

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

AIR FORCE INSTRUCTION 11-2UH-1NV3



19 APRIL 2012

**AIR EDUCATION TRAINING COMMAND
Supplement**

9 DECEMBER 2013

Flying Operations

**UH-1N HELICOPTER OPERATIONS
PROCEDURES**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

ACCESSIBILITY: Publications and forms/IMTs are available on the e-Publishing website at www.e-publishing.af.mil for downloading or ordering.

RELEASABILITY: There are no releasability restrictions on this publication.

OPR: AFGSC/A3TH

Certified by: AF/A3O-A (Col James W.
Crowhurst)

Supersedes: AFI11-2UH-1NV3, 27 Dec
2006

Pages: 51

(AETC)

OPR: AETC/A3VS

Certified by: AETC/A3V (Col R. Brust)
Pages:6

Supersedes: AFI11-2UH-
1NV3_AETCSUP, 29 JUNE
2009

This instruction implements the guidance contained in AFI 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure*. It establishes procedures for the operation of all UH-1N helicopters employed by the United States Air Force to accomplish their respective missions. It applies to the Air National Guard and to the Air Force Reserve Command. It provides the most acceptable policies and procedures for most circumstances, but does not replace sound judgment. This publication applies to all USAF UH-1N helicopter flying units. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route the AF Form 847s from the field through the appropriate functional's chain of command. Supporting Documents: AFI 11-2UH-1NV3, Checklist (CL-1), *Helicopter Crew Briefing Guide/Checklist*. And AFI 11-2UH-1NV3 Checklist (CL-2), *UH-1N Helicopter Mission*

Equipment Inspection and Cleaning Checklist. See Attachment 1 for Glossary References and Supporting Information. 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>.

This publication requires the collection and or maintenance of information protected by the Privacy Act of 1974. The authorities to collect and or maintain the records prescribed in this publication are Title 37 United States Code, Section 301a and Executive Order 9397, *NUMBERING SYSTEM FOR FEDERAL ACCOUNTS RELATING TO INDIVIDUAL PERSONS*, November 22, 1943 as amended by Executive Order 13478, Amendments to Executive Order 9397 Relating to Federal Agency Use of Social Security Numbers, November 18, 2008. Forms affected by the PA have an appropriate PA statement. System of records notice F011 AF XOA Aviation Resource Management System (ARMS).

The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force. The Paperwork

Reduction Act of 1995 affects this instruction.

(AETC) This supplement implements and extends the guidance of AFI 11-2UH-1N, Volume 3, UH-1N Helicopter Operations Procedures. This supplement applies to all AETC units. It applies to Air Force Reserve Command (AFRC) units under AETC oversight and Air National Guard (ANG)-gained units and associate personnel who conduct approved AETC flying syllabuses. This supplement implements a waiver to the parent regulation, specifically regarding crew complement during SAR operations (**Table 2.1** Crew Complement). Units may supplement this instruction. Each unit will coordinate its supplement with AETC/A3V before publication and forward one copy to AETC/A3V after publication. Submit suggested improvements to this instruction on AF Form 847, *Recommendation for Change of Publication*, through standardization and evaluation (stan/eval) channels, to AETC/A3V. See **Attachment 1** for a glossary of references and supporting information. References to forms within this instruction also equate to electronic products when authorized. Ensure 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 IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS)".

SUMMARY OF CHANGES

This document has been substantially revised and must be completely reviewed. Major changes include removing information duplicated in the new AFTTP 3-3.H-1, *Combat Aircraft Fundamentals H-1*, re-structuring the remaining information, placing the mini-told card into the AFI, updating Air Force Global Strike Command (AFGSC) as the UH-1N Lead Major Command (L-MAJCOM), and Table 2.1.

(AETC) This document has been substantially revised and must be completely reviewed. This revision reflects 19th Air Force deactivation and realignments within AETC A-Staff, aligns

paragraphs with changes to the basic AFI, and removes previous guidance that was transferred from the basic AFI to the AFTTP 3-3.H-1.

| | |
|---|-----------|
| Chapter 1—GENERAL INFORMATION | 8 |
| 1.1. General. | 8 |
| 1.2. Applicability. | 8 |
| 1.3. Deviations and Waivers. | 8 |
| 1.3. (AETC) Deviations and Waivers. | 8 |
| 1.4. Supplements. | 9 |
| 1.4. (AETC) Supplements. | 9 |
| 1.5. Development of New Equipment and Procedures. | 9 |
| Chapter 2—OPERATING POLICIES | 10 |
| Section 2A—Command and Control | 10 |
| 2.1. General. | 10 |
| 2.2. Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE). | 10 |
| 2.3. Support to Civil Authorities/Civilian Law Enforcement Agencies. | 10 |
| Section 2B—Crew Management | 11 |
| 2.4. Primary Crewmembers. | 11 |
| 2.5. Minimum Crew. | 12 |
| Table 2.1. Crew Complement. | 12 |
| Table 2.1. (AETC) Crew Complement. | 14 |
| Section 2C—Passenger Policy | 15 |
| 2.6. The UH-1N. | 15 |
| Section 2D—Communications Policy | 16 |
| 2.7. Communications Policy: | 16 |
| 2.8. Instrument Calls: | 16 |
| Section 2E—Power Available Checks | 17 |
| 2.9. Dual Engine Power Available Check. | 17 |
| 2.10. Single Engine Power Available Check. | 17 |
| Section 2F—Aircraft Ground Operations and Servicing | 18 |
| 2.11. Aerospace Vehicle Flight Data Document. | 18 |
| 2.12. Engine Running Crew Change. | 18 |

| | | |
|---|--|----|
| 2.13. | Fire Guard. | 18 |
| 2.14. | Aircraft Servicing. | 18 |
| Section 2G—Weather | | 19 |
| 2.15. | Wind Restrictions. | 19 |
| 2.16. | Visual Flight Rules (VFR) Training/Exercise Weather Minimums. | 19 |
| 2.17. | Instrument Flight Rules (IFR) Takeoff Minimums: | 19 |
| 2.17. | (AETC) Instrument Flight Rules (IFR) Takeoff Minimums: | 19 |
| 2.18. | Life or Death Missions. | 20 |
| 2.19. | Adverse Weather: | 20 |
| 2.20. | Fuel Planning. | 20 |
| Section 2H—Precautionary Landings | | 20 |
| 2.21. | Forced or Precautionary Landings. | 20 |
| Section 2I—Altitude Restrictions | | 21 |
| 2.22. | General. | 21 |
| 2.23. | Low-level. | 21 |
| 2.24. | Obstacle Clearance. | 22 |
| Section 2J—Publications Required for Flight | | 22 |
| 2.25. | Mission Kits. | 22 |
| Table 2.2. | Mission Kit Contents (Minimum). | 22 |
| 2.26. | Aircrew Checklists. | 22 |
| 2.27. | Aircrew Charts. | 22 |
| Section 2K—Aircraft Equipment | | 23 |
| 2.28. | Minimum Aircraft Equipment and Instrumentation. | 23 |
| 2.28. | (AETC) Minimum Aircraft Equipment and Instrumentation. | 23 |
| Table 2.3. | Minimum Aircraft Equipment and Instrumentation. | 23 |
| 2.29. | Radar Altimeter. | 24 |
| Section 2L—Restraint Devices | | 24 |
| 2.30. | At least one pilot will have seat belt and shoulder harness fastened when rotors are engaged. | 24 |
| Figure 2.1. | Ceiling Restraint Cable Configuration. | 25 |
| Section 2M—Dropped Object Prevention | | 25 |

| | |
|--|-----------|
| 2.31. During preflight inspections, pay particular attention to panels and components that are potential dropped objects. | 25 |
| Section 2N—Standard Configuration | 25 |
| 2.32. Responsibilities. | 25 |
| 2.32. (AETC) Responsibilities. | 26 |
| 2.33. Cargo/Equipment. | 26 |
| 2.34. Deployment/Exercise Configuration. | 26 |
| 2.35. Deviations. | 26 |
| 2.36. FCF Configuration. | 26 |
| 2.37. Discrepancies. | 26 |
| Section 2O—Management | 26 |
| 2.38. Predeparture Crew Rest: | 26 |
| 2.39. Post-TDY Crew Rest. | 26 |
| Section 2P—Medical Evacuation (MEDEVAC) | 26 |
| 2.40. MEDEVAC Missions. | 26 |
| 2.41. Medical Assistance. | 27 |
| Section 2Q—Search and Rescue (SAR) | 27 |
| 2.42. Mission Generation. | 27 |
| 2.43. On-Scene Procedures: | 27 |
| 2.44. Altitude Restrictions: | 27 |
| 2.45. (Added-AETC) Alert Procedures. | 27 |
| 2.46. (Added-AETC) Standby Duty. | 27 |
| Chapter 3—AIRCREW PROCEDURES | 29 |
| Section 3A—General | 29 |
| 3.1. Aircrew Uniforms and Protective Devices: | 29 |
| Section 3B—Aircraft Commander Responsibilities | 29 |
| 3.2. Aircraft Commanders are: | 29 |
| Section 3C—Flight Engineer Responsibilities | 30 |
| 3.3. General. | 30 |
| 3.4. Flight Engineer Station. | 31 |
| 3.5. Refueling. | 31 |
| 3.6. Aircraft Systems Management. | 31 |

| | | |
|---|---|-----------|
| 3.7. | TOLD (Take Off and Landing Data): | 31 |
| 3.8. | Weight and Balance: | 31 |
| Chapter 4—NIGHT OPERATIONS | | 33 |
| Section 4A—Night Vision Goggle (NVG) Operations | | 33 |
| 4.1. | Ambient Illumination Requirements. | 33 |
| 4.2. | Aircraft Lighting: | 33 |
| 4.3. | Night Approaches to Non-surveyed/Unprepared Landing Areas and Operational Sites. | 34 |
| 4.4. | Site Selection for Training. | 34 |
| 4.5. | NVG Considerations. | 34 |
| Section 4B—Unaided Operations | | 34 |
| 4.6. | Night Approaches to Non-surveyed/Unprepared Landing Areas and Operational Sites. | 34 |
| 4.7. | Site Selection for Training. | 35 |
| 4.8. | Illumination Requirements for Helicopter Landing Areas. | 35 |
| 4.9. | Landing Zone Lighting. | 35 |
| 4.10. | Landing Zone Lighting Patterns. | 36 |
| Figure 4.1. | Inverted-Y. | 37 |
| Chapter 5—TRANSITION AND EMERGENCY PROCEDURES (PROFICIENCY) TRAINING | | 38 |
| 5.1. | Maneuver entry parameters are found in the AFTTP 3-3. | 38 |
| 5.2. | Instructor Training Requirements. | 38 |
| 5.3. | Prohibited Training Maneuvers. | 38 |
| 5.4. | Training Requirements: | 38 |
| 5.5. | Autorotations. | 39 |
| Chapter 6—MISSION EVENTS | | 40 |
| Section 6A—Non-Surveyed/Unprepared Area and Operational Site Procedures | | 40 |
| 6.1. | Non-surveyed/Unprepared Landing Area Procedures. | 40 |
| 6.2. | Mandatory Calls. | 40 |
| Section 6B—Low-Level Operations/Tactical Procedures | | 40 |
| 6.3. | General. | 40 |
| 6.4. | Low-Level Flight Areas. | 40 |
| 6.5. | Charts: | 41 |

| | |
|---|-----------|
| 6.6. Route Planning. | 41 |
| 6.7. Evasive Maneuvering. | 41 |
| Section 6C—Formation Procedures | 41 |
| 6.8. Formation Types/Maneuvers. | 41 |
| 6.9. Dissimilar Formation. | 42 |
| Section 6D—AIE Procedures | 42 |
| 6.10. Rope Ladder Care, Cleaning and Storage. | 42 |
| Section 6E—Hoist Operations | 42 |
| 6.11. Unit-Owned Rescue Equipment. | 42 |
| 6.12. Training Procedures. | 42 |
| 6.13. Exercise Procedures. | 43 |
| Section 6F—Parachute Delivery Procedures | 43 |
| 6.14. Deployment of Parachutists. | 43 |
| Section 6G—Weapons Employment | 43 |
| 6.15. Refer to 11-214, Air Operations Rules and Procedures, AFTTP 3-1 and AFTTP 3-3. | 43 |
| Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION | 45 |
| Attachment 2—EXAMPLE AUTHORIZATION TO REMOVE HUMAN REMAINS | 50 |
| Attachment 3—MINI TOLD | 51 |

Chapter 1

GENERAL INFORMATION

1.1. General. This directive applies to all UH-1N helicopter aircrews. It consists of this instruction; AFI 11-2UH-1NV3, Checklist 1 (CL-1); and AFI 11-2UH-1NV3, Checklist 2 (CL-2). Use it in conjunction with aircraft flight manuals, Flight Information Publications (FLIP), and applicable USAF publications. It applies to training, normal, and contingency operations to reduce the need for any procedural changes at the onset of contingencies.

1.1.1. HQ AFGSC/A3TH has overall responsibility for administration of this instruction and associated checklists. Submit suggested improvements to this instruction on AF Form 847, *Recommendation for Change of Publication*, through MAJCOM channels to AFGSC/A3TH according to AFI 11-215, *Flight Manual Program (FMP)*.

