

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

**AIR FORCE MANUAL 11-2TH-1H,
VOLUME 2**



21 AUGUST 2023

Flying Operations

***TH-1H HELICOPTER AIRCREW
EVALUATION CRITERIA***

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

ACCESSIBILITY: Publications and forms are available for downloading or ordering on the e-Publishing web site at www.e-Publishing.af.mil.

RELEASABILITY: There are no releasability restrictions on this publication.

OPR: 19 AF/A3V

Certified by: AF/A3T
(Mr. William D. Dries, Jr.)

Supersedes: AFMAN11-2TH-1HV2, 26 July 2018

Pages: 35

This publication implements Air Force Policy Directive (AFPD) 11-2, *Aircrew Operations*, and AFPD 11-4, *Aviation Service*. This publication establishes initial and periodic aircrew qualification evaluation criteria for all TH-1H units, and it is used in conjunction with Air Force Manual (AFMAN) 11-202 Volume 2, *Aircrew Standardization/Evaluation Program*. This manual prescribes standard procedures used by all pilots and instructor pilots operating an Air Force TH-1H aircraft and applies to all DAF civilians and uniformed members of the Regular Air Force, Air Force Reserve, and Air National Guard. This manual does not apply to the United States Space Force. Refer recommended changes and questions about this publication to the office of primary responsibility using the DAF Form 847, *Recommendation for Change of Publication*; route DAF Forms 847 from the field through the appropriate functional chain of command. The authorities to waive wing/unit level requirements in this manual are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See DAFMAN 90-161, *Publishing Processes and Procedures*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternatively, to the office of primary responsibility for non-tiered compliance items. Ensure all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. This Air Force Manual requires the collection and/or maintenance of information protected by the Privacy Act of 1974 authorized by Title 10 United States Code, Section 9013, Secretary of the Air Force and E.O. 9397. The applicable SORN F011 AF XO A, Aviation Resource Management System (ARMS) is available

at <https://dpcl.d.defense.gov/Privacy/SORNS/> This publication may be supplemented at any level. Per AFI 11-200, major commands (MAJCOM) will coordinate proposed MAJCOM-level supplements to this volume through 19 AF/A3V to AF/A3T prior to publication. Field units below MAJCOM level will coordinate copies of their supplements with their parent MAJCOM office of primary responsibility prior to publication.

SUMMARY OF CHANGES

This document has been substantially revised and must be completely reviewed. Major changes include (1) correcting multiple grammatical and typographical errors, (2) updated multiple AFI, DAFMAN, and AFMAN titles, (3) added remote operations and basic visual flight rules navigation graded area to qualification phase, (4) removed AIE operations as a pilot requirement, (5) revised maneuver criteria for visual flight rules, navigation, and low-level operations, (6) made night vision goggles (NVG) Operations required for SMA.

Chapter 1—GENERAL INFORMATION	3
1.1. General.....	3
1.2. Roles and Responsibilities.	3
1.3. Procedures.....	3
Chapter 2—EVALUATION REQUIREMENTS	5
2.1. General.....	5
2.2. Emergency Procedures Evaluations (EPE).....	5
2.3. Publications Check.	5
Table 2.1. Publications Check.	5
2.4. Qualification Evaluations.....	5
2.5. Instrument Evaluations.	5
2.6. Mission (MSN) Evaluations.	6
2.7. Instructor Evaluations.	6
Chapter 3—EVALUATION CRITERIA	7
3.1. Ground Phase Requisites.	7
3.2. Flight Evaluation Criteria.	7
Table 3.1. Flight Evaluation Criteria.	7
Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION	32

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. Flight examiners will conduct aircrew evaluations IAW this instruction and AFMAN 11-202 Volume 2, as supplemented. **(T-2)** Specific areas for evaluation are prescribed to ensure an accurate assessment of proficiency and capabilities of aircrew. This AFMAN is used by flight examiners and instructors while conducting/preparing for aircrew evaluations.

1.2. Roles and Responsibilities.

1.2.1. MAJCOM director of operations. The MAJCOM director of operations is responsible for establishing and managing the MAJCOM standardization and evaluation program, in accordance with AFMAN 11-202, Volume 2.

1.2.2. Operations Group Commander. The operations group commander is responsible for establishing and maintaining the unit-level standardization and evaluation program and ensuring flight examiners administer evaluations in accordance with AFMAN 11-202, Volume 2, and this publications.

1.2.3. Flight examiners (FEs) are responsible for administering standardization and evaluation programs in accordance with AFMAN 11-202, Volume 2, and this publication.

1.3. Procedures.

1.3.1. Flight examiners will use the evaluation criteria contained in this volume to conduct all flight and emergency procedures evaluations (EPE). **(T-3)**

1.3.2. Unless specified, the examinee or flight examiner may fly in any seat (within their crew qualification) that best enables the flight examiner to conduct a thorough evaluation.

1.3.3. Units will use AF Form 4104, *TH-1H Flight Evaluation Worksheet*, when administering flight evaluations and EPEs. **(T-3)**

1.3.4. When it is not possible to evaluate a required area in flight (due to equipment malfunctions, operational requirements, scheduling restrictions or weather), the flight examiner may elect to evaluate the areas by an alternate method (verbal, procedural trainer).

1.3.5. In the ‘additional comments’ section (Section IV) of the AF Form 8, *Certification of Aircrew Qualification*, under ‘Examiner Remarks,’ document why the required areas were not evaluated in flight and the alternate method of evaluation used. If, in the flight examiner’s judgment, a required item cannot be adequately evaluated by an alternate method, complete the evaluation on an additional flight. (Refer to AFMAN 11-202, Volume 2, *Aircrew Standardization/Evaluation Program*, for guidance.)

1.3.6. For initial evaluations, all areas evaluated must be performed by actual demonstration. **(T-3)** Additionally, to evaluate a specific mission area, all subareas identified in [Table 3.1](#), unless designated as optional must be evaluated. **(T-3)**

1.3.7. Evaluations incomplete in the aircraft may be completed in the Weapon Systems Trainer (WST) with 23 FTS/CC approval. Only instrument evaluations may be completely

administered in the WST. Sound, visuals, and secondary motion are required for all evaluation profiles. **(T-3)**

1.3.7.1. The following maneuver items will not be evaluated in the WST under any conditions: precision hover/alternate insertion/extractions, taxiing, slope operations, autorotations to a touchdown, and EMER GOV OPNS in a hover. **(T-3)**

1.3.7.2. Evaluators always have discretion to consider the impact of device fidelity upon examinee's performance. If the evaluator considers the examinees performance to be detrimentally affected by the device fidelity, the evaluator must cease evaluation in the WST (maneuvers already accomplished will be graded). **(T-3)**

Chapter 2

EVALUATION REQUIREMENTS

2.1. General. Evaluation standards are administered in accordance with the individual's crew position. Refer to AFMAN 11-202, Volume 2, for qualification and instrument evaluation requisites. Mission (MSN) evaluation requisites consist of MSN open-book examination and EPE (evaluate MSN-specific emergency procedures and systems knowledge during MSN evaluations).

2.2. Emergency Procedures Evaluations (EPE).

2.2.1. EPEs will not be conducted in-flight (aircraft or WST). (T-3) The purpose of the EPE is to evaluate systems knowledge and emergency procedures on the ground, allowing a more in-depth investigation of systems knowledge.

