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***Flying Operations***

***C-141 AIRCREW EVALUATION CRITERIA***

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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OPR: HQ AMC/DOV  
(Maj Mark Lindhorst)

Certified by: HQ USAF/XOO  
(Maj Gen Michael S. Kudlacz)

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This volume implements AFD 11-2, *Aircraft Rules and Procedures*. It establishes evaluation criteria for the operation of C-141 aircraft to safely and successfully accomplish their worldwide mobility missions. It is used in conjunction with AFI 11-202V2, *Aircrew Standardization/ Evaluation Program*, and the appropriate MAJCOM supplement. This instruction is applicable to active duty, Air National Guard (ANG) and Air Force Reserve Command (AFRC) units. 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.

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This document is new and must be completely reviewed.

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## Chapter 1

### GENERAL INFORMATION

**1.1. General.** This instruction provides flight examiners and aircrews with procedures and evaluation criteria/tolerances to be used during flight evaluations according to AFI 11-202V2, *Aircrew Standardization/Evaluation Program*. Specific areas for evaluation are prescribed to ensure an accurate assessment of the proficiency and capabilities of aircrews. Evaluators use this AFI and the Master Task List/Evaluation Standards Document (MTL/ESD) when conducting aircrew evaluations. Instructors use this AFI and the MTL/ESD when preparing aircrews for qualification.

**1.2. Applicability.** This AFI is applicable to all individuals operating C-141 aircraft. Copies will be available to all aircrew members.

#### 1.3. Key Words and Definitions.

1.3.1. “Will” and “Shall” indicate a mandatory requirement.

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

1.3.3. “May” indicates an acceptable or suggested means of accomplishment.

1.3.4. “Note” indicates operating procedures, techniques, etc., which are considered essential to emphasize.

1.3.5. The phrase “Add an expiration date for reference only” indicates that this expiration date is only applicable to the appropriate additional mission qualification.

**1.4. Deviations and Waivers.** Do not deviate from the policies and guidance in this AFI under normal circumstances, except for safety or when necessary to protect the crew or aircraft from a situation not covered by this AFI and immediate action is required. Report deviations or exceptions without waiver through channels to MAJCOM standardization/evaluation function who, in turn, notifies lead command for follow-on action, if necessary.

1.4.1. Waiver authority for the contents of this document is lead command, which in turn, delegates MAJCOM/DO as waiver authority according to AFI 11-202V2, and the appropriate MAJCOM supplement.

1.4.2. MAJCOM/DO, forward a copy of approved long-term waivers to this instruction to lead command for follow-on action, if required.

**1.5. Supplements and Local Procedures.** This AFI is a basic directive. Each user MAJCOM may supplement this AFI according to AFD 11-2, *Aircraft Rules and Procedures*. Limit supplement information to unique requirements only. MAJCOMs may specify unique evaluation items in their appropriate supplement (units use **Chapter 6**). Supplements and local procedures will not be less restrictive than the provisions of this AFI or the appropriate flight manual.

1.5.1. Supplement Coordination Process. Forward MAJCOM/DO-approved supplements, with attached AF Form 673, **Request to Issue Publication**, to lead command (HQ AMC/DO) for review. HQ AMC/DO will provide a recommendation and forward to HQ USAF/XOOT for approval (accord-

ing to AFD 11-2). Use the following OPR's address: HQ AMC/DOV, 402 Scott Dr., Unit 3A1, Scott AFB IL, 62225-5302. When supplements are published, send a final copy to HQ USAF/XOOT and lead command (HQ AMC/DOV).

1.5.2. If necessary, request and include approved long-term waivers to this AFI (including approval authority, date, and expiration date) in the appropriate MAJCOM supplement.

1.5.3. Local Procedures Coordination. Units send a copy of **Chapter 6** to the appropriate NAF (if applicable) for coordination and approval. If a NAF is not applicable, the unit will send a copy to the parent MAJCOM/DO for coordination and approval. When local procedures are published, notify or send a final copy to lead command, parent MAJCOM, and appropriate NAF, if applicable.