1.1.2. Throughout this Air Force Instruction (AFI) references are made to Major Command (MAJCOM) and Numbered Air Force (NAF) levels of responsibilities. Due to the diverse nature of the structure of UH-1N units, all references to a particular MAJCOM or NAF office is intended to mean that office or equivalent. MAJCOM supplements to this AFI will indicate if there is a different office of responsibility.

1.1.3. For purposes of this instruction, the Air Force District of Washington (AFDW) is considered a MAJCOM.

1.2. Applicability. This instruction is directive to all personnel assigned or attached to USAF UH-1N helicopter units. This instruction, in conjunction with other governing directives, prescribes guidance for UH-1N aircraft. Crewmembers must have a thorough working knowledge of all procedures applicable to their crew position and mission qualification.

1.3. Deviations and Waivers. The waiver authority for this instruction is the MAJCOM/A3. When an operational necessity exists and time does not allow pursuit of a waiver through normal channels, the OG/CC has one-time waiver authority to this instruction. Report all deviations without an approved MAJCOM waiver to the MAJCOM/A3 within 10 duty days of the occurrence. MAJCOM POCs will forward a copy of waiver or details of circumstances to AFGSC/A3TH for information only. Do not deviate from the policies and guidance in this instruction except:

1.3. (AETC)Deviations and Waivers. AETC/A2/3/10 is the waiver authority for this supplement unless otherwise specified (T-2). Send waiver requests through stan/eval channels to AETC/A2/3/10. The operations group (OG/CC) commander, or equivalent, of the unit that generated their supplement will handle waivers to supplemental guidance. Waivers may be issued for a maximum of 1 year or until this supplement is superseded, whichever occurs first. All waivers must be reviewed and renewed in 1 year increments to ensure their continued validity. Units will file a copy of approved written waivers to this volume according to AFI 33-360, *Publications and Forms Management*.

1.3.1. For safety, aircraft commanders may deviate from this directive as necessary to protect their crew and aircraft if they believe strict compliance would jeopardize safe operations.

1.3.2. When circumstances require, this publication provides guidance for helicopter operations under most circumstances, but it does not substitute for sound judgment. If within communications range of command and control agencies, deviations due to unusual circumstances should be pre-coordinated.

1.4. Supplements. MAJCOMs, operations groups and units may supplement this instruction IAW AFI 33-360, *Publications and Forms Management*. Units may supplement this instruction. Items in this AFI delineating unit-level responsibilities may be addressed in a unit supplement. In no case will extended guidance be less restrictive than the provisions of this or any other publication without prior authorization from the appropriate MAJCOM and AFFSA/A3OF. Forward MAJCOM supplements to AFFSA/A3OF, through AFGSC/A3TH for coordination before publication. Forward unit supplements to the applicable NAF/MAJCOM representative for coordination before publication. MAJCOMs will notify AFGSC/A3TH of any approved and posted MAJCOM supplement to this AFI. If the MAJCOM supplement is not posted on the Air Force e-publishing website, provide a copy to AFGSC/A3TH.

1.4. (AETC)Supplements. Forward unit supplements through Stan/Eval channels to AETC/A3V for coordination before publication. (T-2)

1.5. Development of New Equipment and Procedures. Units desiring to use new or not previously approved equipment, to include mission equipment, must obtain individual MAJCOM, HQ/AFGSC and WR-ALC approval via AF Form 1067, *Modification Proposal*, prior to testing and/or use.

Chapter 2

OPERATING POLICIES

Section 2A—Command and Control

2.1. General. Air Force Global Strike Command is the Lead Command for UH-1N operations and will coordinate instruction changes and dissemination of revised information. Individual MAJCOMs may establish command and control guidelines in their supplements.

2.1.1. The wing commander and subordinate unit commanders exercise operational control.

2.1.2. A mission commander (MC) may be required to conduct specific deployment, employment, or redeployment activities in conjunction with contingency, exercise, training, or other operations. Designated by the appropriate command authority, the MC is delegated command authority to exercise operational control over assigned operational and mission support forces in order to attain specified mission objectives during operations and exercises. The MC is a direct representative of the designating commander. The MC is responsible for planning, coordinating, and executing the operation, and through the appropriate command and control system, directs mission support forces as required within the limits of the designating commander's authority. It is the MC's responsibility to take care of the details and the people involved in the mission.

2.1.2. (AETC) The mission commander's (MC) primary responsibility is to take care of mission personnel and any details required for the mission crew to execute the mission. As such, under normal circumstance, the MC should not be an active crewmember involved in flying duties. Waiver authority is the OG/CC. (T-3)

2.1.3. (Added-AETC) The final decision to delay a mission may be made by either the unit MC or the aircraft commander when, in the opinion of either, conditions are not safe to start or continue a mission. Final responsibility for the safe conduct of the mission rests with the aircraft commander (T-2).

2.2. Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE). Due to the wide variation in UH-1N missions and operating locations, MAJCOMs will provide guidance for operating in a CBRNE environment if needed.

2.3. Support to Civil Authorities/Civilian Law Enforcement Agencies.

2.3.1. Military Support to Civil Authorities. Request for helicopter support by civil authorities will be handled IAW AFI 10-802, *Military Support to Civil Authorities*. Mission approval authority is the wing commander (or equivalent).

2.3.2. Assistance to Civilian Law Enforcement Agencies. In general, military units are prohibited by law from participating in civil law enforcement activities (this does not include SAR requests from law enforcement agencies). See AFI 10-801, *Assistance to Civilian Law Enforcement Agencies*, USC Title 10 Chapter 18, *Military Support for Civilian Law Enforcement Agencies* or consult with your Judge Advocates office for more information. Report all requests for assistance and coordinate all requests from civilian law enforcement authorities through appropriate command and control channels.

2.3.3. Approval authority to carry civilian law enforcement or medical personnel on Search and Rescue (SAR) or Medical Evacuation (MEDEVAC) missions may be delegated to aircraft commanders under certain circumstances. If the Aircraft Commander (AC) determines passengers are essential for the successful completion of the mission, and they are unable to contact their controlling agency for approval, passengers may be carried on the segments of flight requiring their presence. Leave a copy of the passenger manifest with a responsible person IAW AFI 11-202V3, *General Flight Rules*.

2.3.4. Utilization of Civilian Law Enforcement or Medical Personnel. Civilian law enforcement or medical personnel may be required to perform duties at an incident site. These duties may include death determination or human remains removal. Local/international laws may affect mission prosecution and should be reviewed prior to deployment/pickup of civilian personnel. Units will publish any local restrictions and procedures. This may be accomplished in either a command or unit supplement to this instruction.

2.3.5. Human Remains. Rescue personnel should not normally remove human remains from crash or incident sites. The decision to remove the remains from the site will be made solely by the local authorities. Except as per paragraph 2.3.5.1., do not commit resources to body removal until the mission approval and/or releasing authority (normally the Wing/Group Commander) has been informed of the request and has approved the use of resources. The AC is responsible for the safety of resources and should not jeopardize them for body recovery. The AC is responsible for compliance with all directions given by local civil authorities concerning the proper removal and handling of remains in that jurisdiction. Written authorization from the proper local authorities should be received prior to removal; however factors such as accessibility to the area, weather conditions, darkness, etc. may preclude the practicality of receiving written authorization from local authorities. In such cases, a verbal authorization may be accepted if followed by a written authorization.

2.3.5.1. Exceptional Cases. In extreme situations where time is critical and communications are impossible, the AC may remove remains and deliver them to the proper authorities if given authorization from the appropriate civil official. This procedure is authorized only if conditions already make it impossible to obtain timely approval from the mission approval and/or releasing authority. Whenever this procedure is employed, the AC shall request and comply with all directions given by local civil authorities concerning the proper removal and handling of remains in that jurisdiction. Again, do not remove human remains without permission, or prior to positive declaration of death by competent medical authority. (See [Attachment 2](#), Example Authorization to Remove Human Remains.)

Section 2B—Crew Management

2.4. Primary Crewmembers. Crewmembers occupying a primary position during flight must be UH-1N qualified and current for the mission events to be flown, or conducting training/re-currency for that crew position/mission IAW AFI 11-2UH-1N, Vol 1, *UH-1N-Aircrew Training* or designated as a supervisory flyer IAW AFI 11-401, *Aviation Management*.

2.4.1. During operational missions, training of non-current or unqualified crewmembers is authorized when under the supervision of an instructor in the respective crew position.

Exception: Aerial gunner (AG) instructors may train flight engineers and flight engineer (FE) instructors may train aerial gunners on events in common.

2.4.2. Functional Check Flight (FCF) certified crewmembers maintaining basic aircraft qualification that are non-current or unqualified for operational/special mission items may perform FCFs.

2.4.3. After completion of the Key Staff Course (see AFI 11-2UH-1NV1, *UH-1N Helicopter Aircrew Training*), supervisory flyers, as designated in AFI 11-401, may fly on all mission profiles listed in **Table 2.1** with the exception of Emergency Procedures Training.

2.4.4. Crewmembers not performing basic crew duties will act as safety observers to assist in obstacle avoidance during ground taxiing, confined area operations, and to reduce midair collision potential during arrivals, departures, and simulated instrument flight.

2.4.5. Interfly. An interfly exists any time an aircrew is made up of members from more than one MAJCOM, or aircrew members of one MAJCOM are flying aircraft owned by another MAJCOM for operational missions. The OG/CC (or equivalent) of the unit possessing the aircraft is the approval authority for MAJCOM interflies. An interfly is a temporary arrangement between OG/CCs or equivalent to permit the exchange or substitution of aircrew members and/or aircraft between units to accomplish flying missions. Normally, interfly should be limited to specific operations, exercises, or special circumstances. However, it may be used for events of longer duration such as unit conversion to another model design series (MDS). Due to the wide variation in MAJCOM missions and UH-1N configurations, care must be taken when considering interfly requests. Units considering an interfly must thoroughly research the guest crewmember's currency and qualifications, and carefully consider crew mix and experience levels. For intra/intercommand aircrew training, see AFI 11-2UH-1NV1.

2.5. Minimum Crew. The minimum crew is the AC. The OG/CC is the waiver authority for crew complement not defined in TO 1H-1(U)N-1 as noted in **Table 2.1**. The OG/CC must make a thorough risk assessment prior to approving waivers to Table 2.1. During single pilot missions, flight engineers, gunners and flight surgeons may sit in the left front seat when not required in the cabin area. Flight engineers may sit in the left front seat during FCFs and maintenance support. At no time will personnel not authorized per AFI 11-401 manipulate flight controls which effect climb, descent, pitch, roll, bank, or yaw.

2.5.1. If MAJCOMs have CEAs occupying the co-pilot's seat during flight, they will define training requirements, to include specific allowances and restrictions, in their MAJCOM Sup to this instruction.

2.5.1. (AETC) If CEAs are occupying the co-pilot's seat during flight, as defined in **Table 2.1** qualification will be in accordance with 11-2UH-1N, Vol 2 (T-2).

Table 2.1. Crew Complement.

| Mission/Profile | Minimum Required Crewmembers ¹ | | |
|-------------------------------|---|-------------------|----------------------|
| | Pilot | Pilot or FE or AG | Scanner ³ |
| Emergency Procedures Training | 2 ² | | |

| | | | |
|---|---|----------------|----------------|
| Instruments (Visual Meteorological Conditions [VMC]) | 1 | 1 | |
| Instruments (Instrument Meteorological Conditions [IMC]) | 2 | | |
| Unprepared Landing Site (Remotes) | 1 | 1 | |
| Night Unaided | 1 | 1 | |
| Night Vision Goggles (NVG) ⁵ | 2 | | |
| Day Low Level ⁵ | 2 | | 1 ⁶ |
| NVG Low Level/NVG Formation | 2 | 1 ⁴ | 1 |
| Day Formation | 1 | 1 | |
| SAR/MEDEVAC | 2 | 1 ⁴ | 1 |
| Day Tactical ^{5,8} | 2 | | |
| NVG Tactical ⁸ | 2 | 1 | |
| Aerial Gunnery/Defensive Suppressive Fire (DSF) | 2 | 2 ⁴ | |
| Distinguished Visitor (DV)/Pax/Cargo Airlift/Cross Country/Ferry | 1 | 1 | |
| FCF | 1 | 1 ⁷ | |
| Alternate Insertion and Extraction (AIE) Operations/Parachute Delivery | 2 | 1 ⁴ | |
| Sling/Fire Bucket | 2 | 1 ⁴ | |
| <p>NOTES:</p> <ol style="list-style-type: none"> 1. Assumes each crewmember is current and certified/qualified (or gaining currency, certification, or qualification) in the profile/mission/maneuver. 2. Reference paragraph 5.4.1.5. 3. Any UH-1N pilot/FE/AG or UH-1N student pilot/FE/AG who has completed the initial Mission phase of training can perform the scanner function. 4. Must be an FE or AG 5. AFDW and PACAF only – One pilot plus a pilot or FE 6. Scanner required for operations below 100 feet Above Ground Level (AGL). 7. Additional crewmember as defined/required by TO 1H-1 (U)N-6CF-1, <i>Flight Manual Acceptance and Functional Checkflight Procedures</i> 8. Low-level crew complements may apply based on flight profile | | | |

Table 2.1. (AETC) Crew Complement.

| Mission Profile | Minimum Required Crewmembers ¹ | | |
|--|---|---------------------------|----------------------|
| | Pilot | Pilot or FE or AG | Scanner ³ |
| Emergency Procedures Training | 2 | | |
| Instruments (Visual Meteorological Conditions [VMC]) | 1 ^{9 (added)} | 1 | |
| Instruments (Instrument Meteorological Conditions [IMC]) | 2 | | |
| Unprepared Landing Site (Remotes) | 1 | 1 | |
| Night Unaided | 1 ^{10 (added)} | 1 | |
| Night Vision Goggles (NVG) ⁵ | 2 | | |
| Day Low Level ⁵ | 2 ^{11 (added)} | | 1 ⁶ |
| NVG Low Level/NVG Formation | 2 | 1 ⁴ | 1 |
| Day Formation | 1 ^{12 (added)} | 1 | |
| SAR/MEDEVAC | 2 | 1 ^{4,13 (added)} | 1 |
| Day Tactical ^{5,8} | 2 | | |
| NVG Tactical ⁸ | 2 | 1 | |
| Aerial Gunnery/Defensive Suppressive Fire (DSF) | 2 | 2 ⁴ | |
| Distinguished Visitor (DV)/Pax/Cargo Airlift/Cross Country/Ferry | 1 | 1 | |
| FCF | 1 | 1 ⁷ | |
| Alternate Insertion and Extraction (AIE) Operations/Parachute Delivery | 2 | 1 ⁴ | |
| Sling/Fire Bucket | 2 | 1 ⁴ | |

NOTES:

1. Assumes each crewmember is current and certified/qualified (or gaining currency, certification, or qualification) in the profile/mission/maneuver.
2. Reference paragraph 5.4.1.5.
3. Any UH-1N pilot/FE/AG or UH-1N student pilot/FE/AG who has completed the initial Mission phase of training can perform the scanner function.
4. Must be an FE or AG
5. AFDW and PACAF only – One pilot plus a pilot or FE
6. Scanner required for operations below 100 feet Above Ground Level (AGL).