2.2.2. The EPE is a verbal evaluation and should be scenario driven. Flight examiners may use one continuous scenario throughout the EPE or different scenarios for each emergency procedure.

2.2.3. Examinees may use publications that are normally available in flight. The examinee must recall applicable boldface items from memory.

2.2.4. The flight examiner may present situational emergency procedures in flight (use of the WST is encouraged); however, they will not be graded as an EPE. Instead, situational emergency procedures presented in flight will be graded under the knowledge of publications, systems, and limits section of [Table 3.1](#).

2.2.5. Boldface procedures may be associated with situational EPEs. If not, knowledge of boldface procedures will be demonstrated to the flight examiner either verbally or in writing. (T-3)

2.3. Publications Check. The following publications listed in [Table 2.1](#) will be checked for currency and proper posting during all flight evaluations. (T-3) Electronic flight bags may be utilized for these publications. If used, they will be checked for current: iOS, electronic publications account sync, and required ForeFlight documents.

Table 2.1. Publications Check.

Publication
TO 1H-1(T)H-1 <i>Flight Manual</i>
TO 1H-1(T)H-1CL-1 <i>Pilots Flight Crew Checklist</i>
TO 1H-1(T)H-5 <i>Basic Weight Checklist and Loading Data</i>
Local 11-2TH-1HV3-CL-1 <i>General Aircrew Briefing Guide</i>
Local In-flight guide

2.4. Qualification Evaluations. Complete all required areas in [Table 3.1](#) under Section I and II for the crewmember's aircrew specialty. If the crewmember is an instructor, Section IV must be completed. (T-3)

2.5. Instrument Evaluations. Complete all required areas in [Table 3.1](#) from Section I and III. If the crewmember is an instructor, Section IV must be completed. (T-3)

2.6. Mission (MSN) Evaluations. All areas (unless optional) in [Table 3.1](#) from Section I and V, for initial mission (INIT MSN) and requalification mission (RQ MSN) evaluations will be completed. **(T-3) Note:** In certain cases, civilian contract instructors may be qualified in some, but not all, MSN events. In this case, the INIT MSN and RQ MSN evaluations will only include those areas in which the instructor received training, and the AF Form 8 will clearly state in which areas the instructor has been evaluated and is qualified to instruct. All night-mission maneuvers will be accomplished using NVGs for initial and requalification evaluations. **(T-3)** For recurring MSN evaluations, complete all of Section I, [Table 3.1](#) and a representative sample of mission areas from Section V. If the crewmember is an instructor, complete section IV. Evaluators will present the crewmember a scenario representative of the unit mission. **(T-3)** Not every unit mission needs to be evaluated in flight, and unit missions can be conducted day or night for recurring MSN evaluations. An attempt will be made to alternate day and night mission profiles on periodic MSN evaluations. **(T-3)**

2.7. Instructor Evaluations. To initially qualify as an instructor in the TH-1H, the crewmember will successfully complete an initial instructor evaluation. **(T-3)** The initial instructor evaluation will include all required areas in [Table 3.1](#) of section I and IV as well as a sampling representative of the unit mission. **(T-3)**

Chapter 3

EVALUATION CRITERIA

3.1. Ground Phase Requisites. Ground phase requisites requirements vary depending upon the specific evaluation administered according to AFMAN 11-202, Volume 2, and may include a combination of applicable examinations, boldface, and an EPE. Grading criteria for ground phase requisites are conducted according to AFMAN 11-202, Volume 2, or as defined in this manual.

3.2. Flight Evaluation Criteria. The following table contains evaluation criteria for conducting flight evaluations. All areas listed with a “P” (Pilot) and/or “SMA” (Special Missions Aviator) indicate evaluation criteria for the identified crew position. Required events for each evaluation type are listed in [Chapter 2](#).

Table 3.1. Flight Evaluation Criteria.

I.	<i>General</i>
Area 1.	Knowledge of Publications, Systems, and Limits: (P/SMA)
Q	Demonstrated a thorough knowledge of National Airspace System rules and procedures applicable aircraft, equipment, publications, and systems operating limits. Ensured satisfactory operation within limits.
Q-	Made minor errors or omissions from (Q) criteria. Deviations did not involve any safety of flight issues regarding National Airspace System rules and procedures, applicable aircraft, equipment, publications, and systems operating limits.
U	Unfamiliar with National Airspace System rules, procedures, and other applicable aircraft, equipment, publications, and system operating limits and procedures.
Area 2.	Performance Data/Weight and Balance (W&B): (P/SMA)
Q	<p>Checked all factors applicable to the flight. Verified accuracy of performance data and W&B information to ensure operation within specified parameters. Correctly computed takeoff and landing data (TOLD) and (or) W&B according to the flight manual and the student guide.</p> <p><i>W&B Criteria:</i> Takeoff or landing/worst case weights \pm100 lbs.</p> <p>Center of gravity \pm 0.1 inches.</p> <p><i>TOLD criteria:</i> computed within the following specified tolerances:</p> <p>Power available: \pm1%</p>

	<p>Power required: $\pm 2\%$</p> <p>Velocity never exceed (Vne): ± 2 knots</p>
Q-	<p>Made minor errors or omissions from (Q) criteria.</p> <p><i>W&B Criteria:</i> Takeoff or landing/worst case weights ± 200 lbs.</p> <p>Center of gravity: > 0.1 but < 0.3 inches</p> <p><i>TOLD criteria:</i> computed within the following specified tolerances:</p> <p>Power available: $\pm 2\%$</p> <p>Power required: $\pm 3\%$</p> <p>Velocity never exceed (Vne): ± 3 knots</p>
U	<p>Made gross errors and (or) omissions from (Q) criteria that would prevent safe and effective mission accomplishment. Computations were not within (Q-) tolerances.</p>
Area 3.	Preflight and Postflight: (P/SMA)
Q	<p>Accomplished required aircraft or equipment inspections according to the flight manual and applicable directives. Ensured the aircraft was correctly configured for assigned mission. Appropriate checklists and (or) technical orders (TO) out and available for reference. Ensured all required personal and mission equipment was available. Equipment was properly inspected, operated, and secured. Had a thorough understanding of the information contained in aircraft and equipment forms and correctly determined aircraft or equipment status. Completed all required forms (before, during, and after flight as applicable) without significant errors.</p>
Q-	<p>Made minor deviations from (Q) criteria. Did not compromise safety or mission effectiveness. Lacked acceptable familiarity with preflight and (or) postflight procedures.</p>
U	<p>Failed to complete preflight and (or) postflight checklists or did so in an unsafe manner.</p>
Area 4.	Cargo and Passenger Loading, Offloading, and Tiedown: (P/SMA)
Q	<p>Satisfactorily loaded or offloaded the aircraft and secured all cargo and equipment according to the flight manual and other applicable directives.</p>
Q-	<p>Made minor deviations from (Q) criteria. Did not compromise safety or mission effectiveness. Did not satisfactorily load or offload the aircraft</p>

