication is MAJCOM/A3 (ANG: ANG/A3), or as indicated by appropriate Tier level. Request waivers to this instruction through applicable command channels. MAJCOMs will provide information copies of approved waivers to AFGSC/A3HT. (T-2) Waiver authority for supplemental guidance will be specified in the supplement.

1.23. Deviations. Do not deviate from the policies and guidance in this AFI, except for safety or when necessary to protect the crew or aircraft from a situation not covered by this AFI and immediate action is required. Report deviations or exceptions without a waiver to MAJCOM standardization/evaluation function; who will notify HQ AFGSC/A3HT for follow-on action, if necessary.

1.24. Supplements/Local Procedures.

1.24.1. Each user MAJCOM may supplement this AFI according to AFD 11-2, *Aircraft Rules and Procedures*. Limit supplemental information to unique requirements only. MAJCOMs may specify unique evaluation items in their appropriate supplement. Supplements and local procedures will not be less restrictive than the provisions of this AFI or the appropriate flight manual. (T-2) MAJCOMs will forward a copy of MAJCOM supplements to AFGSC/A3HT for coordination before publication. (T-2) When supplements are published, send a final copy to AFGSC/A3HT. (T-2)

1.24.1.1. Air Force Reserve Command (AFRC)/Air National Guard (ANG) will coordinate command supplements with the gaining active duty MAJCOM and the active duty NAF with standardization/evaluation oversight responsibility prior to publication/revision. (T-2)

1.24.2. Units are encouraged to supplement this instruction with standard evaluation profiles that best fit the unit's mission, equipment, and location (units use Chapter 6). Supplements and local procedures will not be less restrictive than the provisions of this AFI or the appropriate flight manual. (T-2)

Chapter 2

PILOT EVALUATIONS

2.1. General. Evaluation standards will be administered in accordance with the individual's crew position as listed below:

2.1.1. Basic Aircraft Qualified (BAQ) Pilot (FP)/Mission Pilot (MP). Evaluate in all required areas outlined in **Table 2.1**, unless indicated otherwise. (T-2)

2.1.1.1. MPs certified as Aircraft Commanders will be evaluated as aircraft commanders and formation lead (if applicable). This implies they have command of the aircraft, crew, and formation. (T-2)

2.1.2. Instructor Pilots (IP) are evaluated to the standards outlined in **Table 2.1** and **Table 4.1** (T-2)

2.1.3. Evaluator Pilots (EP) are evaluated to the standards outlined in **Table 2.1**, **Table 4.1** and AFI 11-202V2. (T-2)

2.2. Evaluation Requirements.

2.2.1. Qualification (QUAL).

2.2.1.1. See **Table 2.1** for required QUAL evaluation areas.

2.2.1.2. Requisites. Examinees must complete the following requisites: Qualification Open and Qualification Closed Book examinations, EPE and BOLDFACE examination (prerequisite for initial and requalification evaluations). (T-2)

2.2.1.3. Profile. For instructor qualification evaluations (initial/requalification/recurring), evaluators must evaluate 180 degree turning autorotations. (T-2)

2.2.2. Instrument (INSTM).

2.2.2.1. See **Table 2.1** for required INSTM evaluation areas.

2.2.2.2. Requisites. Instrument exam (prerequisite for initial and requalification evaluations). (T-2)

2.2.3. Mission (MSN)

2.2.3.1. See **Table 2.1** for required MSN evaluation areas.

2.2.3.2. Requisites. Mission Open Book examination and EPE. (T-2)

2.2.3.3. Profile. Evaluations should be accomplished at night, if possible. Scenarios that represent the unit Designed Operational Capabilities (DOC) tasking will be used. Evaluate the training/flight position/certifications as well as basic airmanship of the examinee. For initial/requalification mission evaluations, every mission qualification (FORM, NFORM, REM, NREM, TAC, NTAC) that the MAJCOM executes will be evaluated to be considered qualified to fly that event. Recurring/periodic evaluations should be a representative sample of mission events. (T-2)

Table 2.1. Pilot QUAL/INSTM/MSN Event Requirements Table (T-2).

<i>Area</i>	<i>Grading Area</i>	<i>QUAL</i>	<i>INSTM</i>	<i>MSN</i>
	GENERAL			
1	Knowledge of Directives and Forms	R	R	R
2	Boldface Emergencies (CRITICAL)	R	O	O
3	Publications Check	R	O	O
4	Life Support Systems/Egress	R	R	R
5	Flight Planning	R	R	R
6	Weight and Balance/Take-off and Landing Data	R	R	R
7	Briefings/Debriefings	R	R	R
8	Safety/Judgment (CRITICAL)	R	R	R
9	Aircrew Discipline (CRITICAL)	R	R	R
10	Airmanship/Situational Awareness (CRITICAL)	R	R	R
11	Systems Operation/Knowledge/Limitations/National Airspace System	R	R	R
12	Preflight/Aircraft Run-Up	R	R	R
13	Use of Checklists	R	R	R
14	Crew Coordination	R	R	R
15	Risk Management/Decision Making	R	R	R
16	Task Management	R	R	R
17	Communication/ATC Procedures	R	R	R
18	Scanning/Clearing	R	R	R
19	After Landing and Post Flight Responsibilities	R	R	R
	QUALIFICATION			
20	Hover/Taxi	R		
21	Takeoff	R		
22	Approaches/Landings	R		
23	Traffic Pattern	R		
24	Single Hydraulic Failure	R		
25	Manual Fuel	R		
26	Single Engine Failure	R		
27	Autorotations			
27a	Straight Ahead	R		
27b	90 Degree Turning	R		
27c	180 Degree Turning (IP Only)	R		
28	Refuel	O		
29	Ground Handling/Support Equipment	O		
<i>Area</i>	<i>Grading Area</i>	<i>QUAL</i>	<i>INSTM</i>	<i>MSN</i>
	INSTRUMENTS			
30	Unusual Attitude Recovery		O	
31	Instrument Departure		R	
32	Use of NAVAIDs/Navigation		R	
33	Holding Procedures		R	

34	Non-Precision Approach		R	
35	Precision Approach		R	
36	Missed Approach		R	
37	Circling Procedures		O	
38	Final Approach and Landing		O	
	MISSION			
39	Mission Planning			R
40	Classified/Sensitive Material/Operations Security			R
41	Mission Execution			R
42	Cargo/Passenger Loading/Offloading and Tiedown			R
43	Terrain/Flight Navigation			R
44	Terminal Area Operations			R
45	Formation			1
46	Tactical Employment Procedures			2
47	Tactical Low Level Operations/Navigation			2
48	Tactical Approach and Landing			2
49	Threat Avoidance/Tactics/Countermeasures			2
50	Time On Target (TOT)			2
51	NVG Usage/Limitations			3
52	Alternate Insertion/Extraction Operations			O
53	Search Procedures			O
54	Divert Procedures			O
55	Authentication Procedures			O
56	Close Combat Attack			O
57	Cargo Sling			O
58	Fire Bucket			O
59	Water Operations			O
Legend:				
R—Required				
O—Optional				
1 – Required for Formation Qualification + Area 44 or 48 (see paragraph 2.2.3.3.)				
2 – Required for Tactical Qualification (see paragraph 2.2.3.3.)				
3 – Required for NVG Qualifications (NREM, NFORM, NTAC) (see paragraph 2.2.3.3.)				

2.3. Flight Evaluation Criteria. This section contains evaluation criteria for conducting pilot flight evaluations. These evaluations will be conducted with the examinee in their assigned crew position. This criterion serves as a grading guide for evaluators. (T-2)

2.4. General Phase.

2.4.1. Area 1 — Knowledge of Directives and Forms.

2.4.1.1. Q. Prepared and completed mission in compliance with existing instructions and directives. Knowledgeable of all applicable directives, both higher headquarters (HHQ) and local. Demonstrated knowledge of operating procedures and restrictions and where to find them in the correct publications. All required forms and/or flight plans were complete, accurate, readable, and accomplished on time IAW applicable directives.

Relayed an accurate debrief of significant events to applicable agencies (Intel, Weather, Maintenance, etc.).

2.4.1.2. Q-. Knowledge of capabilities, approved operating procedures, and rules is marginal in some areas but did not impact safe/effective mission accomplishment. Unsure of directives and/or had difficulty locating information in appropriate publications. 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.

2.4.1.3. U. Unaware of 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. Did not accomplish required forms and/or flight plans. Omitted or incorrectly reported significant information due to major errors or omissions.

2.4.2. Area 2 — Boldface Emergencies (CRITICAL): (Note: may be evaluated in-flight, simulator or in a static aircraft).

2.4.2.1. Q. Correct and timely response. Satisfactory performance of the corrective action. The crewmember pointed without hesitation to, and knew the function of, all switches and controls required for all critical action emergency procedures for his/her crew position.

2.4.2.2. U. Incorrect sequence, unsatisfactory/untimely response, or unsatisfactory performance of the corrective action. The crewmember could not, without hesitation, identify or explain the function of all switches and controls required for all critical action emergency procedures for his/her crew position.

2.4.3. DELETED

2.4.3.1. DELETED

2.4.3.2. DELETED

2.4.3.3. DELETED

2.4.4. Area 3 — Publications Check. Conduct a thorough review of paper or electronic publications required by Chapter 1.

2.4.4.1. Q. Publications were current, contain all supplements/changes, and are properly posted.

2.4.4.2. Q-. Publications contained deficiencies that would not impact flight safety or mission accomplishment.

2.4.4.3. U. Publications were out dated and/or contained deficiencies that would impact flight safety or mission accomplishment.

2.4.5. Area 4 — Life Support Systems/Egress.

2.4.5.1. Q. Displayed thorough knowledge of location and use of life support systems and equipment. Demonstrated and emphasized the proper operating procedures used to operate aircraft egress devices such as doors, windows, hatches, life rafts, etc.

2.4.5.2. Q-. Limited knowledge of location and use of life support systems and equipment. Unsure of the proper operating procedures used to operate some of the aircraft egress devices.

2.4.5.3. U. Displayed unsatisfactory knowledge of location and use of life support systems and equipment. Unsatisfactory knowledge of aircraft egress procedures.

2.4.6. Area 5 — Flight Planning.

2.4.6.1. Q. Clearly defined the mission overview and mission goals. Provided specific information on required tasks. Solicited feedback from other crew members to ensure understanding of mission requirements. Thoroughly critiqued plans to identify potential problem areas and ensured all had understanding of possible contingencies. Checked all factors applicable to flight such as Flight Information Publication, weather, Notice To Airman, alternate airfields, flight logs, weight and balance, 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/read files.

2.4.6.2. 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.

2.4.6.3. U. Did not define the mission overview and goals. Lack of specific information on required tasks. Did not solicit feedback from other crew members 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.

2.4.7. Area 6 — Weight and Balance/Take-off and Landing Data (W&B/TOLD).

2.4.7.1. Q. Correctly computed or verified the W&B/TOLD data using applicable performance charts and corrections for existing field conditions. Was fully knowledgeable of W&B/TOLD calculations. If no, flight engineer is present, the following criteria will be used:

2.4.7.1.1. W&B Criteria.

2.4.7.1.1.1. Takeoff or Landing Gross Weights +/- 100 lbs.

2.4.7.1.1.2. Center of Gravity +/- 0.1 inches.

2.4.7.1.2. TOLD Criteria.

2.4.7.1.2.1. Power Available: +/- 2%

2.4.7.1.2.2. Power Required: +/- 2% (5 foot & OGE only)

2.4.7.1.2.3. Safe Single Engine Airspeed (Min/Max): +/- 2 knots

2.4.7.1.2.4. Velocity Never Exceed (Vne): +/- 2 knots

2.4.7.2. Q-. Minor errors in the appropriate use of W&B publications and performance charts resulting in errors or omissions that could degrade mission effectiveness. Knowledge weight and balance publications and performance charts is marginal in some areas. Errors or omissions would not have compromised safety of flight. Could not verify computed W&B and TOLD correctly. If no, flight engineer is present, the following criteria will be used:

2.4.7.2.1. W&B Criteria.

2.4.7.2.1.1. Takeoff or Landing Gross Weights: >100 lbs but < 200 lbs

2.4.7.2.1.2. Center of Gravity: > 0.2 but < 0.3 inches

2.4.7.2.2. TOLD Criteria.

2.4.7.2.2.1. Power Available: > 3% but < 4%

2.4.7.2.2.2. Power Required: > 3% but < 4% (5 foot and OGE only)

2.4.7.2.2.3. 2.4.7.2.2.3. Safe Single Engine Airspeed (Min/Max): +/- 3 knots

2.4.7.2.2.4. Velocity Never Exceed (Vne): > 3 but < 5 knots

2.4.7.3. U. Major errors or omissions that would preclude safe and effective mission accomplishment. Failed to compute or verify W&B/TOLD data. Limited knowledge of W&B/TOLD calculations.

2.4.8. Area 7 — Briefings/Debriefings.

2.4.8.1. Q. Ensured briefing contained all applicable information. Prepared at briefing time. Briefings effectively organized and professionally presented in a logical sequence. Presented all objectives, training events and special interest items. Effectively used available briefing aids. Debriefed mission using specific, non-threatening positive and negative feedback of crew 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.

2.4.8.2. Q-. Omitted items pertinent but not critical to the mission. 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 crew performance. Did not consistently seek input from others. Incomplete or inadequate re-cap of key points and comparison of mission results to mission objectives.

2.4.8.3. U. Failed to conduct/attend required briefings. Failed to use appropriate briefing aids. Omitted essential items or did not correct erroneous information that could affect mission accomplishment. Demonstrated lack of subject knowledge. Briefing was 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.

2.4.9. Area 8 — Safety/Judgment (CRITICAL).

2.4.9.1. Q. Recognized factors affecting safety of flight. Assessed available options and selected a suitable course of action based on reasonable risk assessment. 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. Assessed all aspects of the situation and took an appropriate course of action consistent with prudence, common sense, integrity, mission priority, and safe and effective mission accomplishment.

2.4.9.2. 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. A clear lack of judgment hampered or precluded mission accomplishment. Did not adequately clear the aircraft. Operated aircraft in a dangerous manner. Unnecessarily subjected crew/aircraft to increased risk. Allowed a dangerous situation to develop without taking proper corrective action. Failed to consider consequences of decisions. Untimely or inappropriate decision led to inappropriate response to the situation or compromised integrity, safety, or degraded or prevented effective mission accomplishment.

2.4.10. Area 9 — Aircrew Discipline (CRITICAL).

2.4.10.1. Q. Demonstrated strict, professional aircrew discipline throughout all phases of the mission. Coordinated and communicated effectively with other crew member(s). Provided required direction/information. Correctly adapted to meet new situational demands.

2.4.10.2. U. Failed to exhibit strict aircrew discipline. Violated or ignored rules or regulations. Did not provide direction/information when needed. Did not correctly adapt to meet new situational demands. Improperly or ineffectively coordinated or communicated with the other crew members causing delays or confusion which did, or could have, adversely affected safety or mission accomplishment.

2.4.11. Area 10 — Airmanship/Situational Awareness (CRITICAL).

2.4.11.1. 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. Maintained continuous perception of self and aircraft in relation to the dynamic environment of flight, threats, and mission, demonstrated the ability to forecast, and then execute tasks based on that perception. Demonstrated knowledge and skills to prevent the loss of situational awareness, recognize the loss of situational awareness, and when necessary, demonstrated techniques for recovering from the loss of situational awareness.

2.4.11.2. U. Decisions or lack thereof caused failure to accomplish 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. Unaware of or unresponsive to factors affecting mission accomplishment, safety, crewmembers, or aircraft.

2.4.12. Area 11 — Systems Operation/Knowledge/Limitations/National Airspace System.

2.4.12.1. Q. Demonstrated/explained a satisfactory knowledge of aircraft systems operations/limitations and proper procedural use of systems. Ensured satisfactory operation within limits. Demonstrated adequate knowledge of and complied with NAS rules and procedures in all areas of mission planning and flight operations.

2.4.12.2. Q-. Marginal knowledge of aircraft systems operations and limitations in some areas. Used individual technique instead of established procedures and was unaware of differences. Marginal knowledge of NAS rules and procedures.

2.4.12.3. U. Unsatisfactory systems knowledge. Failed to demonstrate/explain the procedures for aircraft system operations. Operated the aircraft or systems outside applicable limits. Unsatisfactory knowledge of NAS rules and procedures.