7. Additional crewmember as defined/required by TO 1H-1 (U)N-6CF-1, *Flight Manual Acceptance and Functional Checkflight Procedures*
8. Low-level crew complements may apply based on flight profile
9. (Added) Minimum crew for simulated instrument procedures in visual meteorological conditions is two pilots. (T-2)
10. (Added) Minimum crew for night unaided operations is two pilots. (T-2)
11. (Added) Minimum crew for day low level and formation operations at or above 100 feet above the highest obstacle (AHO) is two pilots. (T-2)
12. (Added) Minimum crew for day formation operations is two pilots. (T-2)
13. (Added) Minimum crew for SAR/MEDEVAC operations is 2 pilots and one FE. (T-2)

Section 2C—Passenger Policy

2.6. The UH-1N. The UH-1N is a utility aircraft and is utilized through a variety of mission sets, including passenger transport. DoD 4515.13-R and AFI 11-401 contain guidance on passenger airlift and orientation flights. Units must ensure compliance with these publications for passenger transport covered by their provisions. The following guidance addresses passenger transport not covered by the provisions of DoD 4515.13-R and AFI 11-401.

2.6.1. Passengers may be flown on UH-1N aircraft during the normal course of exercise and contingency operations of the unit. MAJCOMs will detail the approval authority of these passengers in a supplement to this AFI.

2.6.1. (AETC) Passenger approval authority is the Flight Authorizing Official or Aircraft Commander when the FAO cannot be contacted. (T-2)

2.6.2. Direct Mission Support (DMS) denotes a mission where passengers are flown for specific purposes in support of DoD missions (e.g. aerial surveys, observation) where helicopter airlift is specifically needed to accomplish the mission. This does not include routine point-to-point travel of a passenger. Special Airlift Mission (SAM) passengers approved and tasked by the White House Military Office (WHMO) is considered a DMS mission. MAJCOMs will detail the approval authority of these missions in a supplement to this AFI.

2.6.2. (AETC) Passenger approval authority is the Flight Authorizing Official or Aircraft Commander when the FAO cannot be contacted. (T-2)

2.6.3. Restrictions. Simulated emergency procedures are not authorized with passengers onboard. Passengers will be restrained by the safest means possible while still enabling the supported passenger to accomplish their mission. PIC will ensure supported forces are given a safety briefing and are familiar with the mission profile and events before the flight.

2.6.4. Manifests. Passengers will be categorized, manifested, and briefed IAW AFI 11-401. MAJCOMs will determine flight profile and restrictions with passengers on-board (publish in MAJCOM supplement to AFI 11-401), but must weigh the risk against the gain when exposing passengers to various flight regimes.

2.6.5. When passengers are in the cargo compartment, the cargo doors will remain closed during flight unless an aircrew member is also in the cabin. Unit commanders may waive this requirement if a valid need exists and the passengers are thoroughly briefed on cabin personnel and equipment security.

Section 2D—Communications Policy

2.7. Communications Policy:

2.7.1. Primary Radio. The AC will tell the crew which radio is the primary radio. All crewmembers will monitor the primary radio unless specifically directed otherwise by the AC.

2.7.2. Intercom. All crewmembers will listen to the intercom. Clearance is required from the AC prior to switching off the intercom. During critical phases of flight, intra-plane transmissions will be limited to those essential for crew coordination. **NOTE:** Avoid discussing classified information on intercom. If classified discussion is necessary, ensure all wafer switches are in the Internal Communications System (ICS) position. Also ensure the Cockpit Voice Recorder (CVR) Mute Switch and Forward Looking Infra-Red (FLIR) Recorder Mute switch are on.

2.8. Instrument Calls:

2.8.1. Mandatory calls for the pilot not flying during climb out/descent (The FE or AG is responsible for these calls if occupying a cockpit seat):

2.8.1.1. Five hundred feet below/above assigned altitude and one hundred feet below/above assigned altitude.

2.8.1.2. Five hundred feet above/below initial approach fix altitude or holding altitude and one hundred feet above/below initial approach fix altitude or holding altitude.

2.8.2. Any crewmember seeing deviations greater than 10 degrees of heading, 10 knots of airspeed, or 100 feet of altitude will inform the pilot flying. Deviations from prescribed procedures for the approach being flown will also be announced.

2.8.3. Mandatory calls for the pilot not flying the aircraft during non-precision approaches:

2.8.3.1. One hundred feet above Minimum Descent Altitude (MDA).

2.8.3.2. "Minimums" at MDA.

2.8.3.3. Runway in sight. Call when the runway environment is in sight. Do not call too soon when obstructions to vision (such as fog, haze, low stratus clouds, etc.) are present.

2.8.3.4. "Go-around." Call at missed approach point if the runway environment is not in sight.

2.8.4. Mandatory calls for the pilot not flying during precision approaches:

2.8.4.1. One hundred feet above Decision Height (DH).

2.8.4.2. "Land." Call at DH if the runway environment is in sight and the aircraft is in a position for a normal landing.

2.8.4.3. “Go-around.” Call at decision height if the runway environment is not in sight or if the aircraft is not in a position for a normal landing.

Section 2E—Power Available Checks

2.9. Dual Engine Power Available Check.

2.9.1. Perform the power check as near as possible to the same Pressure Altitude (PA) and Outside Air Temperature (OAT) as the operating area. Slowly apply collective pitch without drooping Nr below 97 percent until computed power or a limit (as defined by the flight manual, section 5) is reached. The engines must produce power equal to or greater than computed from the power available charts in the flight manual. If the engines fail the power check or Nr droops below 97 percent prior to reaching computed power or a limit, terminate the sortie. Perform a dual engine power available check for:

2.9.1.1. Operations below 300 feet AGL (except when operating on routes depicted on published Federal Aviation Administration [FAA]/National Aeronautical Charting Office [NACO] Helicopter Route Charts)

2.9.1.2. Non-Surveyed/Unprepared Landing Area Operations

2.9.1.3. Search Operations

2.9.1.4. Cargo Sling Operations

2.9.1.5. Hoist/Non-Hoist AIE (Ropes)/Water Operations.

2.9.2. Minimum power required for areas with a clear escape route is computed hover power for the intended hover height for the landing location. Minimum power required for areas with a restricted escape route is computed OGE hover power for the landing location.

2.9.3. Consider that power available at the site may differ from power available in flight if temperature or PA differs. Reaccomplish power check if conditions change from worst case which will result in a decrease in power available.

2.9.4. Comparing power available with power required determines power margin. This is the excess power available for go-around or unforeseen conditions (e.g., wind shifts, null areas, etc.). When the power margin is 10 percent or less, a second aircrew member will re-compute Take Off and Landing Data (TOLD) to confirm power requirements. The smaller the power margin, the more hazardous the approach. Extra caution must be used when operating in conditions that result in small power margins.

2.9.5. Prior to landing, ensure that sufficient power to depart the planned landing site is available. Factor in any weight that will be added at the site (e.g., survivors).

2.9.6. If sufficient power is not available for the approach, landing and departure, lighten the helicopter, locate a more suitable landing site, or abort the mission.

2.10. Single Engine Power Available Check. To accomplish this, ensure torque is below single engine power available then gradually roll one throttle back to flight idle while monitoring the engine instruments to ensure the other engine is able to produce adequate power to sustain flight. Slowly apply collective pitch without dropping Nr below 97 percent until computed power available or a limit (as defined by the flight manual, Section 5) is reached. If the engine fails the

power check or Nr droops below 97 percent prior to reaching computed power or a limit, terminate the sortie.

Section 2F—Aircraft Ground Operations and Servicing

2.11. Aerospace Vehicle Flight Data Document. Review the AFTO FORM Forms 781, *ARMS Aircrew/Mission Flight Data Document*, before applying power to the aircraft or operating aircraft systems. An authorized maintenance person, if available, or the AC must sign the exceptional/conditional release before flight. Ensure the AIR card and DD Form 1896, *Jet Fuel Identaplate*, are aboard the aircraft.

2.12. Engine Running Crew Change. Engine running crew changes require the following:

2.12.1. One pilot will have seat belt and shoulder harness fastened during pilot change.

2.12.2. The new AC will review the AFTO FORM Forms 781, aircraft weight and balance, configuration, and TOLD.

2.13. Fire Guard. A fire guard will be used, when available, for all engine starts. If a wheeled extinguisher is not available, the fire guard will have a hand-held fire extinguisher readily available. The fire guard's primary duty is to assist the crew in evacuating the aircraft should a fire occur, not fight the fire at the engine compartment.

2.14. Aircraft Servicing.

2.14.1. Refueling Duties. Aircrew members certified in refueling may perform refueling duties. Crewmembers used as refueling supervisors/panel operators will comply with TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding* and TO 1H-1(U)N-2-1 CL-2, *Refueling/Defueling* to max extent possible. At locations with refueling support, aircrews will not refuel unless extenuating circumstances dictate. When not directly involved in the refueling operation, personnel will remain at least 50 feet from the aircraft.

2.14.2. Services Documentation.

2.14.2.1. The AIR Card is used to pay for services at commercial Fixed Base Operators (FBO). These include aviation fuel, aircraft oil and fluids or other minor maintenance items. Charges incurred during this routine aircraft servicing generate a charge receipt. The aircraft commander is responsible for ensuring the receipt is correct and all appropriate signatures are obtained before departing the FBO. Log refuel information on the AF Form 664, *Aircraft Fuels Documentation Log*, located in the aircraft 781 forms binder IAW AFMAN 23-110 V1 PT3, *USAF Supply Manual Volume 1*, and TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policy and Procedures*. The aircraft commander then ensures that all charge receipts are transferred to the unit document control officer (DCO) at the completion of the mission.

2.14.2.2. Charges incurred for other services, including landing fees, aircraft de-icing, follow-me trucks, and other airfield related services might not generate a receipt that is given to the aircrew. If no receipt for the services is generated and provided to the aircrew, the aircraft commander will ensure the location and services performed are noted (AF Form 664 meets this requirement) and relayed to the unit DCO when the receipts are turned in upon mission completion. If a separate receipt is generated, turn it in to the unit DCO.

2.14.2.3. In the event the AIR Card is not accepted aircrew will use the Standard Form 44 (SF44), *Purchase Order-Invoice-Voucher*, for payment purposes. The AF Form 315, *United States Air Force AVFUELS Invoice*, is obsolete. The aircrew shall complete the SF 44 and attach it to the merchant vendor ticket/invoice when the merchant also declines use of the SF 44 and uses its own invoice/receipt. Fuel purchases shall be documented on a separate SF 44 from ground services and other authorized products since the merchant must invoice Defense Energy Support Center (DESC) for the fuel portion of the invoice and the customer home station payment office for any non-fuel product and services.

Section 2G—Weather

2.15. Wind Restrictions. Discontinue flight when wind velocity reaches:

2.15.1. Training/Exercise Sorties: Forty knots steady state.

2.15.2. Operational Sorties: Restrictions will be in accordance with the flight manual.

2.16. Visual Flight Rules (VFR) Training/Exercise Weather Minimums. Operational flights will comply with the weather minimums in AFI 11-202V3. Training and exercise flights must comply with the following criteria:

2.16.1. Day: Single-pilot operations: 700/1. Dual-pilot operations: 500/1.

2.16.1. (AETC) The weather minimums for AETC day single-pilot operations are 700/2; dual pilot operations are 500/2. (T-2)

2.16.2. Night: Night unaided: 1,000/2. Night Vision Goggle (NVG) operations: 500/2. **NOTE:** The above weather minimums do not apply to hover and air taxi operations at the aerodrome.