	and (or) secure all cargo and equipment according to the flight manual and other applicable directives.
U	Unsafely loaded or offloaded the aircraft and (or) unsafely secured cargo and equipment not according to the flight manual and (or) other applicable directives.
Area 5.	Startup and Shutdown Procedures: (P/SMA)
Q	Accomplished startup and shutdown procedures, including all required checks according to the flight manual, checklists, and applicable directives. Correctly configured the cockpit and coordinated with ground support personnel. Familiar with abnormal or emergency situations.
Q-	Minor deviations from (Q) criteria. Did not compromise safety or mission effectiveness. Lacked acceptable familiarity with startup procedures.
U	Unsafe attempted startup and shutdown procedures. Incorrectly configured the cockpit and (or) failed to coordinate with ground support personnel. Unfamiliar with abnormal or emergency situations.
Area 6.	Use of Checklists: (P/SMA)
Q	Effectively referenced and completed appropriate checklists with accurate responses. Was familiar with checklists and contents. Demonstrated a thorough knowledge of checklist notes, cautions, and warnings without reference to the flight manual.
Q-	Minor deviations from (Q) criteria. Did not compromise safety of mission effectiveness. Slow to respond and (or) had difficulty executing proper procedures and had poor checklist discipline. Example: Before-takeoff and (or) before-landing checklists did not adequately cover aircrew intentions in the event of an abort, aircraft problem, etc.
U	Did not use or complete checklists. Lacked acceptable familiarity with contents.
Area 7.	Safety: (P/SMA) (Critical)
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 operation and mission accomplishment.
U	Not aware of or did not comply with all safety factors required for safe operation of aircraft or mission accomplishment. Did not adequately clear the aircraft. Operated aircraft in a dangerous manner. Unnecessarily subjected crew or aircraft to increased risk. Compromised safety and allowed a dangerous situation to develop.

Area 8.	Flight Discipline: (P/SMA) (Critical)
Q	Assessed all aspects of the situation and took an appropriate course of action consistent with safe and effective mission accomplishment.
U	An untimely or inappropriate decision led to an inappropriate response to the situation, compromising integrity or safety, and (or) degraded effective mission accomplishment.
Area 9.	Cockpit/Crew Resource Management: (P/SMA)
	a. Airmanship/ Situational Awareness (Critical)
Q	Aware of and responded to all factors that affected safety, crewmembers, aircraft, or mission effectiveness. Demonstrated knowledge and skills to prevent the loss of situational awareness, recognized the loss of situational awareness and when necessary, demonstrated techniques for recovering from the loss of situational awareness.
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.
	b. Crew Coordination and Flight Integrity
Q	Communicated and coordinated effectively with other crewmembers without misunderstanding, confusion, or delay. Considered the needs, responsibilities, abilities, and inputs of all crewmembers. Worked effectively with all members of the crew to accomplish the tasks of the mission.
Q-	Slow to respond and (or) had difficulty executing proper procedures and had poor checklist discipline. Slow to respond to the needs, responsibilities, abilities, and inputs of all crewmembers. Did not work effectively with all members of the crew to accomplish the tasks of the mission.
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.

	c. Communications/Air Traffic Control Procedures
Q	Fully knowledgeable of communications procedures. Promptly complied with all controlling agency's instructions and made required reports. Obtained proper clearance from the controlling agency.
Q-	Slow to comply with controlling agency instructions or unsure of reporting requirements. Did not compromise safety, aircraft limitations, maneuver, or mission effectiveness.
U	Unfamiliar with proper communications procedures. Required contacts were delayed misleading, or incorrect. Failed to comply with controlling agency instructions and (or) accepted clearance with which they could not comply. Entered controlled airspace without the proper clearance.
	d. Risk Management/ Decision Making
Q	Accurately completed risk assessment and mitigation throughout the flight. Updated risk analysis throughout the mission and kept the crew informed of changes. Demonstrated the ability to choose a course of action, using logical and sound judgment based on available information.
Q-	Minor deviations from (Q) criteria. Slow to recognize, assess, and mitigate risk throughout the flight.
U	Did not demonstrate the ability to choose a course of action and used poor logic and unsound judgment based on available information. Did not effectively incorporate risk assessment, the risk management process and (or) the necessary control measures to effectively mitigate risks associated with the mission.
	e. Task Management
Q	Effectively demonstrated the ability to alter a course of action based on new information, maintain constructive behavior under pressure, and adapted to internal and external environment changes.
Q-	Slow to consider priorities, available resources, and standard operating procedures. Did not compromise safety, aircraft limitations, maneuver effectiveness, or mission effectiveness.
U	Unfamiliar with task management procedures, which compromised mission integrity and (or) flight safety.
	f. Mission Planning
Q	Developed a sound and thorough plan to accomplish the mission. Accounted for all factors applicable to the flight. Example: weather, notices to airmen (NOTAM), landing site data, flight information publications, weight and balance, performance data, fuel requirements,

	maps current and chummed, etc.). Completed DD Form 175-1, <i>Flight Weather Briefing</i> , and AF IMT 70, <i>Pilot's Flight Plan and Flight Log</i> , as applicable, without significant errors.
Q-	Minor errors and (or) omissions from (Q) criteria which did not compromise mission integrity and (or) flight safety.
U	Gross errors and (or) omissions from (Q) criteria. Significant errors which compromised mission integrity and (or) flight safety.
	g. Briefings and Debriefings
Q	Presented a logical, well organized, and professional briefing. Covered all factors pertaining to the flight and provided effective discussion for accomplishing the mission. Considered the abilities and limitations of all flight members. Effectively used training aids. Thoroughly debriefed the mission, including mission accomplishment, deviations, and lessons learned. Offered correct guidance, as appropriate. Debriefed maintenance personnel as required. Note: If not the briefer, actively participated and provided input when required. Fully understood the briefing and debriefing and followed instructions.
Q-	Events were out of sequence, redundant, or difficult to understand. Did not effectively use training aids. Focused on nonessential items or omitted minor details. Did not consider flight members' abilities. Managed time poorly. Passenger briefing lacked sufficient information.
U	Presentation was disorganized or in an illogical sequence. Created doubts, confusion or omitted major events. Did not allow sufficient time for preflight of personal equipment, aircraft, and (or) mission equipment. Ignored flight members' abilities, limitations, and (or) questions. Did not brief passengers. Did not debrief mission deviations or offer corrective guidance. Did not debrief maintenance personnel, as required. Was not prepared or did not actively participate when requested. Did not fully understand duties, and a lack of action or input created problems that impacted safe mission accomplishment.
Area 10.	Fuel Management: (P/SMA)
Q	Understood and monitored continuation fuels and bingo fuels as required. Updated fuel requirements when instructed to divert, hold, or fuel consumption was more than 50 pounds per hour (pph) greater than predicted on the performance planning card.
Q-	Minor errors and (or) omissions from (Q) criteria
U	Major deviations from (Q) criteria

Area 11.	Scanning and Clearing: (P/SMA)
Q	Provided clear, concise, and positive direction to the crew during all phases of flight. Ensured aircraft clearance from obstacles. Alerted crew to obstacles within 25 feet of aircraft.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Was unfamiliar with or did not comply with established procedures.
II.	<i>Qualification</i>
Area 12.	Publications Check: (P/SMA)
Q	Publications current and properly posted.
Q-	Publications current with minor or administrative errors in posting.
U	Publications not current and (or) with errors in posting that resulted in incorrect or incomplete information.
Area 13a.	Hover and Taxi Maneuvers: (P)
Q	Performed according to procedures outlined in the flight manual and AFMAN 11-2TH-1H, Volume 3, <i>TH-1H Operations Procedures</i> . Performed smooth, precise, and controlled aircraft movements. Maintained desired position and ground track ± 2 feet, heading ± 10 degrees. Taxied at constant speed and altitude of 5 feet (± 1 foot). While turning, did not exceed 90 degrees in 4 seconds. Was familiar with marshaling signals.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures. Aircraft control was erratic and (or) unsafe.
Area 13b.	Hover and Taxi Maneuvers: (SMA)