2.4.13. Area 12 — Preflight/Aircraft Run-Up.

2.4.13.1. Q. Completed systems preflight/inspections IAW tech orders, checklists, and instructions. Ensured aircraft was correctly configured for assigned mission and is fully aware of aircraft readiness for flight. Appropriate checklists and/or T.O.s were available for reference. Individual technique complied with established procedures. Ensured all required personal and mission equipment was available. Equipment was properly preflight, operated, and secured. Thorough understanding of the information contained in aircraft/equipment forms and correctly determined aircraft/equipment status. Established and adhered to station, engine start, and taxi times. Accomplished engine start procedures, including all required checks, IAW the flight manual, checklist, and applicable directives. Correctly configured the cockpit and coordinated with ground support personnel. Familiar with required responses to abnormal or emergency situations.

2.4.13.2. 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. Did not compromise safety, aircraft limitations, or mission effectiveness.

2.4.13.3. U. Did not use the checklist or omitted major item(s). Failed to preflight critical component or could not conduct a satisfactory preflight/inspection. Individual techniques unsafe and/or in violation of established procedures. Incorrect or unfamiliar with startup procedures or checks. Failed to accurately determine proper configuration or readiness of aircraft for flight. Did not respond properly to abnormal or emergency situations. Errors or omissions precluded safe and effective mission accomplishment.

2.4.14. Area 13 — Use of Checklists.

2.4.14.1. Q. Effectively referenced and completed appropriate checklists with accurate and timely responses, accomplished appropriate actions at the appropriate time throughout the mission. Familiar with checklists and contents.

2.4.14.2. Q-. Used the appropriate checklist, but responses were untimely and/or crew member required continual prompting for correct responses/action. Did not compromise safety, aircraft limitations, or mission effectiveness.

2.4.14.3. U. Failed to use the proper checklist or consistently omitted checklist items. Lacked acceptable familiarity with contents. Omitted or did not complete checklist(s) at the appropriate time which compromised safety and/or exceeded aircraft limitations.

2.4.15. Area 14 — Crew Coordination.

2.4.15.1. Q. Effectively coordinated with other crewmembers during all phases of the mission. Had knowledge of common errors, cultural influences, and barriers (rank, age, experience and position). Demonstrated effective listening, feedback, precision and efficiency of communication with all members and agencies (i.e. crewmembers, wingmen, weather, ATC, intelligence, etc.). Crewmember identified, planned, and executed mission activity in response to in-flight contingencies in a timely manner. Actively sought other crewmember opinions and ideas. Recognized and requested assistance when task-saturated. Crewmember properly prioritized multiple tasks and effectively used available resources, ensuring smooth mission execution.

2.4.15.2. Q-. Coordinated with other crewmember with minor exceptions. Intra-crew communications were not clear or concise. Coordination was lacking with other crewmembers to the extent minor deviations or omissions caused delays, confusion, degraded crew situational awareness. Crewmember was slow to identify, plan, or execute alternate mission activities in response to contingencies. Poor task prioritization and inefficient use of available resources resulted in less than optimum mission execution. Slow to recognize and request assistance when task-saturated.

2.4.15.3. U. Breakdown in coordination with other crewmembers precluded mission accomplishment and/or jeopardized safety. Crew coordination was lacking to the extent the mission accomplishment was severely degraded. Created confusion or delays that could have endangered the aircraft or prevented mission completion. Failed to prioritize multiple tasks and did not use available resources at his/her disposal to manage workload.

2.4.16. Area 15 — Risk Management/Decision Making.

2.4.16.1. Q. Identified contingencies and alternatives. Gathered and cross checked relevant data before deciding. Clearly stated problems and proposed solutions. Investigated doubts and concerns of crew members. Used facts to come up with solution. Involved and informed necessary crew members when appropriate. Coordinated mission crew activities to establish proper balance between command authority and crew member participation, and acted decisively when the situation required. Clearly stated decisions, received acknowledgement, and provided rationale for decisions.

2.4.16.2. 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 solutions. Did not effectively inform crew members when appropriate. Did not effectively coordinate mission crew activities to establish a proper balance between command authority and crew member participation, and acted indecisively at times.

2.4.16.3. U. Failed to identify contingencies and alternatives. Made no effort to gather and cross check relevant data before deciding. Did not inform necessary crew members 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 crew member participation; acted indecisively.

2.4.17. Area 16 — Task Management.

2.4.17.1. Q. Correctly prioritized tasks. Used available resources to manage workload. Asked for assistance when overloaded. Clearly stated problems and proposed solutions. Accepted better ideas when offered. Used facts to come up with solution. 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.

2.4.17.2. Q-. Did not consistently and correctly prioritize 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 that degraded mission effectiveness. Slow to recognize and report work overloads in self and others.

2.4.17.3. U. Failed to correctly prioritize 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 excessive self-imposed workload/stress due to lack of planning that jeopardized safety of flight or caused mission failure. Failed to recognize and report work overloads in self and others.

2.4.18. Area 17 — Communication/ATC Procedures.

2.4.18.1. Q. Fully knowledgeable of communications procedures. Required contacts were made without hesitation, omission, or discrepancy. Communicated using precise, standard terminology. Acknowledged all communications. Promptly complied with all controlling agency instructions and reporting requirements. Obtained the proper clearance from the controlling agency. Complied with all national airspace requirements. Asked for/provided clarification when necessary.

2.4.18.2. Q-. Unclear or incomplete 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. Slow to comply with controlling agency instructions or unsure of the reporting requirements. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.

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

agency instructions or accepted a clearance for which they could not comply. Entered controlled airspace without proper clearance. Errors or omissions precluded safe and effective mission accomplishment. Improperly or ineffectively communicated or coordinated with all members and agencies (i.e. crewmembers, wingmen, weather, ATC, intelligence, etc.). Did not consider other crewmember's inputs.

2.4.19. Area 18 — Scanning/Clearing.

2.4.19.1. Q. Provided clear, concise and positive direction to the crew during flight, reconnaissance, approaches, landing, and departures. Ensured aircraft clearance from obstacles.

2.4.19.2. Q-. Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.

2.4.19.3. U. Major deviations from Q criteria. Did not provide sufficient direction or directions were not clear, concise and positive. Affected safe, effective mission accomplishment. Did not assure adequate clearance from obstacles

2.4.20. Area 19 — After Landing and Post Flight Responsibilities.

2.4.20.1. Q. Performed proper aircraft and equipment postflight and/or reconfiguration. Correctly determined the condition and status of the aircraft after shutdown. Completed all applicable aircraft forms correctly and briefed maintenance personnel as required.

2.4.20.2. Q-. Same as above except for minor deviations or omissions. Did not compromise safety or mission effectiveness.

2.4.20.3. U. Incorrect or unfamiliar with shutdown procedures or checks. Failed to perform the aircraft and equipment post flight and/or reconfiguration. Did not respond properly to abnormal or emergency situations. Failed to complete the aircraft forms or brief maintenance personnel as required.

2.5. Qualification Phase.

2.5.1. Area 20 — Hover/Taxi Maneuvers.

2.5.1.1. Q. Performed hover and taxi IAW procedures outlined in the flight manual and other directives. Smooth, precise, and controlled aircraft movement. Maintained desired position/ground track. Taxied at appropriate speeds and altitudes . Familiar with marshaling signals. Cleared the aircraft.

2.5.1.2. Q-. Same as Q except for minor deviations in altitude/position/ground track. Did not compromise safety, aircraft limitations, or maneuver effectiveness.

2.5.1.3. U. Performance not IAW procedures outlined in the flight manual and other published directives. Aircraft control/position/ground track/altitude was erratic. Errors or omissions precluded safe or effective maneuver accomplishment. Taxi speeds/altitudes inappropriate or dangerous. Insufficient knowledge of marshaling signals. Failed to adequately clear the aircraft.

2.5.2. Area 21 — Takeoff (Normal, Marginal Power, Maximum Performance, Slide Takeoff).

2.5.2.1. Takeoff Evaluation Criteria

2.5.2.1.1. Q. Smooth, positive aircraft control throughout the takeoff. Maintained the proper power setting (+/- 5% Q). Performed takeoffs IAW procedures outlined in the flight manual and other published directives. Maintained constant ground track and climb out angle. Smooth power application. Performed the departure as published/directed and complied with all restrictions. Visually cleared the area. If necessary, takeoff abort executed in a safe and timely manner as briefed/required without exceeding aircraft limitations.

2.5.2.1.2. Q-. Minor deviations from procedures outlined in the flight manual and other published directives. Some under-or over-control on lift-off. Maintained the proper power setting (+/- 10% Q). Did not compromise safety, aircraft limitations, or maneuver effectiveness. Visually cleared the area.

2.5.2.1.3. U. Level off was erratic, and exceeded above tolerances. Lift-off was potentially dangerous. Exceeded aircraft/systems limitations. Failed to establish proper aircraft attitude. Over-controlled the aircraft resulting in excessive deviations from intended flight path. Failed to comply with the published/directed departure instructions or exceeded the tolerance of Q-. Failed to establish the proper cruise airspeed. Failed to adequately clear the area.

2.5.3. Area 22 — Approaches/Landings (Base and Final Approach)/(Normal, Shallow, Steep, Slide Landing).

2.5.3.1. Approach/Landing Evaluation Criteria

2.5.3.1.1. Q. Performed the approaches and landings IAW the procedures outlined in the flight manual, published directives and crew briefing. Aircraft control was smooth and positive. Started the final descent on the desired approach angle. Demonstrated satisfactory control to maintain/correct to the desired rate of descent, ground track and approach angle. Maintained constant heading. Touchdown/termination was within the desired area. If necessary, landing abort executed in a safe and timely manner as briefed/required without exceeding aircraft limitations.

2.5.3.1.2. Q-. Same as Q except for minor deviations to procedures outlined in the flight manual, published directives and crew briefing. Did not compromise safety, aircraft limitations, or maneuver effectiveness.

2.5.3.1.3. U. Major deviations to the procedures outlined in the flight manual and published directives. Errors or omissions precluded safe and effective maneuver accomplishment. Aircraft control was erratic/unsafe; excessive flare required to arrest descent. Consistently overshoot/undershot final. Failed to recognize/maintain the correct or desired rate of descent and approach angle. Failed to touchdown or terminate within the desired area. Exceeded 800-fpm descent rate with less than 40 KIAS and did not immediately correct or initiate a go-around.

2.5.4. Area 23 — Traffic Patterns (Prior to Base Turn).

2.5.4.1. Q. Performed traffic patterns IAW the procedures outlined in the flight manual, operating procedures, and local directives. Smooth, precise, and controlled aircraft

movement. Constantly cleared area of intended flight. Ensured the required checklists were called for and accomplished.

2.5.4.1.1. Altitude. +/- 50 feet

2.5.4.1.2. Airspeed. +/- 10 KIAS

2.5.4.2. Q-. Performed traffic patterns with minor deviations to the procedures outlined in the flight manual, operating procedures, and local directive. Aircraft control was not consistently smooth. Did not compromise safety, aircraft limitations, or maneuver effectiveness. Constantly cleared the area of intended flight. Required checklists were usually called for and accomplished.

2.5.4.2.1. Altitude. +/- 100 feet

2.5.4.2.2. Airspeed. +/- 20 KIAS

2.5.4.3. U. Traffic patterns were not performed IAW the procedures outlined in the flight manual, operational procedures, and local directives. Erratic aircraft control or did not clear the aircraft. Exceeded the Q- parameters.

2.5.5. Area 24 — Single Hydraulic Failure.

2.5.5.1. Q. Called for and completed the proper checklist in a timely manner. Pattern, approach and landing accomplished IAW the procedures outlined in the flight manual and other published directives. Knowledgeable of maneuver parameters and provided input to correct deviations in a timely manner. Pattern, approach, and landing adjusted to the situation. Smooth, precise, and controlled aircraft movement. Touchdown from hover accomplished with no sideward drift. Touchdown to slide accomplished with an appropriate amount of forward speed and appropriate lane alignment.

2.5.5.2. Q-. Same as Q except for deviations which did not compromise safety, aircraft limitations, or maneuver effectiveness. Had difficulty or slow to recall maneuver parameters and/or provide input during deviations.

2.5.5.3. U. Called for an incorrect checklist or did not complete the checklist in a timely manner. Displayed limited to no knowledge of maneuver parameters. Major deviations to the procedures outlined in the flight manual and other published directives. Errors or omissions precluded safe and effective maneuver accomplishment. Aircraft control erratic/unsafe; frequent major heading deviations. Touchdown accomplished dangerously or too fast/slow. Unaware of or unresponsive to factors affecting the aircraft.

2.5.6. Area 25 — Manual Fuel.

2.5.6.1. Q. Called for and completed the proper checklist in a timely manner. Entered/Exited manual fuel operations IAW the procedures outlined in the flight manual, operating procedures, and local directives. Ensured torque setting was below single engine torque available prior to initiation of Step 1 of checklist. Knowledgeable of maneuver parameters and provided input to correct deviations in a timely manner. Pattern, approach and landing accomplished IAW the procedures outlined in the flight manual and other published directives. Smooth, precise, and controlled aircraft movement. Controlled engine and rotor rpm throughout the maneuver.

2.5.6.1.1. Manual Engine Torque. Approximately 5 to 10 % below the governed engine. Torque on the un-governed engine may be less than 5 percent below the governed engine under high DA conditions to preclude over temp or over torque of the governed engine.

2.5.6.2. Q-. Same as Q except for minor deviations which did not compromise safety. Rarely married or swapped Nf needles and applied proper correction. Did not over control engine or rotor RPM. Had difficulty or slow to recall maneuver parameters and/or provide input during deviations.

2.5.6.2.1. Manual Engine Torque. 10% - 20% below governed engine.

2.5.6.3. U. Called for an incorrect checklist or did not complete the checklist in a timely manner. Displayed limited to no knowledge of maneuver parameters. Major deviations to the procedures outlined in the flight manual and other published directives. Errors or omissions precluded safe and effective maneuver accomplishment. Aircraft control erratic/unsafe; frequent over control of engine and rotor RPM. Unaware of or unresponsive to factors affecting the aircraft.

2.5.7. Area 26 — Single Engine Failure.

2.5.7.1. Q. Called for and completed the appropriate checklist in a timely manner. Performed before landing checks and accomplished the approach and landing IAW procedures outlined in the flight manual and other published directives. Knowledgeable of maneuver parameters and provided input to correct deviations in a timely manner. Pattern, approach, and landing adjusted to the situation. Smooth, precise, and controlled aircraft movement. Touchdown was within the desired area. Touchdown speed commensurate with terrain and power available. Aware of minimum safe single engine airspeed and the existing power available/required.

2.5.7.2. Q-. Same as Q except for deviations which would not have compromised safety, aircraft limitations, or maneuver effectiveness. Had difficulty or slow to recall maneuver parameters and/or provide input during deviations.

2.5.7.3. U. Major deviations from the procedures outlined in the flight manual and other published directives. Displayed limited to no knowledge of maneuver parameters. Errors or omissions precluded safe and effective maneuver accomplishment. Aircraft control erratic or unsafe. Unaware of go-around requirements or power available/required. Would not have landed safely or within the desired area. Unaware of or unresponsive to factors affecting the aircraft.

2.5.8. Area 27 — Autorotations (Straight Ahead/90° (All) & 180° Turning (IP Required, MP optional)). Use the following criteria for Areas 27a, 27b and 27c.

2.5.8.1. Q. Completed the appropriate boldface. Airspeeds, altitudes and procedures were IAW the flight manual, checklist and other published directives. Knowledgeable of maneuver parameters and provided input to correct deviations in a timely manner. Smooth, precise, and controlled aircraft movement. Controlled the rotor revolutions per minute (RPM) throughout maneuver. Would have landed safely and within the desired area. Flared at an appropriate altitude and accomplished a smooth and controlled power recovery.

2.5.8.2. Q-. Same as Q except for minor deviations which would not have compromised safety, aircraft limitations, or maneuver effectiveness. Had difficulty or slow to recall maneuver parameters and/or provide input during deviations.

2.5.8.3. U. Failed to complete appropriate boldface. Major deviations from the procedures outlined in the flight manual and other published directives. Errors or omissions precluded safe and effective maneuver accomplishment. Displayed limited to no knowledge of maneuver parameters. Failed to control rotor RPM. Would not have landed safely or within the desired area. Aircraft control erratic or unsafe. Unable to maintain aircraft position or alignment. Cushion applied too early/late in improper amount. Unaware of or unresponsive to factors affecting the aircraft.

2.5.9. Area 28 — Refuel.

2.5.9.1. Q. Knowledgeable in all areas of ground refueling. Thoroughly familiar with the proper types of aircraft refueling checklists and completed the required forms. Maintained fuel system limits and adhered to existing published safety precautions.

2.5.9.2. Q-. Limited knowledge of ground refueling. Limited knowledge of aircraft refueling checklists and completion of forms. Errors would not affect safe/effective mission accomplishment.

2.5.9.3. U. Unsatisfactory knowledge/performance of aircraft refueling operations. Unfamiliar with checklists and forms completion. Failed to take all safety precautions.