2.17. Instrument Flight Rules (IFR) Takeoff Minimums: In addition to AFI 11-202V3, the following applies:

2.17. (AETC) Instrument Flight Rules (IFR) Takeoff Minimums: The use of self-contained approaches is prohibited. Pilots will not fly Category II or III approaches in AETC UH-1N aircraft. (T-2)

2.17.1. For planned instrument flights in IMC, complete an instrument cockpit check prior to takeoff.

2.17.2. Current UH-1N global positioning systems (GPS) are considered mission enhancement systems and are not authorized as a primary instrument for IFR. The GPS may be used to assist in maintaining situational awareness.

2.17.3. Training Flights. Weather equal to or higher than published approach minimums (ceiling and visibility), but no less than 1/2 mile (2,400 runway visual range [RVR]) at the departure airfield for scheduled takeoff time plus one hour.

2.17.4. Operational Flights:

2.17.4.1. Without a departure alternate, weather at the departure airfield must be equal to or above the published visibility required for the appropriate aircraft category for an available approach.

2.17.4.2. With a departure alternate, weather at the departure airfield must be equal to or above one-half the published visibility minimum required for the appropriate aircraft category, but no less than 1/4 mile (1,200 RVR) for an available approach. Published visibility is required if a copter-only approach is used at the departure airfield. Select the departure alternate using the following criteria:

2.17.4.2.1. Departure alternate should be within one hour flying time.

2.17.4.2.2. Weather enroute to the departure alternate must permit flight within aircraft limitations and comply with AFI 11-202V3, Selecting an Alternate, Helicopter criteria. The aircraft must be capable of maintaining minimum enroute altitudes (MEA) or minimum obstruction clearance altitude (MOCA), (whichever is higher) to the alternate if an engine fails.

2.17.4.2.3. **(Added-AETC)** . The departure alternate prevailing weather must be better than or equal to the lowest published approach ceiling and visibility minimum (no lower than 1,200 runway visual range) and must be forecast to remain for 1 hour after estimated time of arrival. (T-2)

2.18. Life or Death Missions. Life or death missions are determined by the wing commander (or equivalent) with concurrence of the unit commander and the AC. During life or death missions, helicopters may take off if the visibility is sufficient to taxi to the takeoff area. Ensure an appropriate course of action is available (and briefed) in the event of an emergency after takeoff.

2.19. Adverse Weather:

2.19.1. If adverse weather is encountered, take immediate action to avoid further flight in the hazardous conditions by either diverting or landing.

2.19.2. No mission requires a helicopter to penetrate a thunderstorm. Flights may be made into areas of known or forecast thunderstorms if VMC is maintained and thunderstorm activity is avoided by a minimum of 5 nautical miles (NM). Flights will not be made into rain shafts beneath cumulonimbus clouds.

2.20. Fuel Planning.

2.20.1. For all flights, plan to arrive at the destination with a minimum of 200 pounds of reserve fuel.

2.20.2. For flight planning purposes, when visibility-only criteria is used or when destination weather may be unreliable, the fuel requirement for descent, approach, and missed approach will be no less than 250 pounds in addition to required reserve fuel.

Section 2H—Precautionary Landings

2.21. Forced or Precautionary Landings. The helicopter has a unique ability to land nearly anywhere, providing the aircrew a tremendous safety advantage. If the crew becomes doubtful of the helicopter's airworthiness or encounters hazardous weather conditions, they should execute a precautionary landing, provided the landing conditions are not more hazardous than the in-flight problem. Aircraft security and accessibility for maintenance are secondary considerations to

aircrew safety. Report all precautionary landings through appropriate channels as soon as communications are established.

2.21.1. Forced or Precautionary Landings due to In-flight Malfunction.

2.21.1.1. Aircraft malfunctions must be investigated, corrected, and inspected by qualified maintenance personnel. Coordinate maintenance support via radio, telephone, or any other means available. The group commander or designated representative (cannot be delegated below unit Director of Operations [DO]) approval is required prior to further flight when the precautionary landing occurs at a location where qualified maintenance is not available.

2.21.1.2. In the event a forced or precautionary landing occurs at a location where communications are not available, and the AC determines the aircraft is safe for flight the AC may authorize further flight. The decision to resume flight under these circumstances must be based on a thorough evaluation of all the hazards and risks involved.

2.21.2. Precautionary Landings Due to Weather.

2.21.2.1. If deteriorating weather is encountered during VFR operations, consider a precautionary landing a viable option in addition to course reversal, course deviation, or continuing under IFR.

2.21.2.2. The AC may authorize further flight after a precautionary landing for weather. Make a reasonable effort to notify appropriate agencies of the precautionary landing and to determine additional weather information.

Section 2I—Altitude Restrictions

2.22. General. Conduct all operations at or above 300 feet AGL except when lower altitudes are required for takeoff, departure, arrival, landing, operational missions, training flights in approved areas, approved exercise missions, or when directed lower by a FAA/NACO Helicopter Route Chart.

2.22.1. Minimum en route altitude for unaided night is 500 feet Above Highest Obstacle (AHO) within 5 NM of the flight path unless directed lower by a FAA/NACO Helicopter Route Chart.

2.23. Low-level. Flight below 300 feet AGL is considered low-level.

2.23.1. Daytime, low-level flights may be conducted no lower than 50 feet AHO along the route of flight.

2.23.2. NVG enroute operations in a surveyed low-level area, or on a FAA/NACO Helicopter Route Chart, may be conducted no lower than 50 feet AHO when 20 percent Effective Moon Illumination (EMI) or greater exists. Operations are limited to 150 feet AHO when less than 20 percent EMI exists. To increase situational awareness, an operable GPS receiver should be available for NVG flight below 300 feet AGL.

2.23.3. For NVG water operations, minimum cruise altitude is 150 feet Above Water Level (AWL).

2.24. Obstacle Clearance. Prior to maneuvering the helicopter in close proximity to obstacles, ascertain that the area is clear. Whenever horizontal rotor clearance is 25 feet or less, the scanner will inform the pilot of the clock position relative to the nose of the aircraft and estimated distance to the obstacle from the edge of the tip path plane (for example: Tree, nine o'clock, 20 feet).

Section 2J—Publications Required for Flight

2.25. Mission Kits. Unit commanders may supplement the minimum contents of the kit shown in **Table 2.2** Items carried by crewmembers or stored on the aircraft need not be duplicated in the mission kit. A mission kit is required for all flights except on FCFs. During FCFs, a copy of the TO 1H-1(U)N-1 and TO 1H-1 (U)N-6CF-1, is required on board. FLIP shall include coverage for entire area of planned operations.

Table 2.2. Mission Kit Contents (Minimum).

| Flight Documents/Flight Publications | |
|--|---|
| TO 1H-1(U)N-1, <i>Flight Manual USAF Series UH-1N Helicopter</i> | AFI 11-202V3, <i>General Flight Rules</i> |
| TO 1H-1(U)N-5, <i>Technical Manual Basic Weight Checklist and Loading Data</i> | AFI 11-2UH-1NV3 (and applicable supplements), <i>UH-1N Helicopter Operations Procedures</i> |
| TO 1H-1(U)N-2-1 CL-2, <i>Refueling/Defueling</i> | Supplemental Weight & Balance Handbook |
| Flight Information Handbook (FIH) | Low Altitude Instrument Approach Procedures (two sets for area of operation) |
| En route Low Altitude Charts (one set for area of operation) | IFR/VFR/Enroute Supplement (as applicable for geographical area) |
| AF Form 70, <i>Pilot's Flight Plan and Flight Log</i> | AF Form 457, <i>USAF Hazard Report</i> |
| Standard Form 44 (SF44), <i>Purchase Order-Invoice-Voucher</i> | AF Form 651, <i>Hazardous Air Traffic Report (HATR)</i> |

2.26. Aircrew Checklists. All crewmembers will maintain and carry their applicable abbreviated checklists and AFI 11-2UH-1NV3, CL-1 and CL-2 to this instruction during flight. **Exception:** Air Force Special Operations Command (AFSOC) may use the current AFSOC Helicopter Crew Briefing Guides and Checklist. Crewmembers may carry only those checklist pages applicable to their unit operations as determined by the unit commander. Insert current, approved flight manual checklists in the USAF flight crew checklist binder. Additional notes amplifying checklist procedures and limitations may be added. Currency of notes is the crewmember's responsibility.

2.26.1. Copies of the Before Takeoff, Before Landing, Hoist Operators Before Pickup, Hoist Operator's After Pickup and Smoke/Flare Drop checklists may be posted in the cabin at the discretion of the unit.

2.27. Aircrew Charts. Pilots will ensure they flight plan and fly with current charts. A current chart consists of the most recent edition available with updates from the Chart Updating Manual posted on it and annotated as such.

Section 2K—Aircraft Equipment

2.28. Minimum Aircraft Equipment and Instrumentation. Minimum aircraft equipment and instrumentation is listed in **Table 2.3**. Additional information can be found in AFI 11-202V3 and AFI 21-103, *Equipment Inventory, Status and Utilization Reporting*.

2.28. (AETC)Minimum Aircraft Equipment and Instrumentation. The UH-1N is considered to have an anticollision light system. (T-2)

Table 2.3. Minimum Aircraft Equipment and Instrumentation.

| Equipment | Day | Night/NVG | IMC | Overwater |
|--|------------|------------------|------------|------------------|
| Altimeter ¹ | X | X | X | X |
| Attitude Indicator ⁶ | X | X | X | X |
| Heading Indicator ¹ | X | X | X | X |
| Airspeed Indicator ¹ | X | X | X | X |
| Dual Torque Indicator | X | X | X | X |
| Triple Tachometer | X | X | X | X |
| Engine Instruments ² | X | X | X | X |
| Transmission Instruments ² | X | X | X | X |
| Combining Gearbox Instruments ² | X | X | X | X |
| Navigation Instruments ³ | X | X | X | X |
| Communication Equipment ³ | X | X | X | X |
| Restraint devices for all crew/passengers | X | X | X | X |
| Position and Anti-Collision lights | X | X | X | X |
| Landing/Searchlight ^{4,5} | X | X | X | X |
| Cockpit Instrument lights | | X | | |
| Pitot Heat | | | X | |
| Life Preserver Unit (LPU)s | | | | X |
| Helicopter Emergency Egress Device (HEED)s | | | | X |
| Life Rafts | | | | X |
| Notes: | | | | |
| 1. At least one operative, on whichever side occupied by the aircraft commander | | | | |
| 2. Sufficient instrumentation to assess system's performance | | | | |
| 3. As required for flight profile | | | | |
| 4. At least one operational | | | | |
| 5. If infrared filter installed on searchlight landing light must be operational | | | | |
| 6. IMC flight requires two operative ADI's | | | | |

2.28.1. The final decision regarding equipment required for a mission rests with the AC. When the AC considers an item essential for the accomplishment of the mission, the AC will designate the component mission-essential and it will be repaired or replaced prior to departure. Acceptance of an aircraft by an AC to operate one mission (or mission segment) without an item or system does not commit that AC or a different AC to subsequent operations with the same items/systems inoperative.

2.29. Radar Altimeter. Two operational radar altimeters are required for all low-level flight. At least one radar altimeter must be operational for night operations (aided and unaided) below 500 feet AHO. Both radar altimeters must be operational for enroute NVG flight below 300 feet AGL (this does not include terminal operations at prepared landing sites).

Section 2L—Restraint Devices

2.30. At least one pilot will have seat belt and shoulder harness fastened when rotors are engaged. All crewmembers will wear a seat belt when conducting practice emergency procedures. All occupants in the cabin compartment will wear a seat belt, authorized restraint device, or parachute when doors are open during flight except:

2.30.1. The AC may direct crewmembers to perform duties in the cabin unrestrained for brief periods when required to don harnesses, attend passengers, or change seats, provided doors are closed. Parachutists may change positions with doors open if parachutes are worn and the aircraft is higher than 1,000 feet AGL.

2.30.2. For alternate loading of passengers and crewmembers, refer to AFTTP 3-3.H-1.

2.30.3. The AC may direct crewmembers to perform duties requiring the use of a MAJCOM approved restraint device in lieu of a seat and seat belt when mission requirements dictate. Attach the restraint device to any tie down ring on the floor or to any bulkhead mounted seat belt ring as long as the seat belt is not simultaneously in use (does not prevent crewmember from attaching their restraint device to their own seat belt ring). Only one restraint device can be attached to a tie down ring at the same time. Do not attach the restraint device to cargo tie down rings on the bulkhead or ceiling. Adjust the length of the restraint device to preclude accidental exit from the aircraft. **WARNING:** An improperly adjusted restraint device may result in injury or loss of life.

2.30.4. 580 ACSG/GFEAC (WR-ALC/LUHE at time of approval) approved the use of a Crew Restraint Cable (CRC) as an alternate attachment point for restraint devices. The CRC is a locally manufactured item. Instructions for the manufacture of this item may be obtained from 580 ACSG/GFEAC.