Q	Provided pilot flying with drift/altitude deviation calls. Provided proper drift correction instructions. Used standard/correct terminology. Cleared the aircraft as briefed/required.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures.
Area 14a.	Takeoffs: (P)
Q	<p>Performed according to procedures outlined in the flight manual and AFMAN 11-2TH-1H, Volume 3. Performed smooth, precise, and controlled aircraft movements. Maintained constant ground track and climb out angle. Maintained takeoff heading ± 10 degrees below 50 feet. Maintained constant airspeed after achieving 70 knots indicated airspeed (KIAS) ± 10. Applied smooth power application and maintained takeoff power ± 2 percent. If necessary, takeoff abort was executed in a safe and timely manner as briefed or required without exceeding aircraft limitations.</p> <p>a. Normal Takeoff. Initiated from the ground or a 5 feet (± 1 foot) hover. Applied hover power plus 10 percent and achieved approximately 70 KIAS prior to 100 feet above ground level (AGL), but greater than 15 feet by 60 KIAS (as depicted in the height-velocity diagram) or as briefed.</p> <p>b. Marginal Power Takeoff. Initiated at a 5 feet (± 1 foot) hover or from the ground. Accelerated without ground contact. Applied no more than 5-foot hover power. Cleared a real or simulated 50-foot obstacle down range. Accomplished climb out above effective translational lift without descending below 50 feet and (or) the obstacle while accelerating to 50 KIAS.</p> <p>c. Maximum Performance Takeoff. Initiated at a 5 feet (± 1 foot) hover or from the ground. Applied desired power (usually 5-foot hover power plus 10- 15 percent) smoothly and positively. Cleared a real or simulated 100-foot obstacle. Accomplished climb out without descending below 100 feet and (or) the obstacle while accelerating to 70 KIAS.</p>
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Was unfamiliar with or did not comply with established procedures. Aircraft control was erratic and (or) unsafe.
Area 14b.	Takeoffs: (SMA)
Q	Accomplished all required checklists. Monitored aircraft systems/instruments and fuel status as required. Cleared the aircraft as

	required/briefed.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
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.
Area 15a.	Approaches: (P)
Q	<p>Performed according to procedures outlined in the flight manual and AFMAN 11-2TH-1H, Volume 3. Performed smooth, precise, and controlled aircraft movements. Maintained constant ground track and approach angle. If necessary, a go-around was executed in a safe and timely manner as briefed or required without exceeding aircraft limitations. Terminated the approach within 5 feet of intended landing or hover spot. Arrived at or near zero groundspeed on termination of the approach.</p> <p>a. Normal Approach. Entered at 300 feet AGL (or appropriate altitude) and 70 KIAS. Started the descent on an apparent approach angle of 30 degrees. Terminated to hover or touchdown at the desired landing point.</p> <p>b. Steep Approach. Entered at 300 feet AGL (or appropriate altitude) and 30 knots apparent groundspeed. Started descent on an apparent approach angle of 45 degrees. Terminated to touch down at the desired landing point. Achieved at or near zero groundspeed at intended hover or touchdown spot.</p> <p>c. Shallow Approach. Entered at 300 feet AGL (or appropriate altitude) and 70 KIAS. Started the descent on an apparent approach angle of 10 degrees. Terminated to hover or slide at the desired landing point.</p> <p>Turning Approach (Optional). Entered from any applicable point in the traffic pattern. Executed a continually descending, decelerating turn to align the aircraft with the landing spot. Terminated to hover or touch down at the desired landing point.</p>
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures. Aircraft control was erratic and (or) unsafe.
Area 15b.	Approaches: (SMA)
Q	Accomplished all required checklists. Monitored aircraft systems/instruments and cleared the aircraft as required/briefed.

Q-	Same as above except for minor deviations which did not affect safety/effective mission accomplishment.
U	Major deviations which affected safe/effective mission accomplishment. Did not clear the aircraft as briefed/required.
Area16a.	Landings: (P)
Q	<p>Performed according to procedures outlined in flight manual and AFMAN 11-2TH-1H, Volume 3. Performed smooth, precise, and controlled aircraft movements. Maintained constant heading ± 10 degrees.</p> <p>a. To a Hover. Terminated at 5 feet ± 1 foot over the intended spot with no forward speed.</p> <p>b. To a Touchdown. Maintained a constant rate of descent to touchdown. Touched down with minimal forward speed over the intended spot. Touched down without excessive descent rate and with no side drift.</p> <p>c. To a Slide. Maintained above effective translational lift until touchdown. Maintained alignment with the landing area. Level touchdown was accomplished at the intended location with minimal rate of descent.</p>
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures. Aircraft control was erratic and (or) unsafe.
Area 16b.	Landings: (SMA)
Q	Accomplished all required checklists. Monitored aircraft systems/instruments and cleared the aircraft as required/briefed.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations which affected safe/effective mission accomplishment. Did not clear the aircraft as briefed/required.
Area 17a.	Traffic Pattern (P)
Q	<p>Performed according to procedures outlined in the flight manual and other directives. Performed smooth, precise, and controlled aircraft movements. Maintained a rectangular pattern. Maintained 90 KIAS and 500 feet AGL on downwind and 70 KIAS and 300 feet AGL on base (or per local directives) with airspeed deviations $< \pm 10$ KIAS and altitude deviations $< \pm 100$ feet. Conducted a level turn to final on desired heading ± 10 degrees. Maintained aircraft in trim.</p>

Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness. Airspeed deviations $<\pm 20$ KIAS and altitude deviations $<\pm 150$ feet.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Was unfamiliar with or did not comply with established procedures. Aircraft control was erratic and (or) unsafe. Airspeed deviations $>\pm 20$ KIAS and altitude deviations $>\pm 150$ feet.
Area 17b.	Traffic Pattern (SMA)
Q	Completed the required checklists and monitored aircraft systems and instruments. Aware of aircraft position during traffic pattern. Cleared the aircraft as required/briefed.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
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.
Area 18a.	Simulated Engine Failure: (P)
Q	<p>Familiar and complied with procedures outlined in the flight manual, checklist, and AFMAN 11-2TH-1H, Volume 3. Recognized the emergency, determined the appropriate action, and performed or simulated (as required) from memory all checklist-defined immediate action procedures.</p> <p>a. At Altitude. Selected a suitable landing area. Correctly terminated maneuver as directed by the evaluator pilot (EP).</p> <p>b. At a Hover. Entered from a 5 feet (± 1 foot) hover. Maintained aircraft heading ± 10 degrees, while descending at a steady rate without stair stepping. Maintained position over the ground within 1 foot. Executed a smooth, controlled descent and touchdown with little to no lateral or rearward drift.</p>
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures. Aircraft control was erratic and (or) unsafe. Unable to analyze engine and rotor responses. Unaware of or unresponsive to factors affecting the aircraft.
Area 18b.	Simulated Engine Failure: (SMA)