**1.6. Requisition and Distribution Procedures.** Unit commanders should provide copies for appropriate aircrew members and associated support personnel.

**1.7. Improvement Recommendations.** Send comments and suggested improvements to this instruction on AF Form 847, **Recommendation for Change of Publication**, through Stan/Eval channels to HQ AMC/DOV, 402 Scott Drive Unit 3A1, Scott AFB IL, 62225-5302 according to AFI 11-215, *Flight Manual Procedures*, and MAJCOM Supplement. HQ USAF/XO is the approval authority for interim changes (IC) and revisions to this instruction.

**1.8. Evaluations.** This instruction establishes standardized instrument, qualification, mission, and instructor evaluation criteria. It also establishes the areas/subareas necessary for the successful completion of evaluations, and which required areas/subareas will be considered critical and/or non-critical.

**1.9. Evaluation Requirements.** Accomplish evaluations concurrently, whenever practical. Crew Resource Management (CRM) skills will be evaluated on all evaluations. C-141 aircrew members will complete the following evaluations at 17-month frequency according to AFI 11-202V2, and the appropriate MAJCOM supplement:

1.9.1. Instrument (INSTM) Evaluation. All C-141 pilots will successfully complete initial and periodic instrument evaluations including the requisite instrument refresher course (IRC) and open-book written instrument examination according to AFMAN 11-210, *Instrument Refresher Course Program*, and an aircrew training device (ATD)/flight evaluation.

1.9.2. Qualification (QUAL) Evaluation. All C-141 aircrew members will successfully complete initial and periodic qualification evaluations including the requisite open-book, closed-book, Boldface written examinations, emergency procedures evaluation (EPE), and an ATD/flight evaluation. All C-141 navigators will complete the requisite IRC and open book written instrument examination according to AFMAN 11-210 in conjunction with their qualification evaluation.

1.9.2.1. The C-141 simulator (SIM) may be used in conjunction with all qualification/mission, instrument, and emergency procedures evaluations. Perform evaluations in a MAJCOM-approved simulator with an Air Force flight examiner (not a contractor). Use a contractor-developed scenario or a unit Stan/Eval approved and flight examiner provided scenario. Unit/flight examiner provided scenarios must be coordinated with the contractor a minimum of one day before the evaluation to ensure compatibility with ATD software. Evaluations will be limited to areas that can be realistically accomplished and are ATD creditable per AFI 11-2C-141V1, *C-141 Aircrew Training*.

1.9.3. Mission (MSN) Evaluation. All C-141 crewmembers will complete initial and periodic mission evaluations. Crewmembers complete all tasks required in the performance of normal operations and training sorties during a combined QUAL/MSN evaluation. Additional mission evaluations may be required for enroute, air refueling (AR), airdrop (AD), special operations low level (SOLL II), and Primary Nuclear Air Force (PNAF). All SOLL II crewmembers will receive initial and recurring SOLL II mission evaluations (*EXCEPTION*: recurring SOLL II mission evaluation not required for Map Navigator). PNAF qualified aircraft commanders, couriers, and loadmasters will receive initial and recurring mission evaluations. Additional mission evaluations should be as realistic as possible with a minimum of simulated events. Airdrop mission evaluations for all crew positions should include actual airdrop loads. See aircrew chapters for additional mission evaluation requirements.

1.9.4. Instructor (INSTR) Evaluation. To initially qualify as an instructor in the C-141, aircrew members will successfully complete the appropriate initial instructor course, written examination and flight evaluation (see AFI 11-2C-141V1 for course requirements). Crewmembers will not normally receive their initial instructor evaluation in conjunction with the periodic INSTM/QUAL/MSN evaluations. Instructors will be evaluated on their ability to instruct during all periodic evaluations.

1.9.5. SPOT Evaluations. A SPOT is a type of evaluation not intended to satisfy the requirements of a periodic (i.e., INSTM, QUAL, MSN, or INSTR) evaluation. SPOT evaluations have no specific requisites or requirements unless specified in MAJCOM supplements or as specified in this AFI. See AFI 11-202V2 for options available to convert a SPOT evaluation to QUAL/MSN to meet periodic evaluation requirements.