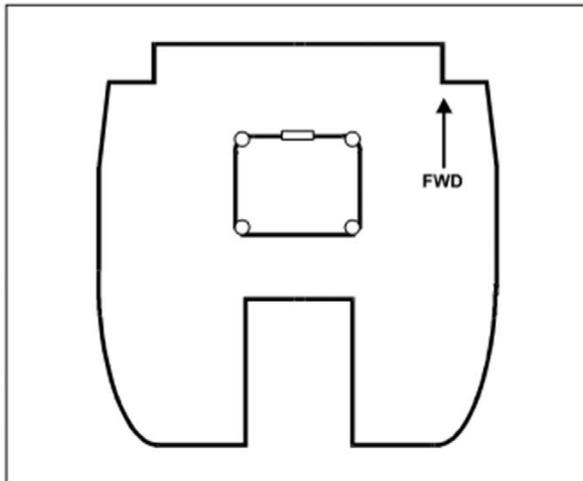
2.30.4.1. The CRC is a cable routed through four D-rings attached to adapters connected to four ceiling mount studs. A bolt, nut, and pin arrangement connect the cable terminal ends. The CRC is only to be used by personnel as an alternate attachment point for restraint devices if it has been pre-flighted by a qualified crewmember. When in use, the CRC affords personnel more flexibility and maneuverability especially during AIE operations. The CRC keeps the restraint device off the floor and free of equipment, lessening the chance of belt entanglement.

2.30.4.2. The CRC is installed by flight engineers or maintenance personnel according to **Figure 2.1** The four adapters are installed on the ceiling mount studs at STA 82.0 BL 11.00 LH, STA 82.0 BL 11.00 RH, STA 100.0 BL 11.60 LH, STA 100.0 BL 11.60 RH. The cable will be fabricated according to TO 1-1A-8, *Engineering Manual Series, Aircraft and Missile Repair, Structural Hardware*. Manufactured cables will have the date of initial manufacture and a one-time weight testing capacity (2,500 pounds) permanently marked on the forked terminal end. Reference TO 1-1A-8 for inspection and maintenance criteria. The cable is routed through the D-rings on the adapters and then

bolted together and pinned at the terminal ends. The terminal ends will be positioned in the middle of any of the four adapter assemblies. The CRC will be visually inspected each time the cable is installed and before use. **WARNING:** Do not use adapters if they cannot be manipulated to the snap-to-lock position.

2.30.4.3. The CRC can support up to two restraint devices at any one time. The restraint device may be attached at any adapter D-ring and cable or by cable alone. Only one restraint device may be attached to an adapter D-ring at a time and only one restraint device may be attached to a cable side at a time. No restraint device will be attached by cable alone at the terminal end attachment point.

Figure 2.1. Ceiling Restraint Cable Configuration.



2.30.5. If a valid mission requirement exists, commanders may permit Operational Support Flyers (OSFs) and Mission Essential Personnel (MEP) to be restrained with a restraint device. ACs must ensure that these personnel are thoroughly familiar with the use of restraint devices and are fully briefed on all pertinent safety considerations.

Section 2M—Dropped Object Prevention

2.31. During preflight inspections, pay particular attention to panels and components that are potential dropped objects. All cargo/mission equipment inside the aircraft must be secured prior to any aircraft movement. **WARNING:** Loose objects can become hazardous projectiles during any violent maneuver or hard landing and must be secured to prevent injury to personnel and/or damage to the aircraft.

Section 2N—Standard Configuration

2.32. Responsibilities. Standard configurations will be IAW MAJCOM and unit local procedures (supplement or operating instruction). Each flying unit will publish diagrams and mission equipment lists for each configuration used by the unit. Prepare a DD Form 365-4, *Weight And Balance Clearance Form F - Transport/Tactical*, IAW [paragraph 3.8](#) for each of these configurations. Additional special mission equipment may be added at the option of the unit commander. All equipment authorized for and installed on the aircraft will be categorized

and managed IAW applicable Air Force Instructions. Aircraft will not be modified to secure and/or install equipment unless authorized by aircraft technical orders or applicable Air Force Instructions.

2.32. (AETC)Responsibilities. Standard configuration will be IAW unit procedures. (T-2)

2.33. Cargo/Equipment. Securing life support/medical equipment/medical kits with seat belts is authorized. In addition, items weighing less than 200 pounds that require constant access, such as navigation or mission kits, may be secured with seat belts. Secure cargo/equipment items not requiring rapid removal during an aircraft or medical emergency with devices identified in TO 13C2-1, *Cargo Tie-Down Equipment*, and the flight manual. Do not modify tie down devices in any fashion.

2.34. Deployment/Exercise Configuration. Every effort will be made to establish the standard configuration(s) prior to deployment/exercise participation. In lieu of an exercise coordinator, the mission commander will establish the standard configuration for each planned mission. The configuration(s) may be altered to carry additional observers, ferry simulated survivors, etc. Survival equipment required by MAJCOM or multi-command guidance will be included in these configurations.

2.35. Deviations. Unit commanders may authorize deviations from the standard configuration. Deviations from tactical configuration requirements are authorized at deployment locations (including exercises) when the mission dictates.

2.36. FCF Configuration. Unit commanders may establish standard FCF configurations as required.

2.37. Discrepancies. Document all standard configuration discrepancies using the AFTO Form 781A, *Maintenance Discrepancy and Work Document*.

Section 2O—Management

2.38. Predeparture Crew Rest: Medical personnel called to duty for urgent SAR/MEDEVAC missions with less than 12 hours of crew rest can perform life saving duties. Crew rest for Flight Surgeons may be waived by the OG/CC, IAW para. 1.3. Because Medical Technicians are Operation Support Flyers performing in-flight medical care, no crew rest is required. Medical personnel will be placed on the flight authorization to perform medical duties only and will log flight time IAW AFI 11-401.

2.39. Post-TDY Crew Rest. Crew rest normally begins upon the final return of an individual to home station from a flying temporary duty (TDY) and runs continuously until completed. Post-TDY crew rest is computed at the rate of 1 hour off for every 3 hours of TDY not to exceed 72 hours. Post-TDY crew rest is normally completed before starting predeparture crew rest for a subsequent mission. Cancellations or delay of post-TDY crew rest is determined by the unit commander.

Section 2P—Medical Evacuation (MEDEVAC)

2.40. MEDEVAC Missions. Aircraft will not be used for routine patient transfers. Medical evacuation flights may be operated to transport seriously ill or injured persons and/or to transport medical personnel, equipment, or supplies under emergency conditions when other means are not

suitable or readily available. Prior to dispatching a medical evacuation mission, obtain the best medical evaluation from a qualified medical authority to determine the need for evacuation. This evaluation is not the final determinant whether or not a mission will be performed.

2.40.1. Medical Evacuation of patients contaminated with chemical or biological agents. Accomplish IAW MAJCOM guidance.

2.40.1. (AETC) Medical Evacuation of patients contaminated with chemical or biological agents will not be accomplished by AETC units. (T-2)

2.41. Medical Assistance. Missions involving life-threatening injuries/illnesses require immediate launch because any delays in reaching the patient/survivor further decrease the probability of survival. Avoid delays whenever and wherever possible. The flight surgeons (FS) and medical technicians (MT) will assist in emergencies and are in charge of the medical aspects of the mission. ACs are responsible for safe mission execution and will not delegate their authority/responsibility under any circumstances. Unit commanders should continuously coordinate their local mission response criteria and requirements with flight surgeons and medical technicians to avoid potential delays. To familiarize the flight surgeons and medical technicians with procedures and the available medical equipment, encourage their participation in training and operational missions whenever possible.

Section 2Q—Search and Rescue (SAR)

2.42. Mission Generation. Units must have a Joint Rescue Coordination Center (JRCC) number prior to conducting an operational Search and Rescue Mission. This does not preclude a unit from preparing and posturing for a mission while waiting for the JRCC number.

2.43. On-Scene Procedures:

2.43.1. Perform a power available check IAW [Para 2.9](#) prior to search operations.

2.43.2. Ensure an emergency escape route is available and briefed. If the mission dictates flight below 50 KIAS, a crewmember will calculate and brief safe single engine airspeed for current conditions.

2.44. Altitude Restrictions:

2.44.1. Operational Searches. Altitudes are determined by the AC.

2.44.2. Training Searches. Any search training below 300 feet AGL must be in a surveyed low level area. Day search training can be accomplished down to a minimum altitude of 100 feet AHO. NVG search training can be accomplished to a minimum altitude of 300 feet AGL. Night unaided search training can be accomplished to a minimum altitude of 500 feet AGL.

2.45. (Added-AETC) Alert Procedures. If applicable, alert procedures will be outlined in the local unit supplement to this instruction. (T-2)

2.46. (Added-AETC) Standby Duty. Standby duty is defined as a period of time that a crew may be required to launch on an anticipated mission for which a firm departure time cannot be established. Aircrew members will be provided a 12-hour inviolate crew rest period preceding the assumption of standby duty and must be allowed to remain in crew rest until called in for duty. Unit commanders, mission commanders, and operations officers must consider aircrew

availability and mission priority when determining periods of standby duty. **Note:** 36 RQF crews TDY to Tacoma Command Post (Cusick, WA) are considered to be in standby status and will not be scheduled for more than 125 hours of continuous standby duty. (T-2)

Chapter 3

AIRCREW PROCEDURES

Section 3A—General

3.1. Aircrew Uniforms and Protective Devices:

3.1.1. When reporting for flying or alert duties, all crewmembers will wear appropriate flying clothing (IAW AFI 11-301V1, *Aircrew Flight Equipment (AFE) Program*) and carry a set of ID tags on their person. Commanders will determine additional requirements appropriate for the terrain and climatic conditions.

3.1.2. All crew chiefs and maintenance/logistic support personnel will wear Nomex flight gear when flying on helicopters. Civilian maintenance contractors must abide by local contract requirements.

3.1.3. Personnel whose duties require them to be in close proximity to the operating helicopter require eye and ear protection. Note: this does not apply for quick loading and unloading of passengers and equipment.

3.1.4. Aircrews will ensure hearing protection is available prior to flight. A crewmember will be responsible for distributing these devices to all passengers.

3.1.5. Chemical/ Biological Warfare Individual Protective Equipment (IPE). IAW MAJCOM procedures.

3.1.5. (AETC) AETC does not require Chemical/Biological Warfare Individual Protective Equipment. (T-2)

3.1.6. (Added-AETC) Survival vest. Crewmembers will wear a survival vest on all flights outside the local closed traffic pattern. (For Kirtland formal training unit, the Aux Field, FCF area, and local ABQ instrument pattern are considered outside the local closed traffic pattern) **Exception:** Wear of the survival vest is optional with winter weight flight clothing if the combination of the survival vest and the winter weight clothing interferes with aircrew duties. Whenever the survival vest is not worn, it must be immediately available. (T-2)

3.1.7. (Added-AETC) Helicopter crewmembers must wear anti-exposure suits on any preplanned overwater flight beyond autorotational distance from land when the water temperature is 60 degrees Fahrenheit or below. Refer to AFI 11-301, Volume 1, *Aircrew Flight Equipment (AFE) Program*, as supplemented, for details. (T-2)

Section 3B—Aircraft Commander Responsibilities

3.2. Aircraft Commanders are:

3.2.1. In command of all persons aboard the aircraft.

3.2.2. Responsible for the welfare of the crew and the safe accomplishment of the mission.

3.2.3. Vested with the authority necessary to manage their crew and accomplish the mission.

3.2.4. The final authority for requesting and accepting any waiver affecting their crew or mission.

3.2.5. Charged with keeping the applicable commander informed concerning mission progress.

3.2.6. Responsible for ensuring all applicable briefings and checklists are completed prior to the event.

3.2.6.1. **(Added-AETC)** Accomplish all checklists with strict discipline using the —challenge – response method. Emergency procedures checklists will employ the —challenge – response – response method. (For example, the reader of the checklist will verbalize the challenge and the desired action; the person performing the action will reverbalyze the action to be taken; the flight engineer is reading the checklist for DC generator failure and reads the first step as —check start switch - off. The person performing the action would respond —off.) (T-2)

3.2.6.2. **(Added-AETC)** Before each flight, the aircraft commander (or the aircraft commander's designated representative) will ensure all passengers are briefed in accordance with the flight manual. If additional passengers are added on subsequent sorties during the same day, the new passengers will be completely briefed before the flight. Briefings must include life support equipment appropriate to the flight profile available for passenger use. (T-2)

3.2.7. Required to debrief maintenance personnel on the condition of the aircraft and equipment. Will make the following entries in the AFTO Form 781A, when appropriate:

3.2.7.1. Aircraft subject to salt spray when flown below 3,000 feet over salt water, except for takeoffs and landings.

3.2.7.2. Aircraft flown below 30 feet above salt water.

3.2.7.3. Hoist and rescue device used in salt water.

3.2.7.4. Aircraft flown through Volcanic Ash.

3.2.8. Responsible for conducting the pre-flight briefing as applicable and a post-flight debrief with both aircrew and the appropriate agencies immediately after the return of teams or aircrews from a sortie.

3.2.9. Fuel Management

3.2.9.1. Preflight. The AC, or designated crewmember, will ensure the pre-planned fuel load is on board the aircraft and will brief the crew on fuel loads that do not meet mission requirements.

3.2.9.2. In flight. The AC, or designated crewmember, will monitor fuel transfer and fuel consumption and keep the crew advised of fuel status.