Q	Familiar and complied with procedures outlined in the flight manual, checklist and AFTTP 3-3.H-1 <i>Combat Aircraft Fundamentals H-1</i> . Communicated aircraft performance quickly and effectively. All advisory calls made to the pilot flying were consistent and clear, and SMA was able to explain corrective actions.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures. Failed to make appropriate advisory calls to the crew. Unable to analyze engine and rotor responses. Unaware of or unresponsive to factors affecting the aircraft.
Area 19a.	Hydraulics- Off Approach: (P)
Q	Familiar and complied with procedures outlined in the flight manual, checklist, and AFMAN 11-2TH-1H, Volume 3. Entered at a minimum altitude of 300 feet AGL and a minimum airspeed of 70 KIAS. Maintained heading control ± 10 degrees and alignment with landing direction. Maintained ground track aligned with the landing area. Executed a smooth, controlled touchdown at or above effective translational lift, with landing area alignment ± 10 degrees. Note: May also be evaluated to a planned 50 feet go-around.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures. Failed to make appropriate calls to preclude unsafe aircraft positioning or touchdown dangerously fast/slow. Unaware of or unresponsive to factors affecting the aircraft.
Area 19b.	Hydraulics- Off Approach: (SMA) Note: Hydraulics- Off Approaches for SMAs may be conducted with the hydraulic control switch in either position.
Q	Familiar and complied with procedures outlined in the flight manual, checklist. Communicated aircraft alignment and performance to pilot flying in an accurate and timely manner. Able to explain corrective actions.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures. Failed to make appropriate calls to preclude unsafe aircraft positioning or touchdown dangerously fast/slow. Unaware of or unresponsive to factors affecting the aircraft.

Area 20a.	Autorotation: (P)
Q	<p>Familiar and complied with procedures outlined in the flight manual, checklist, and AFMAN 11-2TH-1H, Volume 3. Performed smooth and controlled aircraft movements. Controlled rotor speed (Nr) throughout the maneuver (91-105 percent) and maintained safe airspeed (70 KIAS minimum prior to the flare). Maintained aircraft in trim. If required, a power recovery was initiated in a timely and effective manner without exceeding aircraft limitations. Obtained steady state parameters prior to the flare and flared at an appropriate altitude (between approximately 100 and 75 feet AGL).</p> <p>a. Straight-ahead autorotation. Entered no lower than 500 feet AGL.</p> <p>b. Low-level autorotation. Entered 100 to 125 feet AGL but no lower than 50 feet above the highest obstacle (AHO).</p> <p>c. 180-Degree autorotation. Entered no lower than 800 feet AGL.</p> <p>d. Hovering autorotation. Entered from 5 ±1 foot hover. Aligned aircraft within 15 degrees of the wind prior to entry. After entry, maintained aircraft heading ±10 degrees. Executed a smooth, controlled descent and touchdown with little to no lateral or rearward drift.</p> <p>e. Power recovery. Affected a smooth and controlled power recovery. Power recovery completed no lower than 5 feet and 0-15 KGS. Maintained heading alignment within ±10 degrees during power application.</p> <p>f. Touchdown. Applied initial pitch at approximately 15 feet AGL. Touched down between 5-25 knots groundspeed with no lateral drift. Maintained heading alignment within ±10 degrees during touchdown and slide.</p>
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures. Aircraft control was erratic or unsafe.
Area 20b.	Autorotation: (SMA)
Q	<p>Familiar and complied with procedures outlined in the flight manual, checklist, and AFMAN 11-2TH-1H, Volume 3. Communicated aircraft performance quickly and effectively. All advisory calls made to the pilot flying were consistent and clear and was able to explain corrective actions. Must be evaluated: a straight-ahead autorotation or 180-degree autorotation. (T-3)</p>
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.

U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures. Failed to make appropriate advisory calls to the crew. Unable to analyze engine and rotor responses.
Area 21a.	Emergency Governor Operations (Optional): (P)
Q	Familiar and complied with procedures outlined in the flight manual, checklist, and AFMAN 11-2TH-1H, Volume 3. Maintained Nf at 97% \pm 2% while maintaining Nr in the green (91-105%). Smoothly coordinated the flight controls. Maintained altitude 5 \pm 2 feet.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures. Aircraft control was erratic and (or) unsafe.
Area 21b.	Emergency Governor Operations (Optional): (SMA)
Q	Familiar and complied with procedures outlined in the flight manual, checklist, and other directives. Communicated aircraft performance in an accurate and timely manner. Able to explain corrective actions.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions precluded safe and effective maneuver accomplishment. Missed multiple advisory calls indicating deviations of (Q) standards. Unfamiliar with or did not comply with established procedures. Unaware of or unresponsive to factors affecting the aircraft.
Area 22a.	Remote Operations (P)
Q	<p>Familiar with procedures and able to execute appropriate maneuvers according to the flight manual and AFMAN 11-2TH-1H, Volume 3. Performed smooth and controlled aircraft movements during approach, hovering, and takeoff. Thoroughly aware of power requirements and limitations. Considered terrain features and wind conditions. If not flying, monitored aircraft systems, instruments, and aircraft flight path and position. Ensured aircraft clearance from obstacles.</p> <p>a. Site Evaluation. Effectively assessed landing risk. Evaluated and communicated the landing area's obstacles, size and topography, associated winds and turbulence, aircraft's power available/required, and departure route. Maintained no lower than 300' above the landing site and no lower than 100' above highest obstacle (AHO) and a minimum of 50 KIAS during the high reconnaissance. Maintained a minimum of 50' above</p>

	<p>highest obstacle (AHO) and no slower than effective translational lift during the low reconnaissance.</p> <p>b. Approach and Landing. Performed a landing according to procedures outlined in the flight manual and AFMAN 11-2TH-1H, Volume 3. Performed smooth and controlled aircraft movements. Maintained a constant ground track and approach angle. Descent and deceleration were constant and even. Maintained a constant heading during touchdown. Cleared all obstacles by at least 10 feet.</p> <p>c. Departure. Selected and performed takeoff according to procedures outlined in the flight manual and AFMAN 11-2TH-1H, Volume 3. Performed smooth and controlled aircraft movements. Maintained a constant ground track, obstacle clearance (10 feet minimum), and climb out angle.</p>
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations or maneuver/mission effectiveness. Site evaluation not tailored to the situation or was excessively detailed and time consuming.
U	Not familiar or did not comply with procedures. Failed to consider significant factors effecting the approach, landing, or departure. Aircraft control was erratic or unsafe. Failed to verify adequate power margin.
Area 22b.	Remote Operations (SMA)
Q	Familiar and complied with procedures according to the flight manual and AFMAN 11-2TH-1H, Volume 3. Confirmed required TOLD and aware of power requirements and limitations. Provided clear direction to the pilot flying during maneuvers. Effectively communicated aircraft clearance from obstacles.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations or maneuver/mission effectiveness.
U	Unfamiliar or did not comply with procedures. Failed to compute or confirm TOLD or unaware of power requirements and (or) limitations. Failed to provide direction during maneuvers.
Area 23a.	Basic Visual Flight Rules (VFR) Navigation: (P)
Q	<p>Familiar with and effectively used available aircraft navigational systems. Able to satisfactorily determine position. Correctly analyzed all airspace along route and planned accordingly. Consistently remained on planned course ± 1 mile. Adjusted for deviations and located objective within 2 minutes of arrival. Complied with AFMAN 11-2TH-1H, Volume 3 and used proper symbols, appropriately posted route for flight tracking, etc. Effectively managed all resources (time, fuel, etc.) applicable to mission execution.</p> <p>a. Dead Reckoning. Able to use the principles of time, distance, and heading to determine aircraft position, navigation, and destination.</p>