2.5.10. Area 29 — Ground Handling/Support Equipment.

2.5.10.1. Q. Familiar with the necessary ground handling/support equipment and knowledgeable of its safe operations.

2.5.10.2. Q-. Demonstrated a need for additional training in some ground handling and support equipment areas.

2.5.10.3. U. Displayed an unacceptable level of knowledge in the operation of necessary ground handling and support equipment.

2.6. Instrument Phase.

2.6.1. Area 30 — Unusual Attitude Recovery (Will not be accomplished during IMC flight, but may be accomplished in the simulator).

2.6.1.1. Q. Smooth, positive recovery to level flight using the correct recovery procedures. Demonstrated a satisfactory knowledge of procedures.

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

2.6.1.3. U. Unable to determine attitude, or used improper recovery procedures. Inadequate knowledge of proper procedures.

2.6.2. Area 31 — Instrument Departure.

2.6.2.1. Q. Performed departure IAW published procedures and directives. Complied with all restrictions or controlling agency instructions. Made all required reports. Smooth, positive aircraft control throughout the takeoff. Applied course/heading

corrections promptly. Crossing/intermediate altitudes were +/- 100 feet. Maintained course/heading and recognized deviations of +/- 10 degrees and applied corrections promptly. Level-off smoothly at the specified altitude within +/- 100 feet. Promptly established the proper cruise airspeed +/- 10 KIAS. Visually cleared the area.

2.6.2.2. Q-. Minor flight manual procedural deviations. Some under or over control on lift-off. 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. Crossing/intermediate altitudes were +/- 300 feet. Maintained course/heading and recognized deviations of +/- 15 degrees and applied corrections promptly. Level off was erratic, maintained altitude within +/- 300 feet. Slow in establishing the proper cruise airspeed. Visually cleared the area.

2.6.2.3. U. Lift off was potentially dangerous. Instrument departure was not in accordance with technical orders, directives, or published procedures. Failed to comply with published/directed departure, or controlling agency instructions. Accepted an inaccurate clearance. Errors or omissions precluded safe and effective mission accomplishment. Over-controlled the aircraft resulting in excessive deviations from the intended flight path. Level off was erratic, or exceeded the tolerances of Q-. Excessive delay or failed to establish the proper cruise airspeed. Failed to adequately clear the area.

2.6.3. Area 32 — Use of NAVAIDs/Navigation.

2.6.3.1. Q. Able to navigate using all available means. Used appropriate navigation procedures and demonstrated capability to navigate accurately. Ensured NAVAIDs were properly tuned, identified, and monitored. Complied with clearance instructions. Aware of position at all times. Remained within the confines of assigned airspace.

2.6.3.1.1. Course. +/- half dot (if available)

2.6.3.1.2. Fix-to-Fix. +/- 1.0 mile (if accomplished)

2.6.3.1.3. Altitude. +/- 100 feet

2.6.3.1.4. Airspeed. +/- 10 KIAS

2.6.3.2. Q-. Minor errors in the procedures/use of navigation equipment. Some deviations in tuning, identifying, monitoring, and selecting NAVAIDS. Slow to comply with clearance instructions. Had some difficulty in establishing exact position. Slow to adjust for deviations in time and course.

2.6.3.2.1. Course. +/- 1 dot (if available)

2.6.3.2.2. Fix-to-Fix. +/- 2.0 miles (if accomplished)

2.6.3.2.3. Altitude. +/- 200 feet

2.6.3.2.4. Airspeed. +/- 20 KIAS

2.6.3.3. U. Major errors in procedures/use of navigation equipment. Did not ensure NAVAIDS were tuned, identified, monitored and/or selected. 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.

2.6.4. Area 33 — Holding Procedures.

2.6.4.1. Q. Performed entry and holding in accordance with published procedures, directives and/or technique. Able to estimate winds and makes appropriate corrections. For Non-DME holding, able to make timing corrections. Smooth, precise, and controlled aircraft movement. Complied with ATC instructions. Holding pattern tolerances exceeded by not more than:

2.6.4.1.1. Course. +/- half dot (after established in the pattern)

2.6.4.1.2. Altitude. +/- 100 feet

2.6.4.1.3. Airspeed. +/- 10 KIAS

2.6.4.2. Q-. Performed entry and holding procedures with minor deviations. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness. Holding pattern limit exceeded by not more than:

2.6.4.2.1. Course. +/- 1 dot (after established in the pattern)

2.6.4.2.2. Altitude. +/- 200 feet

2.6.4.2.3. Airspeed. +/- 20 KIAS

2.6.4.3. U. Holding was not in accordance with technical orders, directives, or published procedures. Unable to make appropriate wind or timing corrections. Aircraft control erratic or unsafe. Failed to comply with ATC instructions. Exceeded Q- holding pattern tolerances.

2.6.5. Area 34 — Non-Precision Approach.

2.6.5.1. Q. Approach was IAW flight manual, directives, and published procedures. Complied with all restrictions and used appropriate descent rate to arrive at Minimum Decision Altitude (MDA) at or before Visual Descent Point (VDP) (if applicable). Made smooth and timely corrections. Not more than momentary descent below minimum descent altitude (MDA). Position permitted a safe landing. Smooth and timely response to controller's instructions (ASR).

2.6.5.1.1. Airspeed. +/- 10 KIAS

2.6.5.1.2. Heading: +/- 5 degrees (ASR).

2.6.5.1.3. Course: +/- 1 dot deflection.

2.6.5.1.4. FAF/MDA/Stepdown Altitudes: +100/-50 feet. *Note:* The -50 foot tolerance at MDA/Stepdown Altitudes applies only to momentary excursions.

2.6.5.2. Q-. Performed approach with minor deviations. Arrived at MDA at or before the MAP, but past the VDP (if applicable). Slow to make corrections. Position would have permitted a safe landing. Slow to respond to controller's instructions and make corrections (ASR).

2.6.5.2.1. Airspeed. +/- 20 KIAS

2.6.5.2.2. Heading: +/- 10 degrees (ASR).

2.6.5.2.3. Course: +/- 2 dots deflection.

2.6.5.2.4. FAF/MDA/Stepdown Altitudes: +150/-50 feet. *Note:* The -50 foot tolerance at MDA applies only to momentary excursions.

2.6.5.3. U. Approach not IAW flight manual, directives, or published procedures. Erratic corrections were made. Exceeded the tolerances of Q-. Maintained steady-state flight below the MDA. Position at the MAP would not have permitted a safe landing. Did not initiate missed approach/go-around when appropriate or directed.

2.6.6. Area 35 — Precision Approach.

2.6.6.1. Q. Approach was IAW flight manual, directives, and published procedures. Complied with all clearances and restrictions. Smooth and timely corrections to azimuth and glide slope. Complied with the decision altitude (DA) and the position would have permitted a safe landing. Not more than momentary descent below DA.

2.6.6.1.1. Glide Slope. Within 1 dot below and 2 dots above glide slope

2.6.6.1.2. Course. Within 1 dot left or right

2.6.6.1.3. Heading. +/- 5 degrees (PAR only)

2.6.6.2. Q-. Performed the procedures with minor deviations. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness. Slow to respond to controller's instructions and make corrections. Position at the DA would have permitted a safe landing. Elevation did not exceed well above or well below glide path.

2.6.6.2.1. Glide Slope. Greater than 1 to 2 dots below or 2 to 3 dots above glide slope

2.6.6.2.2. Course. Greater than 1 dot, but less than 2 dots left or right of course

2.6.6.2.3. Heading. +/- 10 degrees (PAR only)

2.6.6.3. 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 DA and/or position would not have permitted a safe landing. Exceeded Q- tolerances.

2.6.7. Area 36 — Missed Approach.

2.6.7.1. 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.

2.6.7.1.1. Level Off Altitude. +/- 100 feet

2.6.7.1.2. Maneuvering Airspeed. +/- 10 KIAS

2.6.7.1.3. Heading/Course. +/- 10 degrees

2.6.7.2. Q-. Executed the missed approach with minor deviations to published procedures/directives. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness. Slow to comply with the published procedures/directives, controller's instructions, or flight manual. Slightly over-controlled the aircraft. Allowed aircraft to descend during transition.

2.6.7.2.1. Level Off Altitude. +/- 200 feet

2.6.7.2.2. Maneuvering Airspeed. +/- 20 KIAS

2.6.7.2.3. Heading/Course. +/- 20 degrees

2.6.7.3. 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 including excessive descent during transition. Exceeded Q- criteria.

2.6.8. Area 37 — Circling Procedures.

2.6.8.1. Q. Remained within the lateral limits of circling 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. Maneuver would have permitted a safe landing.

2.6.8.1.1. MDA: +100/-50 feet. *Note:* The -50 foot tolerance applies only to momentary excursions.

2.6.8.2. Q-. Slow to comply with controller's instructions. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness. Attained runway alignment but occasionally required excessive bank angles or maneuvering.

2.6.8.2.1. MDA: +200/-50 feet. *Note:* The -50 foot tolerance applies only to momentary excursions.

2.6.8.3. U. Exceeded the lateral tolerances of circling airspace. Did not comply with controller's instructions. Excessive maneuvering to attain runway alignment was potentially unsafe. Maneuver compromised safety or would not have permitted a safe landing. Descended from the MDA before the aircraft was in position for a normal glide path or landing. Exceeded Q- criteria.

2.6.9. Area 38 — Final Approach and Landing.

2.6.9.1. Q. Performed the approaches and landings IAW the procedures and limitations outlined in the flight manual and published directives. Aircraft control was smooth and positive. Started the final descent on the desired approach angle in a safe position to land. Demonstrated satisfactory control to maintain/correct to the desired rate of descent and approach angle. Touchdown/termination was within the desired area.

2.6.9.2. Q-. Same as Q except for minor deviations to procedures and limitations outlined in the flight manual and published directives. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness and/or did not perform as briefed.

2.6.9.3. U. Major deviations to the procedures and limitations outlined in the flight manual and published directives. Aircraft control was erratic/unsafe. Consistently overshot/undershot final. Failed to recognize/maintain the correct or desired rate of descent and approach angle. Failed to touchdown or terminate within the desired/briefed area. Exceeded the tolerances of flight manual.

2.7. Mission Phase.

2.7.1. Area 39 — Mission Planning.

2.7.1.1. Q. Applied the appropriate tactics to the mission scenario. Followed guidance contained in AFTTP 3-3.H-1, *Combat Aircraft Fundamentals H-1*, other MDS volumes if participating, special instructions (SPINS), air tasking orders (ATO) and concept of operations (CONOPS). Displayed good judgment. Exhausted all possible options to decrease the threat to the lowest possible level. Thoroughly planned all aspects of the mission using the crew concept. Updated the intelligence situation prior to the briefing.

2.7.1.2. Q-. Marginally planned all aspects of the mission. Partial application of the approved guidance to the scenario given. Possessed a limited knowledge of approved tactical guidance. Limited utilization of planning resources, i.e., intelligence, etc.

2.7.1.3. U. Mission planning was based upon unapproved/unrealistic tactics. No plan to degrade the threat to the lowest level possible. Did not utilize crew inputs/considerations. Ignored numerous aspects of the mission. Possessed a poor knowledge of approved tactical guidance. Failed to update the mission critical intelligence situation prior to the briefing.

2.7.2. Area 40 — Classified/Sensitive Material/Operations Security.

2.7.2.1. Q. Demonstrated thorough knowledge of communications/operations security procedures and courier procedures (if applicable). Had positive control of classified/sensitive documents and information used throughout the mission. Properly stored, handled, and/or destroyed all classified/sensitive/Communication Security (COMSEC) material or information generated during the mission. Practiced sound Operations Security (OPSEC) during all phases of the mission. Identified, requested and obtained all classified/sensitive/cryptological material required for the mission.

2.7.2.2. 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/sensitive material/COMSEC, and did not impact mission accomplishment. Identified cryptological material required for mission, but was slow in requesting/obtaining material or did so only after being prompted.

2.7.2.3. U. Unsatisfactory knowledge of COMSEC/OPSEC. Classified documents, COMSEC or sensitive information would have been compromised as a result of improper control by examinee. Unfamiliarity with OPSEC procedures had or could have had a negative impact on mission accomplishment. Failed to identify, request or obtain all cryptological materials required for the mission.

2.7.3. Area 41 — Mission Execution.

2.7.3.1. Q. Successful execution of the mission plan. Adhered to the mission plan until the tactical situation required otherwise. Accomplished planned mission objectives.

2.7.3.2. Q-. Poor execution of the mission plan. Slow to adjust to changes in the tactical situation. Abandoned the mission plan.

2.7.3.3. U. Did not execute mission plan. Unable to adjust to changes in the tactical situation.

2.7.4. Area 42 — Cargo/Passenger Loading/Offloading and Tiedown.

2.7.4.1. Q. Satisfactorily loaded/off loaded the aircraft and ensured all cargo and equipment are secured IAW the flight manual and other applicable directives. Satisfactory knowledge of restraint equipment/requirements, weight limitations, and safety precautions.

2.7.4.2. Q-. Minor deviations from Q criteria which did not affect safe/effective mission accomplishment.

2.7.4.3. U. Major deviations from Q criteria. Unsatisfactory knowledge/performance of aircraft/passenger loading/unloading, restraint equipment/requirements, weight limitations, and safety precautions. Major deviations which would affect safe/effective mission accomplishment.

2.7.5. Area 43 — Terrain/Flight Navigation.

2.7.5.1. Q. Performed flight navigation IAW procedures outlined in the flight manual and other published directives. Familiar with and able to effectively use available aircraft navigational systems. Could satisfactorily determine position when map reading. Recognized all check/turn points. Remained within 1 NM of planned course unless deviating for obstacles/threats and stayed within range/area boundaries. Able to adjust for deviations in time and course. Effectively used terrain masking to degrade/avoid threats. Demonstrated the capability to quickly adjust for deviations in timing and course.

2.7.5.2. Q-. Slow to determine the position when map reading. Slow to recognize check/turn points. Remained within 2 NM of planned course unless deviating for obstacles/threats, and stayed within range/area boundaries. Did not provide adequate navigational input as briefed/required yet did not compromise safety or mission effectiveness. Satisfactorily used terrain masking to degrade/avoid threats. Slow to recognize and adjust for deviations in timing and course.

2.7.5.3. U. Flight navigation was not IAW procedures outlined in the flight manual and other published directives. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Unable to effectively use available aircraft navigational systems. Could not establish position. Failed to recognize check/turn points or adjust for deviations in timing and course. Consistently deviated from planned course. Flew outside the established range/area boundaries. Failed to use terrain masking.

2.7.6. Area 44 — Terminal Area Operations.

2.7.6.1. Q. Performed remote operations IAW procedures outlined in the flight manual and other published directives. Smooth, precise, and controlled aircraft movement. Thoroughly aware of power requirements/limitations. Proper consideration and use of terrain features and wind conditions. If not flying, closely monitored aircraft systems/instruments and aircraft flight path/position. Effectively completed a site evaluation and assessed landing risk. Maintained constant ground track and approach angle. Descent and deceleration constant and even. Maintained constant heading during touchdown. Ensured aircraft clearance from obstacles. Slope operations: No excessive drift before touchdown and allowed minimum drift after skid contact with the ground. Heading remained within +/- 10 degrees. Performed site evaluation within the following tolerance:

2.7.6.1.1. High Reconnaissance. Maintained no lower than 300' above landing site (ALS) and no lower than 100' above highest obstacle (AHO) and a minimum of 50 KIAS.

2.7.6.1.2. Low Reconnaissance. Maintained a minimum of 50' above highest obstacle (AHO) and 50 knots during the low reconnaissance.

2.7.6.2. Q-. Minor deviations from Q criteria which did not affect safe/effective mission accomplishment. Minor deviations to procedures and limitations outlined in the flight manual and published directives. Missed minor factors pertinent to the approach, landing, or departure. Site evaluation not tailored to the situation or excessively detailed and time consuming. Confused or disorganized communication with crew members.

2.7.6.3. U. Major deviations from Q criteria. Major deviations to the procedures and limitations outlined in the flight manual and published directives. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Failed to consider significant details pertinent to the approach, landing, or departure. Unable to clearly communicate with crew. Aircraft control was erratic/unsafe. Failed to determine if an adequate power margin exists for the flight conditions.

2.7.7. Area 45 — Formation.

2.7.7.1. Formation Lead.

2.7.7.1.1. Q. Established appropriate formations in accordance with AFTTP. Effectively directed the flight to accomplish mission objectives. Good situational awareness and wingman consideration. Positive control of the flight/element. Smooth on the controls. Planned ahead and made timely decisions. Complied with established procedures. Provided concise lost visual and rejoin instructions; correctly executed applicable actions.