Section 3C—Flight Engineer Responsibilities

3.3. General. This section contains normal procedures for flight engineers not contained in the flight manual and/or applicable Technical Order. If flight engineers are not being used for the

mission, the pilot not flying will complete the requirements of this chapter. If an FE occupies the left cockpit seat they are responsible for pilot not flying duties.

3.4. Flight Engineer Station. The flight engineer station is defined as the entire cabin area. Due to the diverse mission of a UH-1N flight engineer, duties may be conducted from any station in the aircraft.

3.5. Refueling. The flight engineer may be required to refuel when maintenance personnel are not available. If ground support personnel are not available, the AC designates other crewmembers to assist the flight engineer as required.

3.6. Aircraft Systems Management. The flight engineer will monitor aircraft systems during ground and flight operations unless the mission dictates otherwise. Notify the pilot of all abnormal indications and take action as directed.

3.7. TOLD (Take Off and Landing Data):

3.7.1. In accordance with TO 1H-1(U)N-1, TOLD cards will be completed and briefed prior to takeoff. Whenever possible, TOLD cards should be completed prior to the aircrew briefing. Compute data applicable to the mission profile.

3.7.2. During multiple takeoffs/landings, only affected parameters need to be recomputed if favorable conditions afford an additional margin of safety in all other areas (i.e., gross weight decreases due to fuel burn-off, while pressure altitude and temperature remain constant). Tab Data has been provided in TO 1H-1(U)N-1 to facilitate computing TOLD while in flight. TOLD may be computed in flight using flight manual charts or Tab Data contained in TO 1H-1(U)N-1CL-1.

3.7.3. The H-1 Mini-TOLD Card in attachment 1 (or MAJCOM approved equivalent) will be completed for approaches when power required is within ten percent of power available, when out-of-ground-effect (OGE) power is not available, prior to NVG or low-level operations, or at the discretion of the AC. If involved in NVG or low-level operations, the card should be filled out during pre-mission planning using worst-case data. TOLD data will be thoroughly briefed and will be readily available to the entire crew.

3.8. Weight and Balance:

3.8.1. The AC, or designated crewmember, will compute crew/passenger/equipment off-loading or on-loading to ensure center of gravity (CG) and weight limits are not exceeded. These computations will address the maximum number of personnel/maximum amount of equipment allowed in the cargo compartment without exceeding CG or structural limitations. This procedure applies to all operations in which CG or weight limits may be exceeded as a result of personnel/equipment on or off-loading. A manual or electronic DD Form 365-4 may be used. MAJCOMs must approve any electronic system other than the Automated Weight and Balance System (AWBS).

3.8.1. (AETC) Forward alternate electronic system requests through Stan/Eval channels to AETC/A3V for approval. (T-2)

3.8.2. Automated Weight and Balance System (AWBS). Use the most recent version of AWBS found on the following web site: <https://awbs.hill.af.mil>. Refer to T.O. 1-1B-50, *Weight and Balance*, for installation requirements. Use the transport side of the form.

3.8.3. Use a DD Form 365-4/Form F, *Weight and Balance Clearance Form F – Tactical/Transport*, for each flight. The DD Form 365-4 records the weight, moment, and CG calculations for a specific loading arrangement on a specific aircraft to ensure the aircraft remains within its safe weight and balance limitations. These forms are prepared for use on a one-time basis.

3.8.3.1. Standard Aircraft Configurations (Canned). Aircraft configuration encompasses weight, CG, cabin equipment/seating/personnel layout, and mission equipment (i.e., FLIR, hoist, life raft, cargo hook, AIE devices, etc.). DD Forms 365-4/Form F may be prepared for standard aircraft configurations used by the unit. These canned forms are authorized when an aircraft's weight, moment, and CG remain within specific limits. These forms (either computerized or expendable pad version) must be filed and maintained in both the primary and supplemental weight and balance handbooks. These forms can only be used for the aircraft and configurations they were designed/computed for and must be checked for accuracy at least every 180 days.

3.8.3.2. Initial Takeoff Gross Weight.

3.8.3.2.1. If the initial takeoff condition gross weight changes by more than 500 lbs, a new DD Form 365-4 must be used or generated.

3.8.3.2.2. When initial takeoff condition gross weight does not change by more than 500 lbs, then a new or corrected DD Form 365-4 need not be generated. Even though no written adjustments are required, the AC or flight engineer will calculate the new gross weight and CG and ensure limits are not exceeded.

3.8.3.2.3. Brief the AC on the new gross weight and CG prior to take-off, as required.

3.8.3.3. Zero fuel weight computations are required on the DD Form 365-4.

3.8.3.4. Passengers. Item 13 will indicate the number of passengers in a given position, their weight, associated arm, and the position or station. Example: 2 Pax/360 lbs/117.0/Pos 3.

3.8.3.5. Cargo. Use the last cargo and compartment/arm/station on the right side of the form.

Chapter 4

NIGHT OPERATIONS

Section 4A—Night Vision Goggle (NVG) Operations

4.1. Ambient Illumination Requirements. Training will not be conducted with less than five percent EMI.

4.2. Aircraft Lighting:

4.2.1. Exterior lighting -- IAW AFI 11-202V3.

4.2.1.1. An operable white light (landing or search) is required for all NVG flights.

4.2.1.2. Position lights will be set to steady/bright.

4.2.1.3. Use of one anti-collision light is permitted. **NOTE:** The anti-collision light(s) may be extinguished and the position lights set to dim, if it creates a hazard to the aircrew IAW AFI 11-202V3.

4.2.1.4. An operable searchlight equipped with an infrared filter is required for NVG training flights below 20 percent EMI and is highly recommended for all NVG flights.

4.2.1.5. **(Added-AETC)** Taping of exterior lights during NVG Formation is permitted, provided 360 degree visibility is maintained. (T-2)

4.2.2. Interior Lighting/Configuration

4.2.2.1. The only NVG cockpit modifications currently approved for use on UH-1N helicopters are: blue-filtered secondary instrument lights, NVG compatible Master Caution segment panel, NVG compatible peanut lights, NVG compatible flip filters for the Master Caution and RPM warning lights, NVG compatible filters on the overhead pilot and copilot map lights, NVG compatible bulb replacements for the fire pull handle lights, an NVG compatible filter that can be temporarily mounted over the Master Caution segment light panel, the chip detector caution panel, the fuel system caution panel, gooseneck lights (NSN 1680-01-230-0533) and any permanent/temporary modification that has been approved in writing by Warner Robins (SPO). At a minimum, all helicopters will be equipped with the blue filtered secondary instrument lights.

4.2.2.2. Ensure critical information is not rendered invisible by excessive taping. The tape must allow enough light to be emitted to alert the pilot of critical information. **NOTE:** Use of lip or finger lights to illuminate gauges in lieu of secondary lights is not authorized.

4.2.2.3. Over water flights. All cabin emergency exits will be marked by chemical lights, which will be activated prior to flight over water. The chemical lights will be placed inside the cabin compartment as follows:

4.2.2.3.1. Center one light immediately above each cabin door.

4.2.2.3.2. Attach one light to each window emergency release handle (when doors are closed).

- 4.2.2.3.3. Attach one light to the handle of each cargo door (when doors are closed).
- 4.2.2.3.4. Attach one light to the life raft.
- 4.2.2.3.5. Attach one light to the life raft tie-down release handle.
- 4.2.2.3.6. Attach lights to the pilot and copilot's emergency door jettison handles.

4.2.3. Each crewmember will carry an NVG-compatible light source (flashlight, chemical light, etc.). Finger lights and lip lights do not meet this requirement, but may be used as additional light sources.

4.3. Night Approaches to Non-surveyed/Unprepared Landing Areas and Operational Sites. Operations will be IAW AFI 11-202 Volume 3, this AFI, and AFTTP 3-3.H-1. Do not leave flight altitude until the location of the HLZ has been positively identified. Brief and conduct a site evaluation prior to the approach in a manner similar to day criteria.

4.3.1. Adjust pattern altitude accordingly, but in no case lower than 300 feet Above Landing Site (ALS) on downwind.

4.3.2. Establish final approach to commence at no lower than 300 feet ALS.

4.4. Site Selection for Training. Same as day criteria. Refer to AFI 13-217, *Drop Zone, Landing Zone Procedures*, for HLZ dimension and survey requirements.

4.5. NVG Considerations.

4.5.1. Flight planning is particularly important for NVG operations. Comply with all low-level flight planning requirements such as chart preparation, preparation of navigation log, determining minimum safe altitudes (MSA), etc. regardless of altitude flown. NVG operations with only a pilot and copilot must be conducted at a helipad/runway/ramp type landing area or non-surveyed/unprepared landing area sites meeting unaided criteria.

4.5.2. Comply with the NVG preflight procedures in applicable NVG T.O. (e.g., T.O. 12S10-2AVS9-2, *Image Intensifier Set, Night Vision, Type AN/AVS-9*). Do not fly with NVGs that fail to meet the visual acuity requirements. **NOTE:** When the FLIR Turret FLIR Unit (TFU) is being operated during NVG operations, the flight engineer is allowed to de-goggle in order to view the FE display and operate the FLIR system. The goggles must remain available for immediate use (i.e. adjusted, focused, turned on, and flipped up).

4.5.3. If a primary crewmember experiences an NVG failure which cannot be corrected and no spare NVGs are available, other primary crewmembers may continue operating with NVGs provided night unaided criteria is used for the remainder of the sortie. If this situation occurs during a training mission, the sortie will be terminated. If this situation occurs during an operational mission, the AC must weigh the risk of continuing with a degraded capability against the urgency of the mission.

Section 4B—Unaided Operations

4.6. Night Approaches to Non-surveyed/Unprepared Landing Areas and Operational Sites. Operations will be IAW AFI 11-202 Volume 3, this AFI, and AFTTP 3-3.H-1. Do not leave flight altitude until the location of the HLZ has been positively identified. Brief and conduct a site evaluation prior to the approach much the same as under daylight conditions,

provided adequate lighting is available. Under no circumstances will a low reconnaissance be conducted. Do not descend below 300 feet ALS until established on the approach. Prior to making the first approach, determine wind direction. Forecast winds may be used when wind direction cannot be determined otherwise. When using forecast winds, ensure an adequate power margin is available in the event winds differ from forecast.

4.6.1. Adjust pattern altitude accordingly, but in no case lower than 300 feet ALS on downwind. Throughout the entire approach, use the radar and/or barometric altimeter to maintain awareness of aircraft height above the ground.

4.6.2. Establish final approach to commence at no lower than 300 feet ALS.

4.7. Site Selection for Training. In addition to AFI 13-217, the following apply.

4.7.1. Sites will be selected where the vertical development of the surrounding terrain does not restrict the pilot's option to execute a go-around, with minimum maneuvering, at any point during the approach.

4.7.2. The obstacles/terrain within three NM of the site will not exceed 200 feet above the site elevation. Restricting the approach and departure route to directions that will avoid terrain or obstacles exceeding the above criteria satisfies this requirement.

4.7.3. Eligible night unaided landing sites and applicable restricted approach and departure routes will be depicted on the AF Form 4303, *Helicopter Landing Zone Survey*.

4.7.4. For sites without permanent lighting, prior to full darkness, make a visual survey of the site and position lights to outline the landing area. Check for obstacles, general site condition, and wind. This survey may be accomplished by other crews flying during the day or by ground party. After darkness, the survey may be accomplished by NVG-equipped crews.

4.8. Illumination Requirements for Helicopter Landing Areas. Helicopters on operational support missions may be authorized by the unit commander to operate into and from unlighted areas provided all available illumination is used. On all other missions, operations into non-surveyed/unprepared landing areas or operational sites between official sunset and official sunrise will be made only if one of the following conditions can be met:

4.8.1. The area is outlined by discernible lights.

4.8.2. The pilot can clearly see the approach path and landing surface (as would be possible immediately after official sunset or before official sunrise).

4.9. Landing Zone Lighting. Some type of landing zone lighting should be used to assist the pilot in locating and identifying the landing zone and making a landing at night. When practical, employ a standard landing zone lighting pattern. Landing zone lighting should:

4.9.1. Be visible to the pilot.

4.9.2. Identify an area free of obstacles and safe for hovering and landing.

4.9.3. Employ three or more lights at least 15 feet apart to prevent autokinetic illusions.

4.9.4. Provide orientation along an obstacle-free corridor for landings and takeoffs.

4.10. Landing Zone Lighting Patterns. Since a variety of landing zone lighting patterns are in use, the pilot should anticipate diversity in lighting patterns when participating in joint and/or combined operations.