	<p>b. Contour Navigation. Remained within route or area boundaries. Effectively used terrain to determine route, altitude, groundspeed, and aircraft masking.</p> <p>c. Navigation Divert. Correctly determined new heading +10 degrees. Correctly determined estimated time en route (+2 minutes) and distance to diversion point. Determined estimated time en route from the diversion point to nearest recovery base +2 minutes. Correctly determined fuel requirement +100 pounds and loiter time +5 minutes. Correctly analyzed and determined if mission could be accomplished, to include payload capability at arrival to destination point. Accomplished planning without undue delay.</p>			
Q-	Minor deviations that detracted from, but did not prevent, mission execution. Multiple deviations from route greater than 1 nautical mile (nm) when flying. Able to regain position orientation in reasonable amount of time.			
U	Unfamiliar with or did not execute maneuvers according to the flight manual, AFMAN 11-2TH-1H, Volume 3. Unfamiliar with and unable to effectively use available aircraft navigational systems. Unable to satisfactorily determine position. Consistently deviated from planned course. Unable to adjust for deviations.			
Area 23b.	Visual Flight Rules (VFR) Navigation: (SMA)			
Q	Assisted the pilot with navigation by identifying navigational cues and clearing the aircraft as briefed/required.			
Q-	Same as above except for minor deviations which did not affect safe/effective mission accomplishment. Cleared the aircraft.			
U	Major deviations which affected safe/effective mission accomplishment. Did not assist with navigation or clearing the aircraft.			
III.	Instruments (P)			
	General instrument deviation criteria for this section (applies to all instrument flight):			
	Airspeed Q < ±10 KIAS Q- < ±20 KIAS U > ±20 KIAS	Altitude Q < ±100 feet Q- < ±300 feet U > ±300 feet	Heading Q < ±10 degrees Q- < ±15 degrees U > ±15 degrees	Maintaining Arc Q < ±1 nm Q- < ±2 nm U > ±2 nm
Area 24.	Instrument Cockpit Check			
Q	Familiar and complied with procedures outlined in the flight manual, checklists, and other directives. Ensured required publications were onboard.			

Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Was unfamiliar with or did not comply with established procedures.
Area 25.	Instrument Departure, Climb, or Level Off
Q	Familiar and complied with procedures outlined in the flight manual, checklists, and other directives. Performed smooth and controlled aircraft movements. Performed a departure as published or directed and complied with all restrictions. Maintained takeoff power (5-foot hover power +10-15 percent). Maintained accelerative attitude of 5 degrees nose low ± 2 degrees. Maintained constant heading ± 10 degrees. Aircraft was in trim above 40 KIAS. Maintained a positive rate of climb. Leveled off at a specified altitude. Promptly established cruise airspeed.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures. Aircraft control was erratic and (or) unsafe.
Area 26.	Use of Navigation Aids (NAVAIDs) and Navigation
Q	Familiar and complied with procedures outlined in flight manual, checklists, and other directives. Ensured NAVAIDs were properly tuned, identified, and monitored. Used appropriate navigation procedures and demonstrated the capability to navigate accurately. Complied with clearance instructions. Aware of position at all times.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures. Aircraft control was erratic and (or) unsafe. Errors in procedures or use of navigation equipment. Could not establish position. Deviations would have violated airspace or resulted in an unsafe maneuver.
Area 27.	Holding Procedures
Q	Complied with procedures outlined in the flight manual, checklists, and other directives. Able to correctly enter and maintain a holding pattern. Able to estimate winds and make appropriate corrections. Able to make timing corrections for very high frequency omnidirectional range station, or non-

	directional beacon (NDB) holding. Performed smooth and controlled aircraft movements. Complied with air traffic control instructions.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established holding procedures or directives. Incorrect entry procedures. Unable to make appropriate timing or wind corrections. Aircraft control was erratic and (or) unsafe. Deviation would have violated airspace or resulted in an unsafe maneuver.
Area 28.	Precision Approach
Q	Familiar and complied with procedures outlined in the flight manual, checklists, and other directives. Able to fly a precision approach as published/directed. Complied with all restrictions. Made smooth and timely corrections. Position would have permitted a safe landing. Either instrument landing system (ILS) or precision approach radar (PAR) may be accomplished. For ILS, maintained on course and glidepath with no more than momentary deviations one dot left or right of course centerline and (or) one dot below to two dots above glidepath and not more than momentary descent below decision height. For PAR, followed controller instructions (heading was ± 5 degrees). Had no more than a momentary descent below decision height.
Q-	Minor deviations detracted from the approach. Position at decision height would have permitted a safe landing. For ILS, course deviation was +2 dots, glideslope was 1 3/4 dots below to 2 3/4 dots above. For PAR, slow response to controller's instructions caused poor glidepath control, but never exceeded well above or below glidepath. Heading was ± 10 degrees of controller instruction.
U	Exceeded (Q-) limits. Major deviations and/or erratic corrections. Did not respond to controller instructions, resulting, in erratic glidepath and heading control in a timely manner. Extended flight below decision height and/or position would not have permitted a safe landing.
Area 29.	Non-precision Approach
Q	Familiar and complied with procedures outlined in flight manual, checklists, and other directives. Able to fly a non-precision approach as published or directed. Complied with all restrictions. Made smooth and timely corrections. Used appropriate descent rate to arrive at minimum descent altitude (MDA) (+100 to - 50 feet) at or before the missed approach point (MAP). Note: The -50-foot tolerance at MDA applies only to momentary deviations. Had no more than a momentary descent below MDA. Course deviation within ± 1 dot. For non-directional beacon (NDB) approach ± 10

	degrees. For airport surveillance radar (ASR), made smooth and timely response to controller instructions and heading was ± 5 degrees of controller instructions. For global positioning system (GPS), checked valid receiver autonomous integrity monitoring (RAIM) prior to FAF. Position would have permitted a safe landing.
Q-	Executed approach with minor deviations (within ± 2 dots, NDB approach ± 15 degrees). Arrived at MDA at or before the MAP, but deviation was greater than (Q) criteria. Position would have permitted a safe landing. For ASR approach, did not exceed “well left/right of course” and complied with controller instructions in a timely manner. Note: The -50-foot tolerance at MDA applies only to momentary deviations.
U	Exceeded (Q-) limits. Did not comply with procedures or restrictions. Extended flight below MDA. Not in a position for a safe landing. For ASR, did not respond to controller instruction. For GPS, failed to check valid RAIM prior to FAF.
Area 30.	Transition to Landing (Optional)
Q	Complied with instructions and restrictions. Was able to safely land the aircraft at the termination of an instrument approach in the desired landing area as briefed.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures. Aircraft control was erratic and (or) unsafe.
Area 31.	Missed Approach or Climb Out
Q	Complied with procedures outlined in flight manual, checklists, and other applicable directives. Adjusted airspeed to briefed climb out airspeed. Executed missed approach or climb out as published or directed appropriate procedures.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures. Aircraft control was erratic and (or) unsafe.
Area 32.	Unusual Attitude Procedures (Optional)
Q	Was familiar with and complied with procedures outlined in the flight manual, checklists, and other directives. Was able to recover from an unusual attitude using appropriate procedures

Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions prevented safe and effective maneuver accomplishment. Unfamiliar with or did not comply with established procedures. Aircraft control was erratic and (or) unsafe.
IV.	<i>Instructor</i>
Area 33.	Ability To Instruct (Critical) (P/SMA)
Q	Reviewed student's present level of training and defined mission events to be performed. Developed a sound plan for accomplishing necessary tasks. Provided a well-organized, thorough student briefing. Planned ahead and made timely decisions. Demonstrated the ability to communicate effectively and offered instruction or suggestions for improvement.
U	Failed to assess student's present level of training. Briefings were marginal or nonexistent. Did not plan ahead or anticipate student problems. Was unable to communicate effectively with the student or did not provide corrective actions where necessary.
Area 34.	Demonstration of Maneuvers (P/SMA)
Q	Able to effectively demonstrate procedures and maneuvers. Demonstrated a thorough knowledge of aircraft systems, procedures, and all applicable publications and directives.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Did not demonstrate correct procedures. Had an insufficient depth of knowledge about aircraft systems, procedures, and (or) applicable publications or directives.
Area 35.	Performance Analysis and Critique (P/SMA)
Q	Accurately assessed student performance. Was able to discern problem areas. Correctly identified performance deficiencies or strengths. Was able to provide performance feedback at appropriate times. Was able to reconstruct the flight, offer analysis, and provide corrective guidance. Completed all training documents thoroughly and accurately.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver effectiveness.
U	Performed an inaccurate assessment of student performance. Failed to discern or misdiagnosed several problem areas. Overlooked or omitted major discrepancies. Provided performance feedback at inopportune times

	or not at all. Unable to reconstruct the flight, offer analysis, and (or) provide corrective guidance. Failed to complete training documents. Comments in training documents were insufficient to determine student's status and did not reflect actual performance of student.
V.	<i>Mission (as applicable)</i>
Area 36a.	Visual Flight Rules (VFR) Navigation: (P)
Q	<p>Familiar with and effectively used available aircraft navigational systems. Able to satisfactorily determine position. Correctly analyzed all airspace along route and planned accordingly. Consistently remained on planned course ± 1 mile. Adjusted for deviations. Complied with AFMAN 11-2TH-1H, Volume 3 and used proper symbols, appropriately posted route for flight tracking, etc. Effectively managed all resources (time, fuel, etc.) applicable to mission execution.</p> <p>a. Dead Reckoning. Able to use the principles of time, distance, and heading to determine aircraft position, navigation, and destination.</p> <p>b. Contour Navigation. Remained within route or area boundaries. Effectively used terrain to determine route, altitude, groundspeed, and aircraft masking.</p> <p>c. Low-Level Navigation. Able to use the principles of time, distance, and heading to determine aircraft position, navigation, and destination. Remained within route or area boundaries. Effectively used terrain for masking if available.</p>
Q-	Minor deviations that detracted from, but did not prevent, mission execution. Multiple deviations from route greater than 1 nm when flying. Able to regain position orientation in reasonable amount of time.
U	Unfamiliar with or did not execute maneuvers according to the flight manual, AFMAN 11-2TH-1H, Volume 3. Unfamiliar with and unable to effectively use available aircraft navigational systems. Unable to satisfactorily determine position. Consistently deviated from planned course. Unable to adjust for deviations.
Area 36b.	Visual Flight Rules (VFR) Navigation: (SMA)
Q	Assisted the pilot with navigation by identifying navigational cues and clearing the aircraft as briefed/required.
Q-	Same as above except for minor deviations which did not affect safe/effective mission accomplishment. Cleared the aircraft.
U	Major deviations which affected safe/effective mission accomplishment. Did not assist with navigation or clearing the aircraft.

Area 37a.	Low-Level Operations: (P)
Q	<p>Familiar with procedures and able to execute appropriate maneuvers according to the flight manual and AFMAN 11-2TH-1H, Volume 3. Performed smooth and controlled aircraft movements. Aware of power requirements and limitations. Gave consideration and made use of terrain features and wind conditions. If not flying, monitored aircraft systems, instruments, and aircraft flight path and position.</p> <p>a. En Route. Planned and executed an effective route. Flew above the minimum altitude and in an established low-level area.</p> <p>b. Terminal Operations. Arrived at target within ± 2 minutes. Developed an appropriate plan. Was able to adapt to conditions.</p> <p>c. Approach and Landing. Properly briefed the crew about approach intentions. Maintained controlled, stable approach without excessive deviations. Able to perform a landing or alternate insertion and extraction (AIE) to the desired zone within 3 rotor diameters or 0.03 nm. Effectively completed a site evaluation and assessed landing risk. Maintained briefed descent and approach angle(s). Maintained briefed heading during touchdown (± 10 degrees). Ensured aircraft clearance from obstacles.</p>
Q-	Minor deviations from (Q) criteria. Arrived at the target within ± 5 minutes. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.
U	Major deviations from (Q) criteria. Aircraft control was erratic or unsafe. Unaware of winds, terrain, power requirements, or exceeded aircraft limitations.
Area 37b.	Low-Level Operations: (SMA)
Q	Familiar with procedures and able to execute appropriate maneuvers according to the flight manual and AFMAN 11-2TH-1H, Volume 3. Provided clear direction to the pilot flying. Confirmed TOLD and aware of power requirements/limitations. Effectively communicated aircraft clearance from obstacles.
Q-	Minor deviations from (Q) criteria. Minor errors with communicating aircraft clearance from obstacles. Minor lapses in situational awareness of power requirements/limitations. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.
U	Major deviations from (Q) criteria. Failed to provide clear direction during maneuvers. Failed to confirm or compute TOLD or unaware of power requirements/limitations.
Area 38a.	Formation (P)

Q	<p>Familiar with and complied with AFMAN 11-2TH-1H, Volume 3 and other directives. Utilized appropriate formations. Positive control of flight or element. Demonstrated proper wingman considerations.</p> <p>a. En Route. Maintained position with only momentary deviations. Made appropriate position corrections. Used radio and visual signals properly. Lost visual procedures instrument meteorological conditions and visual meteorological conditions. Provided concise lost visual and rejoin instructions. Correctly executed procedures.</p> <p>b. Rejoin. Able to make a smooth, timely join-up without excessive closure rate to the appropriate briefed position. Correctly used visual or radio commands to rejoin. As lead, used no more than 20 degrees angle of bank. As lead, maintained briefed airspeed ± 5 KIAS. Maintained safe separation.</p> <p>c. Terminal Operations. Maintained position with only momentary deviations. Made precise position corrections. Maintained safe separation. As lead, correctly maneuvered the flight into position for takeoff, established briefed power setting, and established climb. As wingman, maintained position.</p>
Q-	Limited knowledge of procedures or directives. Inadequate wingman considerations. Minor deviations in procedures. Was slow to provide lost visual or rejoin instructions. Some instructions were unclear.
U	Unfamiliar with procedures or directives. Did not establish appropriate formation. Little to no consideration for wingman. Did not plan ahead or was indecisive. Major deviations in procedures. Did not provide adequate lost visual or rejoin instructions. Unable to maintain formation position or did not maintain safe separation.
Area 38b.	Formation (Optional) (SMA)
Q	Was familiar with and ensured crew compliance with formation procedures and AFMAN 11-2TH-1H, Volume 3. Knowledgeable about formation types and spacing required. Kept crew informed of wingman position throughout flight.
Q-	Was somewhat unfamiliar with procedures or directives. Allowed some deviations in procedures. Was slow to provide wingman positional calls to crew. Had minor unannounced losses of wingman without crew notification.
U	Was unfamiliar with procedures or directives. Unable to identify appropriate formations. Made major deviations in procedures. Did not provide wingman positional calls to crew. Did not ensure safe formation separation.
Area 39a.	NVG Operations (P)
Q	Familiar with NVG procedures and able to execute appropriate maneuvers according to the flight manual, AFMAN 11-2TH-1H, Volume 3, and AFPAM 11-417, <i>Orientation in Aviation</i> .