2.7.7.1.2. Q-. Adequate flight management. Fair situational awareness and wingman consideration. Control inputs were not unsafe, but made it difficult for wingman to maintain position. Did not always plan ahead and/or hesitant in making decisions. Minor deviations in established procedures. Slow to provide lost visual or rejoin instructions; instructions vague or unclear.

2.7.7.1.3. U. Did not establish the appropriate formations. Poor situational awareness and wingman consideration. Rough on the controls. Major deviations in established procedures. Did not plan ahead or indecisive. Did not provide adequate lost visual or rejoin instructions; instructions or execution incorrect.

2.7.7.2. Formation Wingman.

2.7.7.2.1. Q. Maintained position with only momentary deviations. Made smooth and immediate position corrections. Maintained safe separation and complied with established procedures. Smooth, timely join-up without excessive closure rate to the appropriate briefed position. Maintained safe separation.

2.7.7.2.2. Q-. Varied position, but sometimes not within limits. Minor over-controlling. Minor procedural deviations. Minor deviations in lost visual procedures, slow join-up.

2.7.7.2.3. U. Unable to maintain a formation position. Abrupt position corrections. Significant over-controlling requiring assistance from other pilot. Did not maintain safe separation. Unsafe join-up or formation procedures. Incorrect lost visual procedures.

2.7.7.3. DELETED

2.7.8. Area 46 — Tactical Employment Procedures.

2.7.8.1. Q. Planned and applied tactics consistent with AFTTP 3-3.H-1, MDS volumes, CONOPS, other directives, and good judgment. Developed a tactical plan and successfully completed it to the maximum extent possible. Adjusted to the tactical situation.

2.7.8.2. Q-. Knowledge of tactics was adequate, but the mission plan contained minor deviations from good tactical considerations. Slow to make adjustments to the tactical situation.

2.7.8.3. U. Did not develop a tactical plan for the mission. Tactics used were ineffective in countering the threat and/or accomplishing the mission.

2.7.9. Area 47 — Tactical Low Level Operations/Navigation.

2.7.9.1. Q. Planned and flew a route to minimize risk to aircraft and crew for a given mission IAW flight manual, governing directives and appropriate Tactics, Techniques, and Procedures (TTP). Maintained briefed/planned altitude profile with minor deviations. Remained within 1 NM of planned course unless deviating for obstacles/threats, or timing and stayed within range/area boundaries. Effectively used terrain masking to degrade/avoid threats.

2.7.9.2. Q-. Planned and flew a route to minimize risk to aircraft and crew for a given mission with minor deviations from flight manual, governing directives and appropriate TTP. Momentary deviations from briefed/planned altitude profile. Slow to determine the position using navigation systems or map. Slow to recognize check/turn points. Remained within 2 NM of planned course unless deviating for obstacles/threats, or timing and stayed within range/area boundaries. Satisfactorily used terrain masking to degrade/avoid threats. Slow to recognize and adjust for deviations in timing and course corrections.

2.7.9.3. U. Excessive amount and/or excessive low altitude warnings. Major/unsafe deviations from established directives and appropriate TTP. Could not establish position. Failed to recognize check/turn points or adjust for deviations in timing and course. Exceeded the parameters for Q-. Flew outside the established range/area boundaries. Failed to use terrain masking.

2.7.10. Area 48 — Tactical Approach and Landing.

2.7.10.1. Q. Properly briefed the crew about approach intentions. Maintained controlled, stable approach without excessive deviations. Able to perform a landing or AIE to the desired zone within 3 RD or 0.03 NM. Able to apply techniques and procedures from AFTTP 3-3.H-1 Combat Aircraft Fundamentals H-1, and adjust parameters based on external factors such as terrain and wind.

2.7.10.1.1. DELETED

2.7.10.1.2. DELETED

2.7.10.1.3. DELETED

2.7.10.1.4. DELETED

2.7.10.1.5. DELETED

2.7.10.1.6. DELETED

2.7.10.2. Q-. Briefed the crew about approach intentions with minor omissions. Maintained controlled, stable approach with minor deviations. Able to perform a landing or AIE to the desired zone within 5 RD or 0.04 NM. Able to apply techniques and procedures from AFTTP 3-3.H-1, but had difficulty adjusting parameters based on external factors such as terrain and wind.

2.7.10.2.1. DELETED

2.7.10.2.2. DELETED

2.7.10.2.3. DELETED

2.7.10.2.4. DELETED

2.7.10.2.5. DELETED

2.7.10.2.6. DELETED

2.7.10.3. U. Unsafe closure rate or touchdown. Exceeded standards for Q-.

2.7.11. Area 49 — Threat Avoidance/Tactics/Countermeasures.

2.7.11.1. Q. Used proper TTPs to limit aircraft susceptibility or highlighting to threats. Threat reactions were timely and correct. Accomplished appropriate countermeasures and performed maneuvers to counter the threat. Thoroughly familiar with threat indications visually and on defensive countermeasures.

2.7.11.1.1. DELETED

2.7.11.1.2. DELETED

2.7.11.2. Q-. Limited use of TTPs. Threat reactions were slow or inconsistent. Slow to accomplish appropriate countermeasures or perform maneuvers to counter threat. Limited knowledge of threat indications visually and on defensive countermeasures.

2.7.11.3. U. Failed to use TTPs or take the appropriate evasive action and/or activate the appropriate countermeasures. Exceeded the aircraft limitations/deviated from required altitude during evasive maneuvering. Improper threat call and/or clearing/scanning procedures. Flew back through the threat area after completion of the evasive maneuver.

2.7.12. Area 50 — Time-On-Target (TOT).

2.7.12.1. Q. Maneuvered aircraft/formation appropriately based on outside factors in order to arrive at objective on ground or at hover height on-time +/- 2 minutes.

2.7.12.1.1. DELETED

2.7.12.1.2. DELETED

2.7.12.1.3. DELETED

2.7.12.2. Q-. Maneuvered aircraft/formation with minor deviations in sound tactical flight in order to arrive at objective on ground or at hover height on-time +/- 5 minutes.

2.7.12.2.1. DELETED

2.7.12.2.2. DELETED

2.7.12.2.3. DELETED

2.7.12.3. U. Failed to appropriately maneuver aircraft/formation. Failed to arrive at objective +/- 5 minutes.

2.7.13. Area 51 — NVG Usage/Limitations.

2.7.13.1. Q. Correctly described the use/limitations of night vision goggles (NVGs). Proper pre-flight, handling, and use of NVGs during the flight.

2.7.13.2. Q-. Minor deviations from Q criteria which did not affect safe/effective mission accomplishment. Demonstrated a need for additional training in the use/limitations of NVGs.

2.7.13.3. U. Major deviations from Q criteria. Procedures for using NVGs were incorrect. Did not perform a proper pre-flight. Caused damage to equipment. Mission unsuccessful as a result of improper NVG usage. No knowledge of use/limitations of NVGs.

2.7.14. Area 52 — Alternate Insertion/Extraction Operations.

2.7.14.1. Q. Performance was IAW the procedures outlined in the flight manual and other published directives. Aircraft control was smooth and positive during the reconnaissance, approach, hovering, landing, and takeoff. Thoroughly aware of the power requirements/limitations. Proper consideration and use of the terrain features and wind conditions. Displayed the proper consideration of the alternate insertion or extraction (AIE) device length versus the altitude of deployment. Minor drift tendencies were promptly corrected. Good situational awareness. Acknowledged and responded to crew input for changes to location, altitude. Responded to emergencies appropriately. If acting as the non-flying pilot closely monitored and called out aircraft systems/instruments and aircraft flight path/position. Provided clear, concise and positive direction to the pilot flying during reconnaissance, approaches, hovering, and departures. Assisted the pilot flying as briefed/required. While in the hover maintained the following tolerances:

2.7.14.1.1. Hover Altitude. +/- 10 feet from desired/briefed.

2.7.14.1.2. Heading. +/- 10 degrees from briefed/desired.

2.7.14.2. Q-. Same as Q except for minor deviations which did not affect safety/mission accomplishment. Drifting during the hover did not jeopardize safety, but prevented the operation from being promptly accomplished. Slow to acknowledge and/or respond to crew input for changes to location, altitude. Slow but safe/appropriate response to emergencies

2.7.14.2.1. Hover Altitude. +/- 20 feet from desired/briefed.

2.7.14.2.2. Heading. +/- 20 degrees from briefed/desired.

2.7.14.3. U. Major deviations to the procedures outlined in the flight manual and other published directives. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Aircraft control was erratic/unsafe. Failed to consider power requirements/limitations, device length versus deployment altitude, use of terrain features and wind conditions. Poor situational awareness. Failed to acknowledge and respond to crew input for changes to location, altitude. Failed to respond to emergencies appropriately. If acting as the non-flying pilot, failed to monitor and call out aircraft systems/instruments and/or aircraft flight path/position. Did not assist the pilot flying as briefed/required. Exceeded the parameters of Q-.

2.7.15. Area 53 — Search Procedures.

2.7.15.1. Q. Thorough knowledge of search procedures. Selected and applied the best search pattern/plan considering the objective, terrain, weather, and the overall scenario. Knowledgeable of scanning techniques and the content of appropriate briefing guides.

2.7.15.2. Q-. Minor deviations from Q criteria which did not affect safe/effective mission accomplishment. Minor deviations to procedures and limitations outlined in the flight manual and published directives. Knowledge of search patterns, scanning, and procedures indicated the need for additional study in certain areas.

2.7.15.3. U. Major deviations from Q criteria. Major deviations from procedures and limitations outlined in the flight manual and published directives. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Unacceptable level of knowledge in search patterns, procedures, or scanning techniques. Selection of the pattern was unsuitable for scenario. Applied incorrect search procedures to a scenario. Mission effectiveness or flight safety compromised.

2.7.16. Area 54 — Divert Procedures.

2.7.16.1. Q. Performed divert procedures IAW procedures outlined in the flight manual and other published directives. Used available resources to manage workload. Familiar with and able to effectively use available aircraft navigational systems. Correctly analyzed and determined if mission could be accomplished. Asked for/provided clarification when necessary. Accomplished procedures without undue delay. Performed procedures within the following tolerance:

2.7.16.1.1. Heading: +/- 10 degrees.

2.7.16.1.2. Estimated Time Enroute (ETE): +/- 2 min.

2.7.16.1.3. ETE from diversion point to nearest recovery base: +/- 2 min.

2.7.16.1.4. Fuel requirements: +/- 100 lbs.

2.7.16.1.5. Payload capability at arrival/destination point: +/- 100 lbs.

2.7.16.1.6. Loiter time: +/- 10 min.

2.7.16.2. Q-. Minor deviations from Q criteria which did not affect safe/effective mission accomplishment. Minor deviations to procedures and limitations outlined in the flight manual and published directives. Performed procedures within the following tolerance:

2.7.16.2.1. Heading: +/- 15°.

2.7.16.2.2. Estimated Time Enroute (ETE): +/- 5 min.

2.7.16.2.3. ETE from diversion point to nearest recovery base: +/- 5 min.

2.7.16.2.4. Fuel requirements: +/- 200 lbs.

2.7.16.2.5. Payload capability at arrival/destination point: +/- 200 lbs.

2.7.16.2.6. Loiter time: +/- 20 min.

2.7.16.3. U. Major deviations from Q criteria. Major deviations to the procedures and limitations outlined in the flight manual and published directives. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Unable to effectively use available aircraft navigational systems. Failed to use available resources to manage workload. Did not determine mission could be accomplished.

2.7.17. Area 55 — Authentication Procedures.

2.7.17.1. Q. Thorough knowledge of authentication materials and procedures. Correct/timely authentication procedures when required. Correct authentication materials were always readily at hand.

2.7.17.2. Q-. Minor deviations from Q criteria which did not affect safe/effective mission accomplishment. Limited knowledge of authentication materials and procedures which did not affect mission accomplishment. Correct but slow authentication which did not affect mission accomplishment.

2.7.17.3. U. Major deviations from Q criteria. Unsatisfactory knowledge of authentication materials and procedures. Incorrect or excessively slow authentication. Authentication materials were not readily available or were incorrect.

2.7.18. Area 56 — Close Combat Attack.

2.7.18.1. Q. Familiar and complied with procedures and operations IAW flight manual, AFTTP and other directives. Able to effectively execute the assigned mission. Established appropriate gun patterns, approaches to target zone and departures away from target zone allowing for successful target engagement. Smooth, precise and controlled aircraft movement.

2.7.18.2. Q-. Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness. Able to established appropriate aerial gunnery patterns, approaches to target zone and departures away from target zone despite minor errors allowing for successful target engagement.

2.7.18.3. U. Major deviations from Q criteria. Errors or omissions precluded safe or effective maneuver/mission accomplishment. Incorrect traffic pattern, approach, or departure; procedures did not allow for successful target engagement. Aircraft control was erratic or unsafe.

2.7.19. Area 57 — Cargo Sling.

2.7.19.1. Q. Familiar and complied with procedures and operations IAW flight manual, AFTTP and other directives. Properly briefed and executed hookup, flight and release procedures. Smooth, precise and controlled aircraft movement. Knowledgeable of power requirements and aware of safety concerns.

2.7.19.2. Q-. Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.

2.7.19.3. U. Unfamiliar with procedures, directives, or operations. Improperly briefed or executed hookup, flight, or release procedures. Aircraft control was erratic or unsafe. Inadequate knowledge of power requirements. Allowed load to come in contact with the ground on the approach. Errors or omissions precluded safe and effective mission/maneuver accomplishment.

2.7.20. Area 58 — Fire Bucket.

2.7.20.1. Q. Familiar and complied with procedures and operations IAW flight manual, AFTTP and other directives. Properly briefed and executed hookup, flight, and water release procedures. Smooth, precise and controlled aircraft movement. Knowledgeable of power requirements and aware of safety concerns.

2.7.20.2. Q-. Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.

2.7.20.3. U. Unfamiliar with procedures, directives, or operations. Improperly briefed or executed hookup, flight, or release procedures. Aircraft control was erratic or unsafe. Inadequate knowledge of power requirements. Allowed load to come in contact with the ground on the approach. Errors or omissions precluded safe and effective mission/maneuver accomplishment.

2.7.21. Area 59 — Water Operations.

2.7.21.1. Q. Performance was IAW procedures outlined in the flight manual and other published directives. Aircraft control was smooth and positive during the pattern/approach/hover/ takeoff. Minimal drift during the hover. Thoroughly aware of power requirements/limitations. Proper consideration of the wind/sea conditions and salt water degradation. Closely monitored aircraft systems/instruments and aircraft flight path/position. As the non-flying pilot, identified, verbalized, and corrected unplanned aircraft descents in the pattern/hover. Assisted the pilot flying as briefed/required.

2.7.21.1.1. **Downwind Altitude.** +/- 25 feet from desired (100 feet AWL minimum)

2.7.21.1.2. **Airspeed.** +/- 10 KIAS from desired (50 KIAS minimum)

2.7.21.1.3. **Hover Altitude.** +/- 5 feet from desired.

2.7.21.2. Q-. Same as Q except for minor deviations which did not affect safety, aircraft limitations or mission effectiveness.

2.7.21.2.1. **Downwind Altitude.** +/- 50 feet from desired (100 AWL minimum)

2.7.21.2.2. **Airspeed.** +/- 15 KIAS from desired (50 KIAS minimum)

2.7.21.2.3. **Hover Altitude.** +/- 10 feet from desired (-5/+10 feet for a low & slow)

2.7.21.3. U. Major deviations to the procedures outlined in the flight manual, operational manual, and/or other published directives. Aircraft control was erratic/unsafe. Failed to consider the power requirements/limitations and wind conditions. Failed to monitor aircraft systems/instruments and/or aircraft flight path/position. Failed to identify, verbalize, and correct for unplanned aircraft descents in the pattern/hover. As the non-flying pilot, did not assist the pilot flying as briefed/required

Chapter 3

FLIGHT ENGINEER (FE) EVALUATIONS

3.1. Crew Positions. Evaluation standards will be administered in accordance with the individual's crew position as listed below:

3.1.1. Basic Aircraft Qualified (BAQ) Flight Engineer (FF)/Mission Flight Engineer (MF). Evaluate in required areas outlined in **Table 3.1**, unless indicated otherwise. (T-2)

3.1.2. Instructor Flight Engineers (IF) are evaluated to the standards outlined in **Table 3.1** and **Table 4.1** (T-2)

3.1.3. Evaluator Flight Engineers (EF) are evaluated to the standards outlined in **Table 3.1**, **Table 4.1**, and AFI 11-202V2. (T-2)

3.2. Evaluation Requirements.

3.2.1. Qualification (QUAL).

3.2.1.1. See **Table 3.1** for required QUAL evaluation areas.

3.2.1.2. Requisites. Examinees must complete the following requisites: Qualification Open and Closed Book examinations, EPE and boldface examination. (T-2)

3.2.2. Mission (MSN).

3.2.2.1. See **Tables 3.1** for required MSN evaluation areas.

3.2.2.2. Mission evaluations may be conducted concurrently with qualification evaluations as long as the required items in **Table 3.1** are completed. If the evaluations are conducted independently, all applicable ground requisites must be accomplished for each evaluation and annotated in the ground phase section of the AF Form 8.