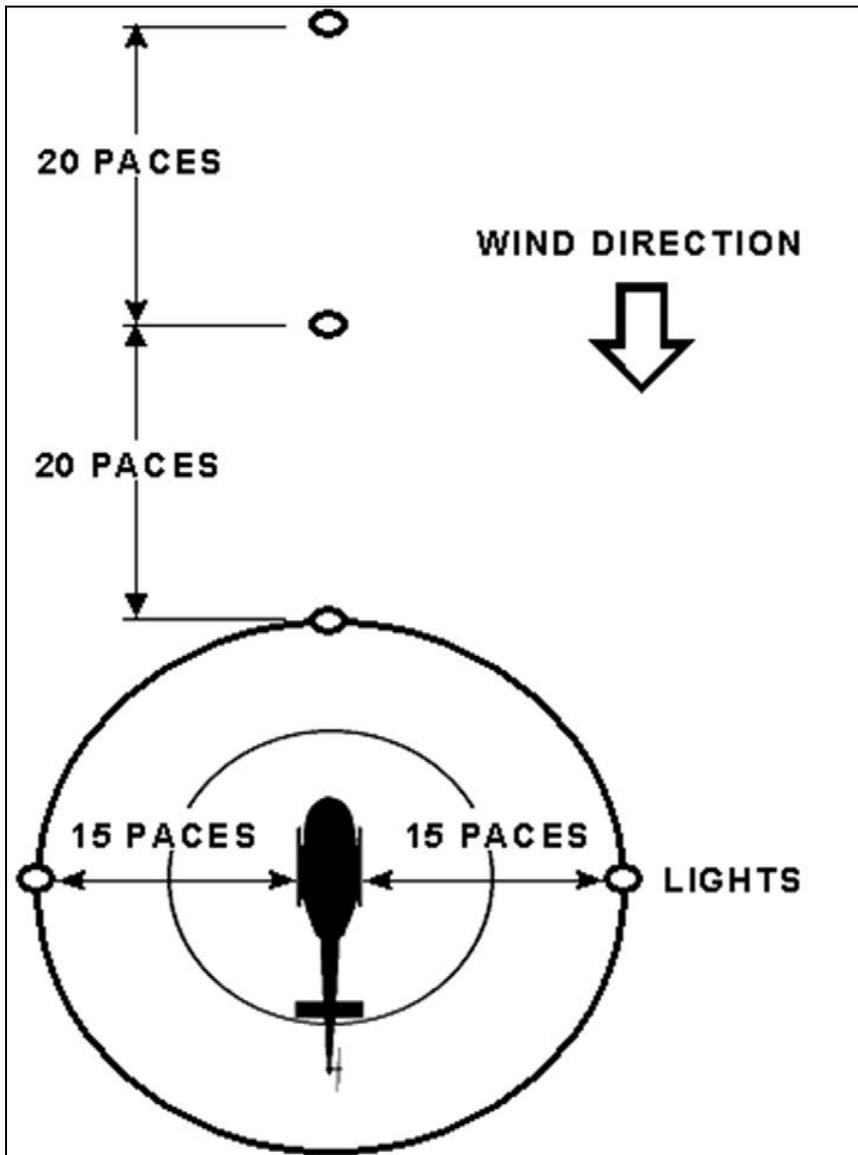
4.10.1. The inverted-Y light system is an excellent way to identify landing zones. Lights for the inverted-Y should normally be spaced in compliance with **Figure 4.1**. When set up in this fashion, the inverted-Y provides visual cues to determine the correctness of the glide angle by observing the apparent distance between the lights in the stem of the Y. For example, if the lights in the stem appear merged into a single light, a shallow glide angle is indicated. If the lights in the stem appear to increase in distance apart, the approach is becoming steeper. Approach path lineup corrections can also be made using the stem of the Y. For example, if the stem points to the left, the helicopter is left of course and should correct to the right. The following guidance applies:

4.10.1.1. The direction of the approach is into the open end of the Y.

4.10.1.2. The touchdown area is outlined by the triangle formed by the three lights marking the open end of the Y.

4.10.1.3. When set up properly, wind direction will be along the stem of the Y.

Figure 4.1. Inverted-Y.



Chapter 5

TRANSITION AND EMERGENCY PROCEDURES (PROFICIENCY) TRAINING

5.1. Maneuver entry parameters are found in the AFTTP 3-3. Aircrew must comply with the entry parameters.

5.2. Instructor Training Requirements. One instructor is required for each duty station requiring student flight training. Instructors are safety observers and are responsible for the actions of their students.

5.3. Prohibited Training Maneuvers. In addition to T.O. 1H-1(U)N-1 restrictions, the following maneuvers will not be intentionally accomplished in the aircraft:

5.3.1. Actual in-flight engine shutdown.

5.3.2. Blade stall and power settling.

5.3.3. Dual fuel control failures.

5.3.4. Dual hydraulic system failures.

5.3.5. Dual engine forced landing (i.e., the surprise approach to conditions leading to an autorotation by intentionally rolling both throttles to flight idle unannounced).

5.3.6. Hovering autorotation.

5.4. Training Requirements:

5.4.1. Special Restrictions. Unusual attitude training and emergency procedures involving engines (to include simulated autorotations), engine fuel systems, flight controls, or hydraulic systems will be accomplished only:

5.4.1.1. During visual meteorological conditions.

5.4.1.2. After official sunrise/prior to official sunset (extended daylight hours may be authorized by MAJCOM). Night Emergency Procedures may be authorized by MAJCOMS and procedures will be addressed in MAJCOM Supplements.

5.4.1.2. (AETC) Night Emergency Procedures are not authorized by AETC. (T-2).

5.4.1.3. During training, currency, or evaluation flights.

5.4.1.4. When passengers are not on board.

5.4.1.5. When an instructor pilot (IP)/flight evaluator pilot (EP) is designated on the flight orders under Duty Position as IP or EP and occupies a pilot seat with a set of controls.

5.4.1.6. When pilot can obtain accurate wind information.

5.4.1.7. Unusual Attitude Training. Entry must be at or above 1,000 feet AGL. Simulated Unusual attitude training will not exceed 30 degrees of bank, a 20 degrees nose high attitude, or 10 degrees nose low attitude.

5.4.2. Slide landing training areas. Local slide landing training areas are used for emergency and normal procedure maneuvers (e.g., single engine). Minimum dimensions will be IAW UFC 3-260-01, *Airfield and Heliport Planning and Design*.

5.4.2.1. The AC will accomplish the following:

5.4.2.1.1. Brief the hazards of the slide landing area prior to commencing any maneuvers.

5.4.2.1.2. Visually inspect the slide area for hazards and surface condition.

5.4.2.1.3. If the visual inspection was inconclusive, test the surface prior to commencing emergency procedures by accomplishing a slide landing. Accomplish a slide landing with both throttles at full open to determine its slide characteristics.

5.4.2.1.4. If the slide area is not safe, discontinue training or go to a suitable slide or hard surface area.

5.4.2.1.5. Hard surface areas such as runways, taxiways, or ramp areas may be used if free of obstacles/hazards.

5.4.2.2. **(Added-AETC)** Units must obtain a survey of all slide areas to determine dimensions (to include slope data) and soil/surface conditions (not applicable for runways/taxiways). (T-2) This survey will be kept on file in each unit that uses the slide area. The unit commander must certify slide areas annually (at a minimum) or when the condition of the slide area suitability is suspect. The certification will include:

5.4.2.2.1. **(Added-AETC)** An inspection of the area for general slide landing suitability (not applicable for runways/taxiways). The area must be free of debris, obstructions, uneven terrain, and any other conditions that exist either on or near the slide area that could pose a hazard to flight operations.

5.4.2.2.2. **(Added-AETC)** A depiction of the slide area that highlights size, slope, magnetic heading, location of known obstacles, etc.

5.4.3. Airport Rescue and Fire Fighting (ARFF). Units will establish procedures to ensure ARFF support is readily available during emergency procedure training. Aircrews will not accomplish simulated emergency procedures while operating at civil airfields unless authorized in a letter of agreement (LOA).

5.5. Autorotations.

5.5.1. Wind Requirements. When steady-state winds are less than 15 knots, align the aircraft landing within 90 degrees of the wind direction; if steady-state winds are 15 knots or greater, align the aircraft landing heading within 45 degrees of the wind direction.

5.5.2. Practice autorotations in excess of 180 degrees must terminate by power recovering no lower than 500 feet AGL.

5.5.3. The initial autorotation for training/currency will be a straight-ahead autorotation accomplished by the instructor to evaluate aircraft performance. During instructor upgrades the instructor pilot candidate may perform this autorotation.

Chapter 6

MISSION EVENTS

Section 6A—Non-Surveyed/Unprepared Area and Operational Site Procedures

6.1. Non-surveyed/Unprepared Landing Area Procedures. Complete a remote site evaluation when landing to a non-surveyed/unprepared or unfamiliar landing area. Only one remote site evaluation is required during successive approaches when conditions are equal to or better than previous approaches to the same area. The remote site evaluation consists of a high and low reconnaissance.

6.1.1. Specific parameters, required areas of evaluation, and techniques for conducting the remote site evaluation are contained in the AFTTP 3-3. Aircrew must comply with altitude and airspeed parameters. Minimum site evaluation requirements are listed in the AFTTP 3-3. Method of evaluation is at the discretion of the aircrew but should be consistent with techniques contained in the AFTTP 3-3.

6.2. Mandatory Calls.

6.2.1. Mandatory calls for the pilot not flying the aircraft are:

6.2.1.1. During night VFR descents, 1,000 feet above intended altitude, 500 feet above intended altitude, 100 feet above intended altitude, and intended altitude.

6.2.1.2. On final approach, make advisory calls every 100 feet when above 300 feet ALS and every 50 feet when below 300 feet ALS. The advisory will include altitude, speed (indicated airspeed until below 30 KIAS, then groundspeed if available) and, at the pilot's discretion, descent rate and power applied--in that order (i.e. "250 feet, 40 knots, sink 500 [feet per minute (fpm)], torque 50"). At approximately 100 feet, the pilot not flying will transfer advisory calls to the primary scanner by calling "door" (i.e. "100 feet, airspeed and sink unreliable, door").

6.2.1.3. Go-around if rate of descent exceeds 800 fpm with forward speed below 40 knots during approaches.

6.2.2. Mandatory calls for the FE/AG/Scanner(s) are:

6.2.2.1. On final approach, after each advisory call, the scanner(s) will provide terrain/hazard clearance inputs (i.e. "clear down right/left"). At approximately 100 feet, the primary scanner will talk the pilot down with standard terminology described in AFTTP 3-3.H-1. The secondary scanner (if available) responds appropriately with inputs for their side of the aircraft.

Section 6B—Low-Level Operations/Tactical Procedures

6.3. General. Flight below 300 feet AGL is considered low-level flying. Tactical operations may consist of low-level flight, normal flight, or a combination of both. Minimum enroute altitude will be at or above 50 feet AHO or as directed by MAJCOM.

6.4. Low-Level Flight Areas. Low-level flight must be conducted in a low-level flight area or as depicted on a helicopter route chart. Specific geographical areas such as missile complexes

and operational areas may be designated as low-level flight areas. The area/route will have defined boundaries and meet the following requirements prior to any low-level flight:

6.4.1. Established low-level surveyed routes or Low Altitude Tactical Navigation (LATN) areas. MAJCOMs will establish guidance IAW AFI 13-201, *Air Force Airspace Management*. **NOTE:** Missile Wing missile complexes are not considered LATNs; however, low-level flight is authorized in order to accomplish assigned missions/training.

6.4.2. Helicopter low-level flight areas will be surveyed annually. Verify all man-made obstacles above 50 feet AGL (or commensurate with the lowest altitude flown within the area) and document all new man-made obstacles on the master chart and flight charts. Annotate the survey date on the master chart.

6.4.3. If low-level helicopter flight operations have not been conducted in a designated area for greater than six months, a resurvey will be accomplished before any low-level flights are conducted in the area.

6.5. Charts:

6.5.1. A master chart depicting the low-level flight areas will be maintained for flight planning purposes. Annotate all man-made obstacles over 50 feet AGL (or commensurate with the lowest altitude flown). Additionally, annotate any published low-level routes, no-fly areas, exotic animal farms, or other hazards within the boundaries. Master charts will be updated monthly using the Chart Update Manual (CHUM) supplement. The date of the CHUM update will be annotated on the master chart. Crewmembers should continuously scan for uncharted obstacles. When uncharted obstacles are found, temporarily suspend training and record appropriate information on to the aircrew chart (location and approximate height AGL). ACs will ensure this information is immediately passed to appropriate supervisors upon landing.

6.5.2. Charts used for flying will reflect the same information as the master chart. Crewmembers will ensure the chart is updated and annotated using the latest CHUM. ACs will ensure a copy of the planned route is available at the unit.

6.6. Route Planning. Aircrews will review and deconflict low altitude charts for IFR, VFR, and slow speed low altitude (IR, VR, and SR) training routes and annotate potential conflict areas along the proposed routes during pre-mission planning.

6.7. Evasive Maneuvering. Evasive Maneuver Training. Maintain 100 feet obstacle clearance during evasive maneuvers. If a break call is made below 100 feet, the pilot flying must climb above 100 feet before initiating any evasive turns. Pilots will make crew advisory calls prior to turns and will clear their flight path throughout maneuvering. If hovering, this does not preclude turning the tail of the helicopter to mitigate the threat or minor heading changes during takeoff.

Section 6C—Formation Procedures

6.8. Formation Types/Maneuvers. A description of formation types and maneuvers is listed in AFTTP 3-3.H-1.

6.8.1. Safety Considerations:

6.8.1.1. Knock-It-Off Call. Any formation member may make the knock-it-off call to terminate maneuvering, particularly when a dangerous situation is developing. This applies to all phases of flight and all types of formation maneuvers. All formation members must acknowledge this call.

6.8.1.2. Break Out Call. The wingmen must break out of formation when:

6.8.1.3. Directed by flight or formation lead.

6.8.1.4. When unable to maintain sight of formation lead or the preceding aircraft.

6.8.1.5. When unable to safely rejoin or remain in formation without crossing under or in front of formation lead or the preceding aircraft.