	<p>a. Preflight. Correctly inspected and prepared all necessary equipment. Used the preflight checklist and did not accept substandard equipment.</p> <p>b. Limitations. Correctly described the limitations for visual acuity and for operations.</p> <p>c. Malfunctions. Familiar with listed malfunctions according to AFPAM 11-417 directives. Recognized malfunctions and executed proper actions to address issues.</p> <p>d. Employment. Complied with guidance in AFMAN 11- 2TH-1H, Volume 3, while using NVGs.</p>
Q-	Missed minor factors pertinent to the performance of the NVGs.
U	Unfamiliar or did not comply with procedures. Accepted NVGs that did not meet requirements.
Area 40.	Alternate Insertion/Extraction (SMA)
Q	Familiar and complied with procedures IAW the flight manual and other published directives. Aware of/computed power requirements and limitations. Satisfactory knowledge of all alternate insertion/extraction limitations. Provided clear and concise direction using standard terminology for motion and direction during approach, insertion, pickup and departure. Advised pilot flying promptly of minor drift tendencies. Actively scanned/cleared aircraft during the alternate insertion/extraction procedures. Equipment malfunctions were dealt with effectively while maintaining situational awareness and crew coordination.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.
U	Major deviations from (Q) criteria. Errors or omissions precluded safe and effective mission/maneuver accomplishment. Unfamiliar with or did not execute maneuvers IAW the flight manual or other directives. Failed to consider power requirements/limitations, use of terrain features and wind considerations. Failed to monitor aircraft systems/instruments and/or aircraft flight path/position. Did not assist pilot flying as briefed/required.
Area 41.	Rope Ladder (SMA)
Q	Ensured rope ladder was properly preflighted and configured for the mission. Effectively deployed and/or recovered rope ladder.
Q-	Minor deviations from (Q) criteria. Did not compromise safety, aircraft limitations, or maneuver/mission effectiveness.

U	Rope ladder was not properly preflighted and configured for mission. Placed team in jeopardy through ineffective procedures.
---	--

JOSEPH T. GUASTELLA, Lt Gen, USAF
Deputy Chief of Staff, Operations

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

AFPD 11-2, *Aircrew Operations*, 30 January 2019

AFPD 11-4, *Aviation Service*, 12 April 2019

AFI 11-200, *Aircrew Training, Standardization/Evaluation*, 3 May 2022

AFMAN 11-290, *Cockpit/Crew Resource Management and Threat & Error Management Program*, 25 October 2021

AFI 33-322, *Records Management and Information Governance Program*, 23 March 2020

DAFMAN 90-161, *Publishing Processes and Procedures*, 14 April 2022

AFMAN 11-2TH-1H, Volume 3, *TH-1H Operations Procedures*, 23 January 2020

AFMAN 11-202, Volume 2, *Aircrew Standardization/Evaluation Program*, 30 August 2021

AFPAM 11-417, *Orientation in Aviation*, 9 April 2015

TO 1H-1(T)H-1, *Flight Manual, USAF Series TH-1H Helicopter*, 1 August 2016

TO 1H-1(T)H-1 CL-1 *Pilot's Flight Crew Checklist, TH-1H Helicopter*, 1 August 2016

TO 1H-1(T)H-5 *Basic Weight Checklist and Loading Data, USAF Series TH-1H Helicopter, 1 August 2016*

AFTTP 3-3.H-1 *Combat Aircraft Fundamentals H-1*, 25 June 21

Prescribed Form

AF Form 4104, *TH-1H Flight Evaluation Worksheet*

Adopted Forms/IMTs

AF Form 8, *Certificate of Aircrew Qualification*

AF IMT 70, *Pilot's Flight Plan and Flight Log*

DAF Form 847, *Recommendation for Change of Publication*

DD Form 175-1, *Flight Weather Briefing*

Abbreviations and Acronyms

AGL—above ground level

AHO—above highest obstacle

ASR—airport surveillance RADAR

DAF—Department of Air Force

EP—evaluator pilot

EPE—emergency procedures evaluation

FES—Flight Examiners

GPS—global positioning system

ILS—instrument landing system

INIT MSN—initial mission

KIAS—knots indicated airspeed

MAJCOM—major command

MAP—missed approach point

MDA—minimum descent altitude

MSN—mission

NAVAID—navigational aid

NDB—non directional beacon

nm—nautical mile

NVG—night vision goggles

P—Pilot—(all inclusive)

PAR—precision approach radar

PPH—pounds per hour

RAIM—receiver autonomous integrity monitoring

RQ MSN—requalification mission

SMA—special missions aviator

TO—technical order

TOLD—takeoff and landing data

U—Unqualified—USAF—United States Air Force

VFR—visual flight rules

W&B—Weight and Balance

WST—Weapon Systems Trainer

Office Symbols

19 AF/A3V—19th Air Force Standardization and Evaluation Division

23 FTS/CC—23rd Flight Training Squadron Commander

AF/A3T—Training and Readiness Directorate, Deputy Chief of Staff, Operations

SQ/CC—Squadron Commander

Terms

Alternate Insertion and Extractions—Different methods to insert or extract personnel from a location.

Bingo Fuel—The minimum amount of fuel required to safely return to the home base or an alternate landing site for refuel.

Certification—The process of endorsing an individual to perform a specific event.

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.

Device Fidelity—The extent to which a device or system is able to replicate the functions and performance of the actual aircraft.

Effective Translational Lift—is a phenomenon that occurs as a helicopter moves forward from a stationary hover and gains forward speed. It is the increase in lift that results from the helicopter moving into undisturbed air after being in its own downwash.

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.

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

Event—The accomplishment of specific training elements, functions, or tasks (i.e., formation, NVG, water operations, remote operations, etc.).

ForeFlight—Aviation application used by aircrew for flight planning, navigation, and weather information.

Formation—Two or more aircraft under the command of a designated Mission Commander (MC) or flight lead operating in mutual support with each other. The aircraft commander assumes responsibility for the aircraft's position relative to others flying in the same formation.

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

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

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

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

Special Mission Aviation (SMA)—A career enlisted aviator AFSC responsible for the following activities: performing aircraft visual inspections and in-flight duties; operating and monitoring engine and aircraft systems controls, panels, indicators, and devices; supervising cargo/passenger loading and offloading activities; determining cargo placement and restraint requirements, as well as directing and checking the placement of restraint equipment; computing aircraft weight and balance, as well as performing functions which include airdrop of personnel and equipment/cargo;

inspecting, operating, and securing armament systems and subsystems; operating airborne weapons systems; and employing combat procedures and tactics.

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.

Qualification—Aircrew member has demonstrated the capability to operate the aircraft and/or equipment safely and effectively during all phases of the mission.

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.