3.2.2.3. Requisites. Mission Open Book examination and EPE. (T-1)

3.2.2.4. Profile. Evaluations should be accomplished at night, if possible. Evaluators will use scenarios that represent the unit Designed Operational Capabilities (DOC) tasking. (T-2) Evaluate the training/flight position/certifications as well as basic airmanship of the examinee. During initial/requalification mission evaluations, every mission qualification (FORM, NFORM, REM, NREM, TAC, NTAC) that the MAJCOM executes will be evaluated to be considered qualified to fly that event. (T-2) Recurring/periodic evaluations should be a representative sample of mission events.

3.2.3. Alternate Insertion and Extraction (AIE).

3.2.3.1. Initial/Requalification Mission Evaluation Hoist Requirements. Initial/Requalification evaluations require the performance of the hoist. (T-2)

3.2.3.2. Periodic Hoist Evaluation Requirements. Hoist qualified flight engineers will accomplish a hoist every recurring mission evaluation. (T-2)

3.2.3.3. Live hoists are encouraged, but are not required, for periodic, requalification or initial instructor evaluations. Live hoists/devices are required for initial evaluations and

AIE certifications. (T-2) Annotate all live hoists on AF Form 8, Section IV., Examiner's Remarks, A. Mission Description. Initial AIE certification will be IAW MDS Vol 1.

Table 3.1. Flight Engineer QUAL/MSN Event Requirements Table (T-2).

<i>Area</i>	<i>Grading Area</i>	<i>QUAL</i>	<i>MSN</i>
	GENERAL		
1	Knowledge of Directives and Forms	R	R
2	Boldface Emergencies (CRITICAL)	R	O
3	Publications Check	R	O
4	Life Support Systems/Egress	R	R
5	Flight Planning	R	R
6	Weight and Balance/Take-off and Landing Data	R	R
7	Briefings/Debriefings	R	R
8	Safety/Judgment (CRITICAL)	R	R
9	Aircrew Discipline (CRITICAL)	R	R
10	Airmanship/Situational Awareness (CRITICAL)	R	R
11	Preflight/Aircraft Run-Up	R	R
12	Use of Checklists	R	R
13	Crew Coordination	R	R
14	Risk Management/Decision Making	R	R
15	Task Management	R	R
16	Communication Procedures	R	R
17	Scanning/Clearing	R	R
18	After Landing and Post Flight Responsibilities	R	R
	QUALIFICATION		
19	Systems Knowledge	R	
19a	Engines	O	
19b	Drive Train	O	
19c	Rotor System	O	
19d	Flight Control System	O	
19e	Hydraulic System	O	
19f	Fuel Supply System	O	
19g	Electrical System	O	
19h	Instruments and Indicators	O	
19i	Emergency Equipment	O	
19j	Heating and Ventilation System	O	
19k	Aircraft Lighting	O	
19l	Auxiliary and Mission Equipment	O	
19m	Internal Rescue Hoist (if applicable)		4
19n	Miscellaneous Equipment	O	
19o	COM/NAV and Associated Electronic Equipment	O	
20	Hover/Taxi	R	
21	Takeoff	R	
22	Approaches/Landings	R	

23	Traffic Pattern	R	
24	Single Hydraulic Failure	R	
25	Manual Fuel	R	
26	Single Engine Failure	R	
27	Autorotations	R	
27a	Straight Ahead	R	
27b	Turning	R	
28	Refuel	O	
29	Ground Handling/Support Equipment	O	
	MISSION		
30	Mission Planning		R
31	Classified/Sensitive Material/Operations Security		R
32	Mission Execution		R
33	Cabin Configuration/Loading and Tiedown		R
34	Terrain/Flight Navigation		R
35	Tactical Employment Procedures		1
36	Threat Identification/Countermeasure Procedures		1
37	Infil/Exfil Procedures		1
38	Aerial Gunnery		2
39	Divert Procedures		O
40	Terminal Area Operations		R
41	Formation		3
42	Hoist		4
43	NVG Usage/Limitations		5
44	Non-Hoist AIE Operations		O
45	Search Procedures		O
46	Authentication Procedures		O
47	Cargo Sling		O
48	Fire Bucket		O
49	Water Operations		O
50	Cryptological System Operations		O
Legend			
R—Required			
O—Optional			
1 – Required for Tactical Qualification (see paragraph 3.2.2.4.)			
2 – Required for Aerial Gunnery Qualification (see paragraph 3.2.2.4.)			
3 – Required for Formation Qualification + Area 40 or 37 (see paragraph 3.2.2.4.)			
4 – Required for Hoist Qualification (see paragraph 3.2.2.4.)			
5 – Required for NVG Qualifications (NHST, NREM, NFORM, NTAC, NGUN) (see paragraph 3.2.2.4.)			

3.3. Flight Evaluation Criteria. This section contains evaluation criteria for conducting flight engineer flight evaluations. These evaluations will be conducted with the examinee in their assigned crew position. This criterion serves as a grading guide for evaluators. (T-2)

3.4. General Phase.

3.4.1. Area 1 — Knowledge of Directives and Forms.

3.4.1.1. Q. Prepared and completed mission in compliance with existing instructions and directives. Knowledgeable of all applicable directives, both higher headquarters (HHQ) and local. Demonstrated knowledge and location of operating procedures/restrictions within governing publications. All required forms and/or flight plans were complete, accurate, readable, and accomplished on time IAW applicable directives. Relayed an accurate debrief of significant events to applicable agencies (Intel, Maintenance, etc.).

3.4.1.2. Q-. Knowledge of capabilities, approved operating procedures, and rules is marginal in some areas but did not impact safe/effective mission accomplishment. Unsure of directives and/or had difficulty locating information in appropriate publications. Minor errors on forms and/or flight plans that did not affect the conduct of the flight/mission. Incorrectly or incompletely reported some information due to minor errors, omissions, and/or deviations.

3.4.1.3. U. Unaware of 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. Unaware of the need to accomplish required forms. Omitted or incorrectly reported significant information due to major errors or omissions.

3.4.2. Area 2 — Boldface Emergencies (CRITICAL): (Note: may be evaluated in flight, simulator or in a static aircraft.)

3.4.2.1. Q. Correct and timely response. Satisfactory performance of the corrective action. The crewmember pointed without hesitation to, and knew the function of, all switches and controls required for all critical action emergency procedures for his/her crew position.

3.4.2.2. U. Incorrect sequence, unsatisfactory/untimely response, or unsatisfactory performance of the corrective action. The crewmember could not, without hesitation, identify or explain the function of all switches and controls required for all critical action emergency procedures for his/her crew position.

3.4.3. DELETED

3.4.3.1. DELETED

3.4.3.2. DELETED

3.4.3.3. DELETED

3.4.4. Area 3 — Publications Check. Conduct a thorough review of publications required by [Chapter 1](#).

3.4.4.1. Q. Publications were current, contain all supplements/changes, and are properly posted.

3.4.4.2. Q-. Publications contained deficiencies that would not impact flight safety or mission accomplishment.

3.4.4.3. U. Publications were out dated and/or contained deficiencies that would impact flight safety or mission accomplishment.

3.4.5. Area 4 — Life Support Systems/Egress.

3.4.5.1. Q. Displayed thorough knowledge of location and use of life support systems and equipment. Demonstrated and emphasized the proper operating procedures used to operate aircraft egress devices such as doors, windows, hatches, life rafts, etc.

3.4.5.2. Q-. Limited knowledge of location and use of life support systems and equipment. Unsure of the proper operating procedures used to operate some of the aircraft egress devices.

3.4.5.3. U. Displayed unsatisfactory knowledge of location and use of life support systems and equipment. Unsatisfactory knowledge of aircraft egress procedures.

3.4.6. Area 5 — Flight Planning.

3.4.6.1. Q. Adequately assisted the pilot in planning the mission. Actively involved in the mission planning process. Checked fuel requirements and aircraft configuration to ensure successful mission accomplishment. When required, extracted necessary information from air tasking order/frag. Read and signed off all items in the Flight Crew Information File/read files.

3.4.6.2. Q-. Provided marginal assistance in the mission planning process. Minor errors or omissions detracted from mission effectiveness, but did not affect mission accomplishment.

3.4.6.3. U. Did not assist the pilot in mission planning. Not actively involved in the planning process. Did not verify fuel requirements and aircraft configuration which prevented a safe or effective mission. Did not read or sign off the Flight Crew Information File/read file.

3.4.7. Area 6 — Weight and Balance/Take-off and Landing Data (W&B/TOLD).

3.4.7.1. Q. Correctly computed W&B/TOLD data using applicable performance charts with corrections for existing field conditions. Was fully knowledgeable of W&B/TOLD calculations. Computed W&B and TOLD within the following specified tolerances and in a timely manner.

3.4.7.1.1. W&B Criteria.

3.4.7.1.1.1. Takeoff or Landing Gross Weights +/- 100 lbs.

3.4.7.1.1.2. Center of Gravity +/- 0.1 inches.

3.4.7.1.2. TOLD Criteria.

3.4.7.1.2.1. Power Available: +/- 2%.

3.4.7.1.2.2. Power Required: +/- 2% (5 foot & OGE only).

3.4.7.1.2.3. Safe Single Engine Airspeed (Min/Max): +/- 2 knots.

3.4.7.1.2.4. Velocity Never Exceed (Vne): +/- 2 knots.

3.4.7.2. Q-. Minor errors in the appropriate use of W&B publications and performance charts resulting in errors or omissions that could degrade mission effectiveness. Knowledge of weight and balance publications and performance charts is marginal in some areas. Errors or omissions would not have compromised safety of flight. Computed W&B and TOLD within the following specified tolerances.

3.4.7.2.1. W&B Criteria.

3.4.7.2.1.1. Takeoff or Landing Gross Weights: > 100 lbs but < 200 lbs.

3.4.7.2.1.2. Center of Gravity: > 0.2 but < 0.3 inches.

3.4.7.2.2. TOLD Criteria.

3.4.7.2.2.1. Power Available: > 3% but < 4%.

3.4.7.2.2.2. Power Required: > 3% but < 4% (5 foot and OGE only).

3.4.7.2.2.3. Safe Single Engine Airspeed (Min/Max): > 3 but < 5 knots.

3.4.7.2.2.4. Velocity Never Exceed (Vne): > 3 but < 5 knots.

3.4.7.3. U. Major errors or omissions that would preclude safe and effective mission accomplishment. Failed to compute W&B/TOLD data. Errors caused W&B/TOLD calculations to exceed Q- criteria. Limited knowledge of W&B/TOLD calculations.

3.4.8. Area 7 — Briefings/Debriefings.

3.4.8.1. Q. Prepared and in seat at briefing time. W&B/TOLD briefed in a logical, professional and organized sequence. Effectively completed crewmember specific briefing (i.e. AIE Briefing) in an organized and professional manner. Provided specific, non-threatening positive and negative feedback of crew and individual performance. Provided specific alternatives to correct errors. Asked for inputs from others. Re-capped key points and compared mission results with mission objectives.

3.4.8.2. Q-. Omitted items pertinent but not critical to the mission. Some difficulty communicating clearly. Dwelled on non-essential items. Not fully prepared for briefing. Incomplete or inadequate re-cap of key points and comparison of mission results to mission objectives.

3.4.8.3. U. Failed to conduct/attend required briefings. Omitted essential items or did not correct erroneous information that could affect mission accomplishment. Demonstrated lack of knowledge of subject. Briefing was poorly organized and not presented in a logical sequence. Presentation created doubts or confusion. 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.

3.4.9. Area 8 — Safety/Judgment. (CRITICAL)

3.4.9.1. Q. Recognized factors affecting safety of flight. Assessed available options and selected a suitable course of action based on reasonable risk assessment. 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. Assessed all aspects of the situation and took appropriate

course of action consistent with prudence, common sense, integrity, mission priority, and safe and effective mission accomplishment.

3.4.9.2. 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. A clear lack of judgment hampered or precluded mission accomplishment. Did not adequately clear the aircraft. Allowed aircraft to be operated in a dangerous manner subjected crew/aircraft to increased risk. Allowed a dangerous situation to develop without taking proper corrective action. Failed to consider consequences of decisions. Untimely or inappropriate decision led to inappropriate response to the situation or compromised integrity, safety, or degraded or prevented effective mission accomplishment.

3.4.10. Area 9 — Aircrew Discipline. (CRITICAL)

3.4.10.1. Q. Demonstrated strict, professional aircrew discipline throughout all phases of the mission. Coordinated and communicated effectively with other crewmember(s). Provided required direction/information. Correctly adapted to meet new situational demands.

3.4.10.2. U. Failed to exhibit strict aircrew discipline. Violated or ignored rules or regulations. Did not provide direction/information when needed. Did not correctly adapt to meet new situational demands. Improperly or ineffectively coordinated or communicated with the other crewmembers causing delays or confusion which did, or could have, adversely affected safety or mission accomplishment.

3.4.11. Area 10 — Airmanship/Situational Awareness. (CRITICAL)

3.4.11.1. 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. Maintained continuous perception of self and aircraft in relation to the dynamic environment of flight, threats, and mission. Demonstrated the ability to forecast, and then execute tasks based on that perception. Demonstrated knowledge and skills to prevent the loss of situational awareness, recognize the loss of situational awareness, and when necessary, demonstrated techniques for recovering from the loss of situational awareness.

3.4.11.2. U. Decisions or lack thereof caused failure to accomplish 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. Unaware of or unresponsive to factors affecting mission accomplishment, safety, crewmembers, or aircraft.

3.4.12. Area 11 — Preflight/Aircraft Run-Up.

3.4.12.1. Q. Completed systems preflight/inspections IAW tech orders, checklists, and instructions. Ensured aircraft was correctly configured for assigned mission and is fully aware of aircraft readiness for flight. Appropriate checklists and/or T.O.s were available for reference. Individual technique complied with established procedures. Ensured all required personal and mission equipment was available. Equipment was properly pre-

flight, operated, and secured. Thorough understanding of the information contained in aircraft/equipment forms and correctly determined aircraft/equipment status. Established and adhered to station, engine start, and taxi times. Accomplished engine start procedures, including all required checks, IAW the flight manual, checklist, and applicable directives. Correctly configured the cabin area for flight. Familiar with required responses to abnormal or emergency situations.

3.4.12.2. 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. Did not compromise safety, aircraft limitations, or mission effectiveness.

3.4.12.3. U. Did not use the checklist or omitted major item(s). Failed to pre-flight critical component or could not conduct a satisfactory preflight/inspection. Individual techniques unsafe and/or in violation of established procedures. Incorrect or unfamiliar with startup procedures or checks. Failed to accurately determine proper configuration or readiness of aircraft for flight. Did not respond properly to abnormal or emergency situations. Errors or omissions precluded safe and effective mission accomplishment.

3.4.13. Area 12 — Use of Checklist.

3.4.13.1. Q. Effectively referenced and completed appropriate checklists with accurate and timely responses, accomplished appropriate actions at the appropriate time throughout the mission. Familiar with checklists and contents.

3.4.13.2. Q-. Used the appropriate checklist, but responses were untimely and/or crewmember required continual prompting for correct responses/action. Did not compromise safety, aircraft limitations, or mission effectiveness.

3.4.13.3. U. Failed to use the proper checklist or consistently omitted checklist items. Was unable to identify the correct checklist to use for a given situation. Lacked acceptable familiarity with contents. Omitted or did not complete checklist(s) at the appropriate time which compromised safety and/or exceeded aircraft limitations.

3.4.14. Area 13 — Crew Coordination.

3.4.14.1. Q. Effectively coordinated with other crewmembers during all phases of the mission. Crewmember identified, planned, and executed alternate mission activity in response to in-flight contingencies in a timely manner. Actively sought other crewmembers opinions and ideas. Recognized and requested assistance when task-saturated. Crewmember properly prioritized multiple tasks and effectively used available resources, ensuring smooth mission execution. Provided clear and concise direction using standard terminology for motion and direction consistent with the AFTTP 3-3.H-1 during taxi, departure, approach, insertion, pickup, and hovering operations while maintaining situational awareness and crew coordination.

3.4.14.2. Q-. Coordinated with other crewmembers with minor exceptions. Intra-crew communications were not clear or concise. Coordination was lacking with other crewmembers to the extent that minor deviations or omissions caused delays, confusion, degraded crew situational awareness. Crewmember was slow to identify, plan, or execute alternate mission activities in response to contingencies. Marginal task prioritization and

inefficient use of available resources resulted in less than optimum mission execution. Slow to recognize and request assistance when task-saturated. Provided direction using not standard terminology for motion and direction consistent with the AFTTP 3-3.H-1.