6.8.1.6. Anytime his or her presence constitutes a hazard to the formation.

6.8.2. Types of Formation and Spacing Requirements. The formations listed in AFTTP 3-3H-1 are common to all UH-1N missions and are authorized. MAJCOMs may supplement this section with additional formations for unique mission requirements. Refer to AFTTP 3-3H-1 for descriptions and discussion of each formation type. In all cases:

6.8.2.1. The minimum rotor diameter between aircraft in flight is one rotor diameter.

6.8.2.2. The minimum rotor diameter between aircraft taxiing is two rotor diameters.

6.8.2.3. When separated from the formation for any reason (e.g. a breakout), wingmen will maintain well-clear of other aircraft in the formation until directed to rejoin.

6.8.2.3.1. Rejoins may be straight ahead or turning

6.8.2.3.2. Maximum bank angle for turning rejoins is 20 degrees

6.9. Dissimilar Formation. Formation flights with dissimilar aircraft are authorized when all participating crewmembers are briefed and are thoroughly familiar with the other aircraft's performance and tactics. Rotor disk (RD) separation will be based on the largest rotor disk diameter.

Section 6D—AIE Procedures

6.10. Rope Ladder Care, Cleaning and Storage. Units will develop a program to ensure all unit-owned equipment is tracked, maintained and serviceable. As a minimum units must ensure compliance with current manufacturer procedures.

Section 6E—Hoist Operations

6.11. Unit-Owned Rescue Equipment. Units will develop a program to ensure all unit-owned rescue equipment is tracked, maintained, and serviceable.

6.12. Training Procedures.

6.12.1. Accomplish live hoist training at the minimum altitude required to accomplish desired training, but in no case higher than 40 feet AGL

6.12.1. (AETC) Accomplish live hoist training at the minimum altitude required to accomplish desired training. Live training will be accomplished no higher than 40 feet over

an obstacle-free area or no higher than 25 feet above the highest obstacle directly below the aircraft. (T-2)

6.12.2. Both radar altimeters must be operable for all water operations.

6.13. Exercise Procedures. Exercises are distinct from currency training. Exercises are designed to add elements of realism not normally provided during currency training. The following are special provisions for exercises:

6.13.1. Any military member or DOD civilian may serve in a survivor role and ride the hoist. Personnel not familiar with AIE operations will require a qualified observer. This requirement may be met by lowering a qualified crewmember to assist the survivor.

6.13.2. Select a clear recovery area to enhance speed and safety and to allow the helicopter to land or use the extraction device from as low a hover altitude as possible and/or practical. Altitude restrictions defined in [para 6.12.1](#) do not apply to exercises. If a recovery is to be accomplished from a forested area, the foliage must be sparse enough to ensure the survivor will not be dragged through the branches. When practical, select areas with trees of a minimum height to decrease recovery time and provide additional safety for the survivor in the event of a hoist or other equipment malfunction.

6.13.3. Other exercise personnel. Every practical effort will be made to recover other exercise personnel by landing. They may be recovered by hoist if the remaining range time prevents movement of these personnel to a suitable landing area, or when an extended period of time is required to reach a suitable landing area. These personnel will be briefed to select an area within a reasonable distance that will allow the helicopter to hover as low as practical.

Section 6F—Parachute Delivery Procedures

6.14. Deployment of Parachutists. Unit/mission commanders may authorize parachutists to deploy from aircraft under their control. Personnel authorized must have a valid operational currency, administrative, or training requirement. In addition, the personnel must be graduates of an accredited armed forces parachutist course and possess aeronautical parachutist orders. The AC or a designated representative will inform the jumpmaster of required qualifications. It is the jumpmaster's responsibility to ensure all participants are in compliance with these requirements. For water jumps utilizing SCUBA equipment, personnel must be certified military SCUBA divers.

Section 6G—Weapons Employment

6.15. Refer to 11-214, Air Operations Rules and Procedures, AFTTP 3-1 and AFTTP 3-3. Units will ensure that detailed local weapons procedures are included in their local supplement.

HERBERT J. CARLISLE, Lt Gen, USAF
DCS, Operations, Plans and Requirements

(AETC)

MICHAEL E. KELTZ, Major General, USAF
Director of Intelligence, Operations and Nuclear
Integration

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

- AFI 10-801, *Assistance to Civilian Law Enforcement Agencies*, 15 Apr 1994
- AFI 10-802, *Military Support to Civil Authorities*, 19 Apr 2002
- AFI 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure*, 19 Jan 2012
- AFI 11-202 Volume 1, *Aircrew Training*, 22 Nov 2010
- AFI 11-202 Volume 3, *General Flight Rules*, 22 Oct 2010
- AFI 11-214, *Air Operations Rules and Procedures*, 22 Dec 2005
- AFI 11-215, *Flight Manual Program (FMP)*, 22 Dec 2008
- AFI 11-2UH-1N Volume 1, *UH-1N Helicopter Aircrew Training*, 19 Sep 2007
- AFI 11-2UH-1N Volume 3 CL-1, *UH-1N Helicopter Crew Briefing Guides and Checklists*, 27 Feb 2007
- AFI 11-2UH-1N Volume 3 CL-2, *UH-1N Helicopter Mission Equipment Cleaning and Inspection Procedures*, 28 Feb 2007
- AFI 11-301, Volume 1, *Aircrew Flight Equipment (AFE) Program*, 25 Feb 2009
- AFI 11-401, *Aviation Management*, 10 Dec 2010
- AFI 13-201, *Airspace Management*, 1 Dec 2006
- AFI 13-217, *Drop Zone and Landing Zone Operations*, 10 May 2007
- AFI 21-103, *Equipment Inventory, Status and Utilization Reporting*, 9 Apr 2010
- AFI 33-360, *Publications and Forms Management*, 18 May 2006
- AFI 33-363, *Management of Records*, 1 Mar 2008
- AFMAN 23-110 Volume 1 PT3, *USAF Supply Manual*, 24 Feb 2007
- AFTTP 3-3.H-1, *Combat aircraft Fundamentals H-1*,
- DoD 4515.13-R, *Air Transportation Eligibility*, 9 Apr 1998
- TO 00-20-1, *Technical Manual, Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures*, 1 Sep 2006
- TO 00-25-172, *Technical Manual, Ground Servicing of Aircraft and Static Grounding/Bonding*, 21 Feb 2008
- TO 1-1A-8, *Technical Manual, Engineering Manual Series, Aircraft and Missile Repair, Structural Hardware*, 30 Sep 2006
- TO 1-1B-50, *Technical Manual, Basic Technical Order for USAF Aircraft, Weight and Balance*, 1 Apr 2008

TO 1H-1(U)N-1, *Flight Manual, USAF Series UH-1N Helicopter*, 17 Jul 2009

TO 1H-1(U)N-2-1 CL-2

TO 1H-1(U)N-5, *Technical Manual, Basic Weight Checklist and Loading Data*, 17 Jul 2009

TO 1H-1(U)N-6CF, *Flight Manual, Acceptance and Functional Checkflight Procedures*, 17 Jul 2009

TO 12S10-2AVS9-2, *Technical Manual, Image Intensifier Set, Night Vision, Type AN/AVS-9*, 1 Aug 2005

TO 13C2-1

UFC 3-260-01, *Airfield and Heliport Planning and Design*, 1 Nov 2001

Forms Adopted

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

AF Form 315, *United States Air Force AVFUELS Invoice*

AF Form 457, *USAF Hazard Report*

AF Form 651, *Hazardous Air Traffic Report (HATR)*

AF Form 664, *Aircraft Fuels Documentation Log*

AF Form 847, *Recommendation for Change of Publication*

AF Form 1067, *Modification Proposal*

AF Form 4303, *Helicopter Landing Zone Survey*

AFTO Form Forms 781, *ARMS Aircrew/Mission Flight Data Document*

AFTO Form 781A, *Maintenance Discrepancy and Work Document*

DD Form 365-4, *Weight And Balance Clearance Form F - Transport/Tactical*

DD Form 1896, *Jet Fuel Identaplate*

Standard Form 44 (SF44), *Purchase Order-Invoice-Voucher*

Abbreviations and Acronyms

AC—Aircraft Commander

(Added-AETC) AETC—Air Education and Training Command

AFDW—Air Force District of Washington

AFFSA—Air Force Flight Standards Agency

AFGSC—Air Force Global Strike Command

AFI—Air Force Instruction

AFSOC—Air Force Special Operations Command

AG—Aerial Gunner

AGL—Above Ground Level

AHO—Above Highest Obstacle
AIE—Alternate Insertion and Extraction
ALS—Above Landing Site
ARFF—Airport Rescue and Fire Fighting
AWBS—Automated Weight and Balance System
AWL—Above Water Level
CBRNE—Chemical, Biological, Radiological, Nuclear, and Explosive
CC—Commander
CG—Center of Gravity
CHUM—Chart Update Manual
CRC—Ceiling Restraint Cable
CVR—Cockpit Voice Recorder
(Added-AETC) DC—Direct Current
DCO—Document Control Officer
DESC—Defense Energy Support Center
DH—Decision Height
DSF—Defensive Suppressive Fire
DV—Distinguished Visitor
EMI—Effective Moon Illumination
EP—Emergency Procedure
FAA—Federal Aviation Administration
FBO—Fixed Base Operator
FCF—Functional Check Flight
FE—Flight Engineer
FLIP—Flight Information Publications
FLIR—Forward Looking Infrared
FS—Flight Surgeon
GPS—Global Positioning System
HEED—Helicopter Emergency Egress Device
ICS—Intercom Communication System
IFR—Instrument Flight Rules
IMC—Instrument Meteorological Conditions

IP—Instructor Pilot
IPE—Individual Protective Equipment
JRCC—Joint Rescue Coordination Center
KIAS—Knots Indicated Airspeed
LATN—Low Altitude Tactical Navigation
LOA—Letters of Agreement
LPU—Life Preserver Unit
MAJCOM—Major Command
MC—Mission Commander
MDA—Minimum Descent Altitude
MEA—Minimum Enroute Altitude
MEDEVAC—Medical Evacuation
MEP—Mission Essential Personnel
MOCA—Minimum Obstruction Clearance Altitude
MT—Medical Technicians
NACO—National Aeronautical Charting Office
NAF—Numbered Air Force
NM—Nautical Miles
NVG—Night Vision Goggles
OAT—Outside Air Temperature
OG—Operations Group
OGE—Out of Ground Effect
OSF—Operational Support Flier
PA—Pressure Altitude
RD—Rotor Disk
RPM—Revolutions Per Minute
RVR—Runway Visual Range
SAR—Search And Rescue
TDY—Temporary Duty
TFU—Turret FLIR Unit
TOLD—Take Off and Landing Data
VFR—Visual Flight Rules

VMC—Visual Meteorological Conditions

Terms

Abort— To terminate a specific maneuver or to turn back from or cut short a mission before it is completed for reasons other than enemy action. This may occur after an aircraft is airborne or on the ground before takeoff.

AIE— Alternate insertion/extraction is the insertion or extraction of any personnel by means other than landing the aircraft, to include hoist operations.

Alternate Loading— A method of restraining passengers without using standard troop seats. Allows more combat-equipped troops to be carried. Used in tactical situations.

BREAK (Direction)— Directive to perform an immediate maximum performance turn in the direction indicated. Assumes a defensive situation.

May— Indicates an acceptable or suggested method.

Mission Commander— The Mission Commander is delegated command authority to exercise operational control over assigned operational and mission support forces in order to attain specified mission objectives during operations and exercises.

Must— Indicates the requirement or procedure is mandatory.

Note— Operating procedure, technique or information that is essential to emphasize or explain.

Rotor Disk (RD)— Measure of separation within a helicopter formation. Based on the largest rotor size of any aircraft within the formation.

Shall— Indicates the requirement or procedure is mandatory.

Should— Indicates non-mandatory, desired, preferred, or recommended method.

Terminate—Procedures used to stop maneuvering for other than safety reasons. When safety of flight is the issue, Knock-It-Off will be used.

WARNING— Operating procedure, technique or information that may result in death or injury if not carefully followed.

Will— Indicates the requirement or procedure is mandatory.

Attachment 2

EXAMPLE AUTHORIZATION TO REMOVE HUMAN REMAINS

Figure A2.1. Example Authorization To Remove Human Remains.

| Example Authorization to Remove Human Remains |
|--|
| <p>1. I <u>(name)</u> under the authority granted me as <u>(position)</u>, of <u>(jurisdiction where position held)</u>, hereby authorize this <u>(xx)</u> day of <u>(month)</u>, <u>(year)</u> or hereby did authorize the <u>(xx)</u> day of <u>(month)</u>, <u>(year)</u>, the United States Government to remove any and all human remains located near <u>(location)</u> and certify I have provided or did provide these representatives with any necessary directions for the proper removal and handling of human remains under the applicable laws and regulations of this jurisdiction.</p> <p>_____</p> <p>(Signature)</p> <p>_____</p> <p>(Printed Name)</p> <p>_____</p> <p>(Date)</p> <p>2. Verbal permission received per telecom on <u>(date)</u> by <u>(name and position)</u> for SAR mission <u>(number)</u>.</p> |