3.4.14.3. U. Major deviations from Q criteria. Breakdown in coordination with other crewmembers precluded mission accomplishment and/or jeopardized safety. Crew coordination was lacking to the extent that mission accomplishment was severely degraded. Created confusion or delays that could have endangered the aircraft or prevented mission completion. Failed to prioritize multiple tasks and did not use available resources at his/her disposal to manage workload. Did not provide clear and concise direction using standard terminology for motion and direction consistent with the AFTTP 3-3.H-1.

3.4.15. Area 14 — Risk Management/Decision Making.

3.4.15.1. Q. Identified contingencies and alternatives. Gathered and cross-checked relevant data before deciding. Clearly stated problems and proposed solutions. Investigated doubts and concerns of crewmembers. Used facts to come up with solution. Involved and informed 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. Clearly stated decisions, received acknowledgement, and provided rationale for decisions.

3.4.15.2. 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 solutions. Did not effectively inform 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.

3.4.15.3. 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. Area 15 — Task Management.

3.4.16.1. Q. Correctly prioritized tasks. Used available resources to manage workload. Asked for assistance when overloaded. Clearly stated problems and proposed solutions. Accepted better ideas when offered. Used facts to come up with solution. Clearly communicated and acknowledged workload and task distribution. Demonstrated a high level of vigilance in both low/high 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.

3.4.16.2. Q-. Did not consistently and/or correctly prioritize 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 low/high 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.

3.4.16.3. U. Failed to correctly prioritize tasks. Did not use available resources to manage workload. Did not communicate and acknowledge workload and task distribution. Did not demonstrate a high level of vigilance in both low/high 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. Area 16 — Communication Procedures.

3.4.17.1. Q. Fully knowledgeable of communications procedures. 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. Had knowledge of common errors, cultural influences, and barriers (rank, age, experience and position). Demonstrated effective listening, feedback, precision and efficiency of communication with all members and agencies (i.e. crewmembers, wingmen, etc.).

3.4.17.2. Q-. Unclear or incomplete 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 crewmembers. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.

3.4.17.3. U. Failed to communicate effectively. Continuously interrupted others, mumbled, and/or conduct/attitude was detrimental to communication among crew members. Withheld information and failed to ask for/respond to constructive criticism. Failed to use precise, standard terminology. Repeatedly failed to acknowledge communications. Did not state opinions, ask questions when unsure or attempt to motivate crewmembers using positive statements. Errors or omissions precluded safe and effective mission accomplishment. Improperly or ineffectively communicated or coordinated with all members and agencies (i.e. crewmembers, wingmen, etc.). Did not consider other crewmember's inputs.

3.4.18. Area 17 — Scanning/Clearing.

3.4.18.1. Q. Provided clear, concise and positive direction to the crew during flight, reconnaissance, approaches, landing, and departures. Ensured aircraft clearance from obstacles.

3.4.18.2. Q-. Minor deviations from Q criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.

3.4.18.3. U. Major deviations from Q criteria. Did not provide sufficient direction or directions were not clear, concise and positive. Affected safe, effective mission accomplishment. Did not assure adequate clearance from obstacles

3.4.19. Area 18 — After Landing and Post Flight Responsibilities.

3.4.19.1. Q. Performed proper aircraft and equipment postflight and/or reconfiguration. Correctly determined the condition and status of the aircraft after shutdown. Completed all applicable aircraft forms correctly and briefed maintenance personnel as required.

3.4.19.2. Q-. Same as above except for minor deviations or omissions. Did not compromise safety or mission effectiveness.

3.4.19.3. U. Incorrect or unfamiliar with shutdown procedures or checks. Failed to perform the aircraft and equipment post-flight and/or reconfiguration. Did not respond properly to abnormal or emergency situations. Unaware of the need to accomplish required aircraft forms or brief maintenance personnel as required.

3.5. Qualification Phase:

3.5.1. **Area 19 — Systems Knowledge.** Use the following criteria for Area 19a through Area 19o. Evaluate individual on a representative sample of Areas 19a through Area 19o.

3.5.1.1. Q. Demonstrated a complete knowledge of aircraft systems and operating limitations both with and without reference to the flight manual and/or available aids.

3.5.1.2. Q-. Limited knowledge of aircraft systems operations and limitations in some areas. Used individual technique instead of procedures and was unaware of differences.

3.5.1.3. U. Unsatisfactory systems knowledge. Failed to demonstrate or explain the procedures for aircraft systems operations with or without reference to the flight manual and/or available aids.

3.5.1.4. Area 19a. Engines

3.5.1.5. Area 19b. Drive Train

3.5.1.6. Area 19c. Rotor System

3.5.1.7. Area 19d. Flight Control System

3.5.1.8. Area 19e. Hydraulic System

3.5.1.9. Area 19f. Fuel Supply System

3.5.1.10. Area 19g. Electrical System

3.5.1.11. Area 19h. Instruments and Indicators

3.5.1.12. Area 19i. Emergency Equipment

3.5.1.13. Area 19j. Heating and Ventilation System

3.5.1.14. Area 19k. Aircraft Lighting

3.5.1.15. Area 19l. Auxiliary and Mission Equipment

3.5.1.16. Area 19m. Internal Rescue Hoist (if applicable)

3.5.1.17. Area 19n. Miscellaneous Equipment

3.5.1.18. Area 19o. Communications/Navigation and Associated Electronic Equipment

3.5.2. **Area 20 — Hover/Taxi Maneuvers.**

3.5.2.1. Q. Provided pilot flying with drift/altitude deviation calls. Provided proper drift correction instructions. Used standard/correct terminology. Cleared the aircraft as briefed/required.

3.5.2.2. Q-. Same as above except for minor deviations which did not affect safe movement of aircraft.

3.5.2.3. U. Did not provide drift/altitude deviation calls. Failed to provide correct drift correction instructions. Did not use standard terminology resulting in confusion. Failed to clear the aircraft as briefed/required.

3.5.3. Area 21 — Takeoff (Normal, Marginal Power, Maximum Performance, Slide Takeoff).

3.5.3.1. Q. Accomplished all required checklists. Monitored aircraft systems/instruments and fuel status as required. Cleared the aircraft as required/briefed.

3.5.3.2. Q-. Same as above except for minor deviations which did not degrade safe/effective mission accomplishment.

3.5.3.3. U. Major deviations which affected safe/effective mission accomplishment. Failed to monitor aircraft systems/instruments and fuel status. Failed to complete checklists. Did not clear the aircraft. Failed to recall briefed abort, power and airspeed parameters.

3.5.4. Area 22 — Approaches/Landings (Base and Final Approach)/(Normal, Shallow, Steep, Slide Landing).

3.5.4.1. Q. Accomplished all required checklists. Monitored aircraft systems/instruments and cleared the aircraft as required/briefed.

3.5.4.2. Q-. Same as above except for minor deviations which did not affect safety/effective mission accomplishment. Cleared the aircraft as briefed/required.

3.5.4.3. U. Major deviations which affected safe/effective mission accomplishment. Did not clear the aircraft as briefed/required.

3.5.5. Area 23 — Traffic Patterns (Prior to Base Turn).

3.5.5.1. Q. Completed the required checklists and monitored aircraft systems and instruments. Aware of aircraft position during traffic pattern. Cleared the aircraft as required/briefed.

3.5.5.2. Q-. Same as above except for minor deviations which did not affect safety of flight. Cleared the aircraft.

3.5.5.3. U. Major deviations which affected safe/effective mission accomplishment. Unaware of aircraft position during traffic pattern. Poor situational awareness. Did not clear the aircraft or monitor systems/instruments.

3.5.6. Area 24 — Single Hydraulic Failure.

3.5.6.1. Q. Completed the required checklists correctly and assisted the pilot as briefed/required. Gave clear/concise indications of nose alignment, when necessary.

Correctly briefed the crew on restrictions/limitations. Monitored systems/instruments and effectively incorporated scan during the approach.

3.5.6.2. Q-. Same as Q except for deviations which did not compromise safety. Had difficulty or slow to recall maneuver parameters and/or provide input during deviations.

3.5.6.3. U. Failed to complete the checklists correctly or did not assist the pilot as briefed/ required. Displayed limited to no knowledge of maneuver parameters. Did not give indications of nose alignment, when necessary. Did not brief the crew on restrictions/limitations and/or provide inputs to deviations to maneuver parameters. Failed to monitor systems, instruments, or provide inputs during deviations and did not effectively incorporate scan during the approach.

3.5.7. Area 25 — Manual Fuel.

3.5.7.1. Q. Completed all required checklists correctly and assisted the pilot as briefed/required. Knowledgeable of maneuver parameters and provided input to correct deviations in a timely manner. Gave clear/concise indications when engine torque needles were married, split or swapped. Correctly briefed the crew on restrictions/limitations. Monitored systems/instruments and effectively incorporated scan during the approach.

3.5.7.2. Q-. Same as Q except for minor deviations which did not compromise safety. Had difficulty or slow to recall maneuver parameters and/or provide input during deviations.

3.5.7.3. U. Failed to complete all require checklists correctly. Did not assist the pilot as briefed/ required. Did not give indications of engine torque needles being married, split or swapped. Did not brief the crew on restrictions/limitations and/or provide inputs to deviations to maneuver parameters. Failed to monitor systems, instruments, or provide inputs during deviations and did not effectively incorporate scan during the approach.

3.5.8. Area 26 — Single Engine Failure.

3.5.8.1. Q. Completed all required checklists and assisted the pilot as briefed/required. Computed single engine performance as required/briefed within tolerances. Knowledgeable of maneuver parameters and provided input to correct deviations in a timely manner. Gave clear/concise indications of nose alignment, engine power, aircraft parameters and limit calls as requested. Monitored systems/instruments and effectively incorporated scan during the approach.

3.5.8.1.1. Single Engine Power Available: +/- 2%

3.5.8.1.2. Safe Single Engine Airspeed (Min/Max): +/- 2 knots

3.5.8.2. Q-. Same as Q except for deviations which did not compromise safety. Had difficulty or slow to recall maneuver parameters and/or provide input during deviations. Single engine performance was computed within the following tolerances:

3.5.8.2.1. Single Engine Power Available: > 3% but < 5%.

3.5.8.2.2. Safe Single Engine Airspeed (Min/Max): > 3 but < 5 knots.

3.5.8.3. U. Failed to complete all required checklist. Did not compute single engine performance as required/briefed. Did not give indications of nose alignment, engine power, aircraft parameters and limits. Single engine performance tolerances exceeded Q-criteria. Did not monitor aircraft systems/instruments or assist the pilot as briefed/required. Did not brief the crew on restrictions/limitations and/or provide inputs to deviations to maneuver parameters.

3.5.9. Area 27 — Autorotations. (Straight Ahead/Turning). Use the following criteria for Areas 27, 27a and 27b.

3.5.9.1. Q. Monitored aircraft systems/instruments as briefed. Knowledgeable of maneuver parameters and provided input to correct deviations in a timely manner. Gave clear/concise indications of rotor, engine, aircraft parameters, and limits as requested by pilot or IAW other directives. Effectively incorporated scan during the approach. Understands duties for both training and actual autorotations.

3.5.9.2. Q-. Same as Q except for deviations that did not compromise safety. Does understand duties with minor deficiencies. Had difficulty or slow to recall maneuver parameters and/or provide input during deviations.

3.5.9.3. U. Failed to monitor aircraft systems/instruments as briefed. Did not give indications of rotor, engine, aircraft parameters, and limits as requested by pilot or IAW other directives. Does not understand duties required during training and real-world autorotations. Did not brief the crew on restrictions/limitations and/or provide inputs to deviations to maneuver parameters. Failed to monitor systems, instruments, or provide inputs during deviations and did not effectively incorporate scan during the approach.

3.5.10. Area 28 — Refuel.

3.5.10.1. Q. Knowledgeable in all areas of ground refueling. Thoroughly familiar with the proper types of aircraft refueling checklists and completed the required forms. Maintained fuel system limits and adhered to existing published safety precautions.

3.5.10.2. Q-. Limited knowledge of ground refueling. Limited knowledge of aircraft refueling checklists and completion of forms. Errors did not affect safe/effective mission accomplishment.

3.5.10.3. U. Unsatisfactory knowledge/performance of aircraft refueling operations. Unfamiliar with checklists and forms completion. Failed to take all safety precautions.

3.5.11. Area 29 — Ground Handling/Support Equipment.

3.5.11.1. Q. Familiar with the necessary ground handling/support equipment and knowledgeable of its safe operations.

3.5.11.2. Q-. Demonstrated a need for additional training in some ground handling and support equipment areas.

3.5.11.3. U. Displayed an unacceptable level of knowledge in the operation of necessary ground handling and support equipment.

3.6. Mission Phase.

3.6.1. Area 30 — Mission Planning.

3.6.1.1. Q. Actively involved in the mission planning process. Familiar with and able to locate information contained in the appropriate tactical guidance. Assisted the pilot in updating the intelligence situation prior to the briefing.

3.6.1.2. Q-. Provided marginal assistance in the mission planning process. Limited knowledge of the location of approved tactical guidance.

3.6.1.3. U. Did not assist the pilot in mission planning. Not actively involved in the planning process. Unfamiliar with the information contained in approved tactical guidance publications. Failed to update the intelligence situation prior to the briefing.

3.6.2. Area 31 — Classified/Sensitive Material/Operations Security.

3.6.2.1. Q. Demonstrated thorough knowledge of communications/operations security procedures and courier procedures (if applicable). Had positive control of classified/sensitive documents and information used throughout the mission. Properly stored, handled, and/or destroyed all classified/sensitive Communication Security (COMSEC) material or information generated during the mission. Practiced sound Operations Security (OPSEC) during all phases of the mission. Identified, requested and obtained all classified/sensitive/cryptological material required for the mission.

3.6.2.2. 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/sensitive material/COMSEC, and did not impact mission accomplishment. Identified cryptological material required for mission, but was slow in requesting/obtaining material or did so only after being prompted.

3.6.2.3. U. Unsatisfactory knowledge of COMSEC/OPSEC. Classified documents, COMSEC or sensitive information would have been compromised as a result of improper control by examinee. Unfamiliarity with OPSEC procedures had or could have had a negative impact on mission accomplishment. Failed to identify, request or obtain all cryptological materials required for the mission.

3.6.3. Area 32 — Mission Execution.

3.6.3.1. Q. Effectively performed required duties in support of mission tasks.

3.6.3.2. Q-. Marginal performance of required duties.

3.6.3.3. U. Poor performance of required duties. Unable to accomplish required tasks.

3.6.4. Area 33 — Cabin Configuration/Loading and Tiedown.

3.6.4.1. Q. Ensured the cabin 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. Made sure all cargo items were loaded properly and secured in accordance with the cargo loading manual. Correctly briefed and performed passenger handling duties.

3.6.4.2. Q-. Difficulty configuring the aircraft but did not impede mission. Limited knowledge of various configurations as outlined in applicable directives, and stowed unused items with minor errors. Made sure all cargo items were loaded properly and secured in accordance with the cargo loading manual with minor errors and deviations.

Correctly briefed and performed passenger handling duties with minor errors and deviations.

3.6.4.3. U. Failed to ensure proper aircraft configuration or caused mission delays. Had unsatisfactory knowledge of configurations and failed to properly stow configuration items. Incorrectly loaded and secured cargo items. Failed to brief and/or did not perform proper passenger handling procedures.

3.6.5. Area 34 — Terrain/Flight Navigation.

3.6.5.1. Q. Maintained position awareness, terrain clearance, threat awareness/avoidance, Time Over Targets (TOT), and terminal objective situational awareness by identifying navigational cues. Safely cleared the aircraft as briefed/required.

3.6.5.2. Q-. Maintained position awareness, terrain clearance, threat awareness/avoidance, Time Over Targets (TOT), and terminal objective SA by identifying navigational cues with some deviations. Safely cleared the aircraft as briefed/required.

3.6.5.3. U. Major navigation deviations which affected safe/effective mission accomplishment. Did not use navigational cues to assist the pilot in navigating. Did not safely clear the aircraft as briefed/required.

3.6.6. Area 35 — Tactical Employment Procedures.

3.6.6.1. Q. Knowledge of tactics was satisfactory. Planned and applied tactics consistent with AFTTP 3-3.H-1, MDS volumes, CONOPS, other directives, and good judgment. Worked well with the tactical plan and successfully completed it to the maximum extent possible. Adjusted to the tactical situation.

3.6.6.2. Q-. Knowledge of tactics was adequate, but failed to notice/verbalize mission planning contained minor deviations from acceptable tactical considerations. Slow to make adjustments to the tactical situation.

3.6.6.3. U. Knowledge of tactics was poor. Did not participate in the tactical mission planning. Failed to notice adjustments were needed. Tactics used were ineffective in countering the threat and/or accomplishing the mission.

3.6.7. Area 36 — Threat Identification/Countermeasure Procedures.

3.6.7.1. Q. Threat/countermeasure procedure calls were timely and correct. Performed proper clearing/scanning procedures IAW AFTTP. Thorough knowledge of aircraft specific threat avoidance/defense.

3.6.7.2. Q-. Threat/countermeasure procedure calls were slow or inconsistent. Slow to accomplish proper clearing/scanning procedures IAW AFTTP. Limited knowledge of aircraft specific threat avoidance/defense.

3.6.7.3. U. Failed to verbalize/take the appropriate threat/countermeasure procedure calls. Failed to clear/scan. Allowed the aircraft limitations to be exceeded during evasive maneuvering. Improper threat call and/or clearing/scanning procedures. Failed to stop the aircraft from flying back through the threat area after completion of the evasive maneuver. No knowledge of aircraft specific threat avoidance/defense.

3.6.8. Area 37 — Infil/Exfil Procedures.

3.6.8.1. Q. Followed/explained proper procedures for infil/exfil operations. Thoroughly familiar with proper light signals (as applicable)/communications and emergency procedures.

3.6.8.2. Q-. Difficulty following/explaining proper procedures for infil/exfil operations. Limited knowledge of proper light signals (as applicable)/communications and emergency procedures that did not degrade mission effectiveness.

3.6.8.3. U. Did not follow/explain proper procedures for infil/exfil operations. Failed to use or understand proper light signals (as applicable)/communications and emergency procedures.

3.6.9. Area 38 — Aerial Gunnery.

3.6.9.1. Q. Properly accomplished all weapons procedures IAW flight manual, other technical orders, AFTTPs, and directives. Demonstrated the ability to preflight, arm, acquire/effectively engage the target, and de-arm the weapon. Able to identify and clear weapon malfunctions in a timely manner IAW the appropriate operating manuals. Provided clear, concise, and positive direction to the pilot flying, allowing for constant target acquisition. Ensured pilot flying maintained appropriate gunnery pattern, approaches to and away from target zone. Kept crew advised of other aircraft/team/survivor/target during employment.

3.6.9.2. Q-. Minor deviations in preflight procedures. Minor procedural errors and/or was slow to arm/de-arm the weapon. Target acquisition was slow or limited in its effectiveness. Slow to identify and/or clear (if possible) weapons malfunctions IAW the appropriate operating manuals. Direction provided to the pilot flying was not completely clear and concise but still allowed for constant target acquisition. Slow to advise crew of other aircraft/team/survivor/target during employment. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.

3.6.9.3. U. Unable to preflight, arm, acquire, engage the target, or de-arm the weapon. Major errors in procedures. Improperly performed weapons procedures IAW flight manual, other technical orders and directives. Target acquisition was ineffective. Unable to identify and/or clear weapons malfunctions. Direction provided to the pilot flying was inaccurate, confusing, and/or delayed preventing constant target acquisition. Failed to ensure pilots flying maintained appropriate gunnery patterns, approaches to and away from target zone. Failed to advise crew of other aircraft/team/survivor/target during employment. Compromised safety.

3.6.10. Area 39 — Divert Procedures.

3.6.10.1. Q. Adequately assisted the pilots in performed divert procedures IAW procedures outlined in the flight manual and other published directives. Provided the pilot with correct current fuel load, aircraft current weight, zero fuel weight. Asked for/provided clarification when necessary. Accomplished procedures without undue delay. Performed procedures within the following tolerance:

3.6.10.1.1. Current fuel load: +/- 100 lbs

3.6.10.1.2. Gross weight: +/- 100 lbs

3.6.10.1.3. Zero fuel weight. +/- 0 lbs

3.6.10.2. Q-. Provided marginal assistance to the pilot. Correct but slow in providing information to the pilot which did not affect mission accomplishment. Performed procedures within the following tolerance:

3.6.10.2.1. Current fuel load: > 100 lbs but < 200 lbs.

3.6.10.2.2. Aircraft weight: > 100 lbs but < 200 lbs.

3.6.10.2.3. Zero fuel weight. +/- 0 lbs

3.6.10.3. U. Did not assist the pilot in divert procedures when requested. Provided incorrect information to the pilot which affected mission accomplishment

3.6.11. Area 40 — Terminal Area Operations.

3.6.11.1. Q. Satisfactory performance IAW AFTTP 3-3.H-1, the flight manual, operational manuals, and other applicable directives. Provided clear, concise and positive direction to the pilot during the reconnaissance, approaches, landings, and departure. Ensured aircraft clearance from obstacles. If necessary/required/requested, computed TOLD. Was thoroughly aware of power margin/limitations and the appropriate site training restrictions. If TOLD was computed, it was computed within the following tolerances:

3.6.11.1.1. Gross Weight: +/- 100 pounds.

3.6.11.1.2. Power Available: +/- 2 percent

3.6.11.1.3. Power Required: +/- 2 percent. (5 foot and OGE)

3.6.11.1.4. Safe Single Engine Airspeed (Min/Max): +/- 2 knots.

3.6.11.2. Q-. Same as Q except for minor deviations which did not affect safety/mission accomplishment. If TOLD was computed, it was computed within the following tolerances:

3.6.11.2.1. Gross Weight. > 100 lbs but < 200 lbs.

3.6.11.2.2. Power Available: > 3% but < 4%.

3.6.11.2.3. Power Required. > 3% but < 4%. (5 foot and OGE)

3.6.11.2.4. Safe Single Engine Airspeed (Min/Max): > 3 but < 5 knots.

3.6.11.3. U. Major deviations to the procedures outlined in AFTTP 3-1.H-1, flight manual, operational manuals, and other directives. Failed to compute TOLD or was unaware of the power requirements/limitations and site training restrictions. TOLD computations exceeded the parameters of Q-. Failed to provide clear, concise, and positive direction/inputs to the pilot flying. Did not ensure adequate clearance from obstacles.

3.6.12. Area 41 — Formation.

3.6.12.1. Q. Knowledge of formation procedures IAW AFTTPs and AFIs. Provided timely inputs on the wingman's position in the formation. Cleared the aircraft throughout maneuvers. Recognizes closure.

3.6.12.2. Q-. Limited knowledge of formation procedures. Minor lapses in informing the crew on the wingman's position. Cleared the aircraft throughout maneuvers. Closures recognized, but slow to verbalize.

3.6.12.3. U. Consistently failed to update the crew on the wingman's position. Failed to clear the aircraft throughout maneuvers. Failed to recognize or verbalize closure. Displays no formation knowledge.

3.6.13. Area 42 — Hoist.

3.6.13.1. Q. Performed IAW procedures outlined in the flight manual and other published directives. Aware of computed power requirements/limitations. Satisfactory knowledge of all cable/hoist limitations (i.e. shock loading, bird caging, kinks). Provided clear and concise direction using standard terminology for motion and direction consistent with the AFTTP 3-3.H-1 during approach, insertion, pickup and departure. Advised pilot flying promptly of drift tendencies from established hover parameters. Actively scanned/cleared aircraft during the hoist procedures. Equipment malfunctions were dealt with effectively while maintaining situational awareness and crew coordination.

3.6.13.2. Q-. Minor deviations from Q criteria which did not affect safe/effective mission accomplishment. Slow to advise the pilot flying of drift tendencies and/or slow to scan the area around the aircraft.

3.6.13.3. U. Major deviations to the procedures outlined in the flight manual and other published directives which affected safe/effective mission accomplishment. Unaware of the proper hoist methods or the emergency procedures associated with the method used. Poor knowledge of cable/hoist limitations (i.e. shock loading, birdcaging, kinks). Failed to advise the pilot flying of drift tendencies and failed to scan the area around the aircraft. Equipment preparation was not accomplished in a timely manner or IAW published directives. Did not correct equipment malfunctions and failed to maintain situational awareness/crew coordination.

3.6.14. Area 43 — NVG Usage/Limitations.

3.6.14.1. Q. Correctly described the use/limitations of NVGs. Proper pre-flight, handling, and use of NVGs during flight.

3.6.14.2. Q-. Same as above except for minor deviations which did not affect safe/effective mission accomplishment.

3.6.14.3. U. Procedures for using NVGs were incorrect. Did not perform a proper pre-flight. Caused damage to equipment. Mission unsuccessful as a result of improper NVG usage. No knowledge of use/limitations of NVGs.

3.6.15. Area 44 — Non-Hoist AIE Operations.

3.6.15.1. Q. Performed IAW procedures outlined in the flight manual and other published directives. Aware of/computed power requirements/limitations. Satisfactory knowledge of all AIE limitations. Provided clear and concise direction using standard terminology for motion and direction consistent with the AFTTP 3-3.H-1 during approach, insertion, pickup and departure. Advised pilot flying promptly of minor drift tendencies. Actively scanned/cleared aircraft during the AIE procedures. Equipment

malfunctions were dealt with effectively while maintaining situational awareness and crew coordination.

3.6.15.2. Q-. Minor deviations from Q criteria which did not affect safe/effective mission accomplishment. Slow to advise the pilot flying of drift tendencies and/or slow to scan the area around the aircraft.

3.6.15.3. U. Major deviations to the procedures outlined in the flight manual and other published directives which affected safe/effective mission accomplishment. Unaware of the proper AIE methods or the emergency procedures associated with the method used. Poor knowledge of limitations. Failed to advise the pilot flying of drift tendencies and failed to scan the area around the aircraft. Equipment preparation was not accomplished in a timely manner or IAW published directives. Did not correct equipment malfunctions and failed to maintain situational awareness/crew coordination.

3.6.16. Area 45 — Search Procedures.

3.6.16.1. Q. Thorough knowledge of search procedures. Selected and applied the best search pattern/plan considering the objective, terrain, weather, and the overall scenario. Knowledgeable of scanning techniques and the content of appropriate briefing guides.

3.6.16.2. Q-. Knowledge of search patterns, scanning, and procedures was marginal.

3.6.16.3. U. Knowledge level of search patterns, procedures, or scanning techniques poor. Pattern selection unsuitable for scenario.

3.6.17. Area 46 — Authentication Procedures.

3.6.17.1. Q. Thorough knowledge of authentication materials and procedures. Correct/timely authentication procedures when required. Correct authentication materials were always readily at hand.

3.6.17.2. Q-. Limited knowledge of authentication materials and procedures which did not affect mission accomplishment. Correct but slow authentication which did not affect mission accomplishment.

3.6.17.3. U. Unsatisfactory knowledge of authentication materials and procedures. Incorrect or excessively slow authentication. Authentication materials were not readily available or were incorrect.

3.6.18. Area 47 — Cargo Sling.

3.6.18.1. Q. Familiar and complied with cargo sling procedures IAW the flight manual and other directives. Properly executed hookup and release procedures. Computed required TOLD and is thoroughly aware of power requirements/limitations and emergency procedures. Provided clear, concise and positive direction to the pilot flying during takeoff, en route, approaches and landings. Communicates sling load clearance from obstacles. Provided clear, concise and positive direction to place the sling load on a pre-designated or specified area without inadvertent contact with the ground/obstacles. TOLD computed within the following tolerances:

3.6.18.1.1. Takeoff or Landing Gross Weights +/- 100 lbs.

3.6.18.1.2. Power Available: +/- 2%

3.6.18.1.3. Power Required: +/- 2% (5 foot & OGE only)

3.6.18.2. Q-. Minor deviations from Q criteria. Did not compromise safety, aircraft limitations or maneuver/mission effectiveness. Directions allowed sling load to be positioned within the pre-designated or specified area but required multiple attempts or repositioning after ground contact. While hovering, the FE's direction or lack of direction caused the load to briefly/unintentionally contact the ground. TOLD computed within the following tolerances:

3.6.18.2.1. Takeoff or Landing Gross Weights >100 lbs but < 200 lbs.

3.6.18.2.2. Power Available: > 3% but < 4%.

3.6.18.2.3. Power Required: > 3% but < 4% (5 foot and OGE only).

3.6.18.3. U. Major deviations from Q criteria. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Unfamiliar with procedures, directives, or operations. Improperly executed hookup and/or release procedures. Inadequate knowledge of power requirements. Allowed load to come in contact with the ground on the approach. Direction or lack of direction allowed the sling load to be positioned outside the pre-designated or specified area, despite numerous attempts to reposition after ground contact. Mission effectiveness or safety was compromised.

3.6.19. Area 48 — Fire Bucket.

3.6.19.1. Q. Familiar and complied with fire bucket procedures IAW applicable directives. Thoroughly familiar with and properly performs fire bucket preflight procedures IAW applicable directives. Properly performs fire bucket operational checks, hookup and water release procedures. Computed required TOLD and is thoroughly aware of power requirements/limitations. Provided clear, concise and positive calls directing fire bucket and water release over a predetermined and specified area. Ensure fire bucket clearance from obstacles. TOLD computed within the following tolerances:

3.6.19.1.1. Takeoff or Landing Gross Weights +/- 100 lbs.

3.6.19.1.2. Power Available: +/- 2%

3.6.19.1.3. Power Required: +/- 2% (5 foot & OGE only)

3.6.19.2. Q-. Minor deviations from Q criteria. Did not compromise safety, aircraft limitations or maneuver/mission effectiveness. Directions allowed water release over a predetermined and specified area but required multiple attempts. TOLD computed within the following tolerances:

3.6.19.2.1. Takeoff or Landing Gross Weights: >100 lbs but < 200 lbs.

3.6.19.2.2. Power Available: > 3% but < 4%.

3.6.19.2.3. Power Required: > 3% but < 4% (5 foot and OGE only).

3.6.19.3. U. Deviations exceeding Q- criteria. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Unfamiliar with procedures, directives, or operations. Improperly executed hookup and/or release procedures. Inadequate knowledge of power requirements. Direction or lack of direction allowed the water

release to be outside the predetermined or specified area, despite numerous attempts. Mission effectiveness or safety was compromised.

3.6.20. Area 49 — Water Operations.

3.6.20.1. Q. Performed IAW the procedures outlined in the flight manual and other published directives. Aware of computed power requirements/limitations. Confirmed required TOLD and is thoroughly aware of power requirements/limitations. Successfully deployed the appropriate equipment/people and provided clear and concise direction during pattern, approach, pickup, and departure. Effectively managed equipment malfunctions and maintained situational awareness/crew coordination. Knowledgeable of the types of pyrotechnics and their characteristics. TOLD computed within the following tolerances:

3.6.20.1.1. Takeoff or Landing Gross Weights +/- 100 lbs.

3.6.20.1.2. Power Available: +/- 2%

3.6.20.1.3. Power Required: +/- 2% (5 foot & OGE only)

3.6.20.1.4. Safe Single Engine Airspeed (Min/Max): +/- 2 knots

3.6.20.1.5. Velocity Never Exceed (Vne): +/- 2 knots

3.6.20.2. Q-. Same as Q except for minor deviations which did not affect safety/mission accomplishment. TOLD computed within the following tolerances:

3.6.20.2.1. Takeoff or Landing Gross Weights: >100 lbs but < 200 lbs.

3.6.20.2.2. Power Available: > 3% but < 4%.

3.6.20.2.3. Power Required: > 3% but < 4% (5 foot and OGE only).

3.6.20.2.4. Safe Single Engine Airspeed (Min/Max): > 3 but < 5 knots.

3.6.20.2.5. Velocity Never Exceed (Vne): > 3 knots but < 5 knots.

3.6.20.3. U. Major deviations to the procedures outlined in the flight manual and other published directives which affected safe/effective mission accomplishment. Failed to compute or confirm TOLD or is unaware of power requirements/limitations. Failed to provide clear and concise direction during approach, pickup and departure. Inadequate aircraft clearance from obstacles and/or water. Severe lack of knowledge, with regard to the use and employment of pyrotechnics. Failed to manage equipment malfunctions or maintain situational awareness/crew coordination.

3.6.21. Area 50 – Cryptological System Operations.

3.6.21.1. Q. Thorough knowledge of applicable crypto-logical systems. Full knowledge of keying devices and materials. With use of a guide, keyed all systems without errors.

3.6.21.2. Q-. Familiar with applicable crypto-logical systems, keying devices and materials. With use of guide, keyed most systems with minor errors.

3.6.21.3. U. Lacked knowledge of applicable crypto-logical systems, keying devices or keying materials. Failed to key systems without errors.

Chapter 4

INSTRUCTOR EVALUATIONS

4.1. General. The instructor grading criteria apply to initial, requalification, and all periodic instructor (INSTR) evaluations. The examinee must demonstrate the ability to instruct in a safe and effective manner.

4.2. Requirements. Evaluate instructors on areas listed in **Table 4.1**. (T-2) Instructor candidates must be qualified in all areas they will instruct and should have a solid understanding of systems, procedures, and techniques. Initial instructor evaluations may be a stand-alone evaluation or accomplished in conjunction with a periodic qualification/mission evaluation. Accomplish periodic instructor evaluations in conjunction with periodic qualification/mission evaluations IAW AFI 11-202V2 (and applicable supplements). (T-2) If able, evaluate instructor candidates instructing actual students. Otherwise, the flight examiner may act as the student. An instructor or evaluator graded Q-2 on any evaluation will not perform instructor or evaluator duties until additional training is completed. Reference AFI 11-202 Vol 2 for restrictions to instructors who fail an evaluation for any item in **Table 4.1** (T-2) RQ INSTR will not be used for loss of qualification due to expiration of required periodic evaluation or loss of currency. Only annotate RQ INSTR if requalification is required due to a failure of instructor ability. For all other RQ evaluations, annotate as RQ (QUAL, MSN etc.)

4.2.1. Initial Instructor Evaluations. There are no requisites for initial instructor evaluations. Initial qualification instructor evaluations will be accomplished in the aircraft. Evaluate instructor candidates on instructor performance during a representative sample of unit's basic/mission maneuvers as appropriate.

4.2.2. Periodic Instructor Evaluations. Instructors will, at a minimum, demonstrate instructional ability and maneuvers/procedures in flight or in an ATD; all other areas may be evaluated via alternate method. All events required by Table 2.1 or Table 3.1 will be accomplished by a balance of demonstration and instruction. (T-2)

Table 4.1. Instructor Evaluation Event Requirements Table (all Crew Positions) (T-2)

<i>Area</i>	<i>Grading Area</i>	<i>QUAL</i>	<i>INSTM</i>	<i>MSN</i>
61	Instructional Preparation	R	R	R
62	Instructional Ability (CRITICAL)	R	R	R
63	Instructor Knowledge	R	R	R
64	Briefings/Debriefings/Critique/Forms	R	R	R
65	Demonstration of Maneuvers/Procedures	R	R	R
Legend				
R—Required				
O—Optional				

4.3. Instructor Grading Criteria.

4.3.1. Area 61 — Instructional Preparation.

4.3.1.1. Q. Thoroughly reviewed student's training documentation. 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.

4.3.1.2. 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.

4.3.1.3. 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.

4.3.2. Area 62 — Instructional Ability. (CRITICAL)

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

4.3.2.2. U. Failed to effectively communicate, provide timely feedback. Performed or taught improper procedures/techniques/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.

4.3.3. Area 63 — Instructor Knowledge.

4.3.3.1. Q. Demonstrated a high level of knowledge of all applicable aircraft systems, techniques, procedures, missions, publications and tactics to be performed. Completed appropriate training records accurately. Comments were clear and pertinent.

4.3.3.2. 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.

4.3.3.3. 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.

4.3.4. Area 64 — Briefings/Debriefings/Critique/Forms.

4.3.4.1. Q. Briefings were well organized, accurate, and thorough. Reviewed student's present level of training and defined mission events to be performed. Showed a satisfactory 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. Properly completed training folders/records, understood grading policies and procedures.

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

4.3.4.3. 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. Improperly completed training folders/records, failed to understand grading policies and procedures.

4.3.5. Area 65 — Demonstration of Maneuvers/Procedures.

4.3.5.1. 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.

4.3.5.2. 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.

4.3.5.3. U. Failed 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. Insufficient knowledge of aircraft systems, procedures, and/or proper source material.

Chapter 5

FLIGHT EXAMINER OBJECTIVITY EVALUATIONS

5.1. General. Flight examiner objectivity evaluations are SPOT evaluations used by any flight examiners to observe a flight evaluation and evaluate the objectivity and performance of a lower echelon flight examiner. The examinee must demonstrate the ability to perform evaluations in a safe and effective manner. (T-2)

5.2. Requirements. Any flight examiner may administer aircrew flight examiner objectivity evaluations. Evaluators will evaluate flight examiners (all crew positions) on areas listed in **Table 5.1.** (T-2) Evaluators will only use Q-1 or Q-3 qualification levels. (T-2) Award a Q-3 if a grade of U is awarded in any area. Consider cumulative Q- deviations when determining the qualification level. The OG/CC will determine the future status of any flight examiner receiving a Q-3. (T-3) Units will not use flight examiner objectivity evaluations to fulfill the requirements of periodic evaluations. (T-2) Evaluators will document flight examiner objectivity evaluations on the AF Form 8. (T-2)

5.2.1. An evaluator receiving an unqualified rating will not sign the AF Form 8 for the direct evaluation examinee. If the higher echelon evaluator is the same crew position as the direct evaluation examinee, the higher echelon evaluator will sign both the lower echelon evaluator's and the direct examinee's AF Form 8 as the Flight Examiner. If the examiner is administering an evaluation to a person in another aircrew specialty, the direct examinee's evaluation will be terminated.

5.2.1.1. If the direct examinee was receiving a recurring evaluation (QUAL, INSTM or MSN), the higher echelon evaluator is responsible for ensuring all requisites and items are completed for the evaluation, or the evaluation will be recorded as a SPOT and not count for the 17-month recurring evaluation requirement.

5.2.2. If an examinee assigns an incorrect area grade or assigns an incorrect qualification level, the flight examiner administering the flight examiner objectivity evaluation will assign the appropriate area grade or qualification level and complete the documentation for the evaluation being administered by the examinee.

Table 5.1. Flight Examiner Event Requirements Table (all Crew Positions) (T-2)

<i>Area</i>	<i>Grading Area</i>	<i>QUAL</i>	<i>INSTM</i>	<i>MSN</i>
66	Compliance with HHQ and Local Stan/Eval Directives	R	R	R
67	Flight Examiner Briefing	R	R	R
68	Identification of Discrepancies and Assignment of Area Grades	R	R	R
69	Assessment of Overall Performance	R	R	R
70	Appropriate Assignment of Additional Training and Restrictions	R	R	R
71	Mission Critique	R	R	R
72	Flight/EP Evaluation Documentation	R	R	R
73	Squadron Commander Debriefing	R	R	R
74	Flight Examiner Performance	R	R	R

Legend R—Required O—Optional

5.3. Evaluator Grading Criteria.

5.3.1. Area 66 — Compliance with HHQ and Local Stan/Eval Directives.

5.3.1.1. Q. Complied with all directives pertaining to the administration of a flight evaluation.

5.3.1.2. Q-. Complied with most directives. Deviations did not jeopardize the effectiveness of the evaluation or flight safety.

5.3.1.3. U. Failed to comply with directives or allowed flight safety to be jeopardized.

5.3.2. Area 67 — Flight Examiner Briefing.

5.3.2.1. Q. Thoroughly briefed the examinee on the conduct of the evaluation, mission requirements, responsibilities, grading criteria, and flight examiner actions/position during the evaluation.

5.3.2.2. Q-. Items were omitted during the briefing causing minor confusion or requiring later clarification. Did not fully brief the examinee as to the conduct and purpose of the evaluation.

5.3.2.3. U. Flight examiner failed to adequately brief the examinee.

5.3.3. Area 68 — Identification of Discrepancies and Assignment of Area Grades.

5.3.3.1. Q. Identified all discrepancies and assigned proper area grade.

5.3.3.2. Q-. Most discrepancies were identified. Failed to assign Q- grade when appropriate. Assigned discrepancies for performance which was within standards.

5.3.3.3. U. Failed to identify discrepancies related to flight discipline or deviations that merited an unqualified grade. Assigned Q grades, which should have been U or assigned U grades for performance within standards.

5.3.4. Area 69 — Assessment of Overall Performance.

5.3.4.1. Q. Awarded the appropriate overall qualification level based on the examinee's performance.

5.3.4.2. Q-. Awarded an overall qualification level without consideration of cumulative deviations in the examinee's performance.

5.3.4.3. U. Did not award a qualification level commensurate with overall performance.

5.3.5. Area 70 — Appropriate Assignment of Additional Training and Restrictions.

5.3.5.1. Q. Assigned proper additional training and restrictions (if warranted).

5.3.5.2. Q-. Additional training assigned was insufficient to ensure the examinee would achieve proper level of qualification. Restrictions assigned were not appropriate.

5.3.5.3. U. Failed to assign additional training or restrictions when warranted.

5.3.6. Area 71 — Mission Critique.

5.3.6.1. Q. Thoroughly debriefed the examinee on all aspects of the evaluation.

5.3.6.2. Q-. Failed to fully discuss all deviations and assigned grades. Did not advise the examinee of additional training, if required.

5.3.6.3. U. Did not discuss any assigned area grades or the overall rating. Changed grades without briefing the examinee.

5.3.7. Area 72 — Flight/EP Evaluation Documentation.

5.3.7.1. Q. Correctly completed and/or understands all required documentation.

5.3.7.2. Q-. Minor errors in documentation, which did not affect the validity of the evaluation.

5.3.7.3. U. Failed to complete all required documentation. Major errors caused the validity of the evaluation to be questioned.

5.3.8. Area 73 — Squadron Commander Debriefing. (For Q-2 or Q-3 Evaluations Only)

5.3.8.1. Q. Thoroughly debriefed the examinee's squadron commander.

5.3.8.2. Q-. Debriefed the squadron commander, but failed to adequately discuss all discrepancies, qualification level, or additional training.

5.3.8.3. U. Failed to debrief the examinee's squadron commander on an unsatisfactory evaluation.

5.3.9. Area 74 — Flight Examiner Performance.

5.3.9.1. Q. Flight examiner performed as briefed, conducted a thorough evaluation, and did not detract from examinee performance.

5.3.9.2. Q-. Flight examiner committed minor errors that did not detract from the examinee's performance.

5.3.9.3. U. Flight examiner committed major errors which disrupted the examinee's performance or prevented a thorough evaluation.

Chapter 6

LOCAL PROCEDURES

6.1. General. Use this chapter to define local evaluation criteria, as required.

TOD D. WOLTERS, Lt Gen, USAF
Deputy Chief of Staff for Operations

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

AFPD 10-9, *Lead Command Designation and Responsibilities for Weapon Systems*, 8 March 2007

AFPD 11-2, *Aircrew Operations*, 19 Jan 2012

AFMAN 33-363, *Management of Records*, 1 Mar 2008

AFI11-2UH-1NV1, *UH-1N Helicopter Aircrew Training*, 19 March 2013

AFI 11-2UH-1NV3, *UH-1N Helicopter Operations Procedures*, 19 April 2012

AFI 11-2UH-1NV3 CL-1, *UH-1N Helicopter Crew Briefing Guides/Checklists*, 8 April 2015

AFI 11-2UH-1N, Vol 3 CL-2, *UH-1N Helicopter Mission Equipment Cleaning and Inspection Procedures*, 28 Feb 2007

AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, 13 September 2010

AFI 11-202V3, *General Flight Rules*, 7 November 2014

AFMAN 11-217, Vol 1 *Instrument Flight Procedures*, 22 October 2010

AFTTP 3-3.H-1, *Combat Aircraft Fundamentals H-1*, 21 September 2014

TO 1H-1(U)N-1, *UH-1N Flight Manual*, 17 July 2009

TO 1H-1(U)N-1 CL-1, *Pilot's Flight Crew Checklist*, 17 July 2009

TO 1H-1(U)N-1 CL-2, *Crewmembers Flight Crew Checklist*, 17 July 2009

Prescribed Form

AF IMT 3862, *Flight Evaluation Worksheet*, 25 August 2005

Forms Adopted

AF Form 8, *Certificate of Aircrew Qualification*, 08 December 2006

AF Form 847, *Recommendation for Change of Publication*, 22 September 2009

AF Form 942, *Record of Evaluation*, 8 December 2006

AF IMT 4031, *CRM Skills Criteria Training/Evaluation*, 01 March 1998

AF Form 4348, *USAF Aircrew Certifications*, 12 December 2006

AFTO Form 781, *ARMS Aircrew/Mission Flight Data Recorder*, 11 September 2008

Abbreviations and Acronyms

AC—Aircraft Commander

ACDE—Aircrew Chemical Defense Ensemble

AF—Air Force

AFB—Air Force Base

AFI—Air Force instruction

AFDW—Air Force District of Washington

AFGSC—Air Force Global Strike Command

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFTTP—Air Force Tactics Techniques and Procedures (AFTTP 3-3.H-1, Combat Aircraft Fundamentals H-1)

AGL—Above Ground Level

AHO—Above Highest Obstacle

AIE—Alternate Insertion or Extraction

ALS—Above Landing Site

ANG—Air National Guard

ARMS—Aviation Resource Management Systems

ASR—Airport Surveillance Radar

ATD—Aircrew Training Device

ATO—Air Tasking Order

BAQ—Basic Aircraft Qualification

CONOPS—Concept Of Operations

CMR—Combat Mission Ready

CRM—Crew Resource Management

DH—Decision Height

DME—Distance Measuring Equipment

DO—Director of Operations

DOC—Designed Operational Capability

DoD—Department of Defense

DRU—Direct Reporting Unit

EF—Evaluator Flight Engineer

EP—Emergency Procedure or Evaluator Pilot

EPE—Emergency Procedures Evaluation

ETA—Estimated Time of Arrival

FCF—Functional Check Flight

FCIF—Flight Crew Information File
FE—Flight Engineer
FEF—Flight Evaluation Folder
FL—Flight Lead
FMP—Flight Manuals Program
FOA—Forward Operating Agency
FP—First Pilot
FTU—Flight Training Unit
GS—Ground Speed
HQ—Headquarters
HHQ—Higher Headquarters
IAW—In Accordance With
ILS—Instrument Landing System
IMC—Instrument Meteorological Conditions
IMT—Information Management Tool
INIT INSTR—Initial Instructor
INIT MSN—Initial Mission
INSTM—Instrument
INSTR—Instructor
IP—Instructor Pilot or Initial Point
IRC—Instrument Refresher Course
ITO—Instrument Take Off
KIAS—Knots Indicated Airspeed
LZ—Landing Zone
MAJCOM—Major Command
MAP—Missed Approach Point
MC—Mission Copilot
MDA—Minimum Descent Altitude
MDS—Mission Design Series
MF—Mission Flight Engineer
MP—Mission Pilot
MQF—Master Question File

MSN—Mission
N/A—Not Applicable
NAF—Numbered Air Force
NAV—Navigation
NAVAIDS—Navigation Aids
NLT—Not Later Than
NM—Nautical Mile
NOTAM—Notice to Airman
NT—Night
NVG—Night Vision Goggle
OG—Operations Group
OPR—office of primary responsibility
P—Pilot (all inclusive)
PEX—Patriot Excalibur
PAR—Precision Approach Radar
Q—Qualified or Torque
Q-— -Qualified Minus
Q-1—Qualification Level 1
Q-2—Qualification Level 2
Q-3—Qualification Level 3
QUAL—Qualification
RAP—Ready Aircrew Program
RDS—Records Disposition Schedule
RPM—Revolutions Per Minute
SA—Situational Awareness
FE—Stan/Eval Flight Examiner
SELO—Stan/Eval Liaison Officer
SPINS—Special Instructions
TACAN—Tactical Air Navigation
T.O.—Technical Order
TOLD—Takeoff and Landing Data
TOT—Time Over Target

U—Unqualified

VFR—Visual Flight Rules

VOR—Very High Frequency Omnidirectional Range

WST—Weapon System Trainer

Terms

Certification—The process of endorsing an individual to perform a specific event (i.e. ACDE, contingency, etc...)

Eligibility Period—The 6-month period prior to the expiration date of an evaluation.

Emergency Procedures Evaluation (EPE)—A flight, aircrew training device or verbal evaluation used to evaluate emergency procedures and systems knowledge.

Evaluation Profile—Defines the required items of an evaluation to include a scenario.

Deviation—Performing an action not in sequence with current procedures, directives, or regulations. 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.

Error—Departure from standard procedures. Performing wrong actions or recording incorrect information.

Initial Evaluation—The first evaluation of any type for a crew position in an MDS (i.e., INIT QUAL/INSTM, INIT MSN, INIT INSTR).

MSN Evaluation—Qualifies an individual to perform the unit's operational mission.

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

Q—The desired level of performance. The examinee demonstrated a satisfactory knowledge of all required information, performed aircrew duties within the prescribed tolerances, and accomplished the assigned mission.

Q-—The examinee is qualified to perform the assigned area/subarea tasks, but requires debriefing or additional training as determined by the flight examiner. Deviations from established standards must not exceed the prescribed Q- tolerances or jeopardize safety of flight.

U— A breach of flight discipline, performance outside allowable parameters, or deviations from prescribed procedures/tolerances that adversely affected mission accomplishment or compromised flight safety. An examinee receiving an area/subarea grade of U normally requires additional training.