1.9.6. Requalification (RQ). Use the prefix RQ when the evaluation is remedy for loss of qualification.

1.9.7. Emergency Procedures Evaluations (EPE). See AFI 11-202V2 and the following: Evaluate an aircrew member's knowledge of emergency procedures and systems knowledge for all initial, re-qualification, and periodic qualification evaluations. The C-141 SIM and cockpit procedure trainer (CPT) may be used to accomplish the EPE. The EPE will include areas commensurate with the examinee's crew qualification. See below and specific aircrew chapters of this AFI for additional EPE requirements.

1.9.7.1. Units (normally OGV) will develop and periodically update a list of EPE program requirements (topics, special interest, etc.) in **Chapter 6**. The EPE will include areas commensurate with the examinee's graduated training (e.g., initial, line, instructor, or evaluator) or as specified in AFI 11-202V2 and MAJCOM supplement.

1.9.7.2. Examinees may use publications that are normally available in flight. The examinee must be able to recite all Boldface items from memory and provide the initial steps of selected emergency procedures that would not allow time for reference.

1.9.7.3. Examinees receiving an overall EPE grade of unqualified will be placed in supervised status until recommended additional training and re-evaluation are completed. Examinees receiving an overall EPE grade of unqualified because of unsatisfactory Boldface procedures will not be permitted to fly in their aircrew position until a successful re-evaluation is accomplished. Accomplish additional training IAW AFI 11-202V2.

1.9.8. Evaluation Prefixes. Use AFI 11-202V2 evaluation prefixes for AF Form 8, **Certificate of Aircrew Qualification**, and AF Form 942, **Record of Evaluation**.

1.9.8.1. Identify unique mission-type evaluation descriptions, (e.g., airdrop, SOLL II, PNAF, etc.) on AF Form 8, "Examiner's Remarks, A. Mission Description."

1.9.8.2. Difference Evaluations. The phrase "difference" is used to describe the evaluation of one or more areas to meet qualification requirements. Normally, a difference evaluation will include areas that are different between aircraft models, systems, or operations not previously qualified to operate. A difference evaluation does not have expiration date established because the evaluation does not satisfy the requirements for the "full" periodic evaluation. See crewmember's chapters for difference evaluation requirements.

1.9.8.2.1. For administrative purposes, annotate AF Form 8, flight phase as a SPOT evaluation (according to AFI 11-202V2) and Paragraph 1.9.5. above.

## 1.10. Grading Policies.

1.10.1. The overall qualification level awarded an evaluation is based on performance during both the flight and ground phases. This grade should be awarded only after all evaluation requirements have been completed and given due consideration.

1.10.2. To receive a qualified grade on an evaluation, the aircrew member must satisfy the criteria set forth for that evaluation and demonstrate ability to operate the aircraft and/or equipment safely and effectively during all phases of an evaluation.

1.10.3. Use the grading criteria in this instruction and the MTL/ESD to grade areas/subareas accomplished during an evaluation.

1.10.3.1. The flight examiner must grade the areas listed as "required" in the general and specific evaluation sections of this instruction.

1.10.3.2. The flight examiner may grade any area accomplished during an evaluation if performance in that area impacts the specific evaluation accomplished or flight safety.

1.10.4. When in-flight evaluation of a required area is not possible, the area may be evaluated in an ATD, or as last resort, verbally evaluated. Flight examiners will make every effort to evaluate all required areas in flight before resorting to this provision. See the appropriate chapter for areas prohibited from verbal/ATD evaluation. Annotate AF Form 8 comment section all area's or items verbally evaluated.

1.10.5. Grading criteria tolerances assume smooth air and stable aircraft conditions. Minor momentary deviations are acceptable, provided the examinee applies prompt corrective action and such deviations do not jeopardize flight safety. Consider cumulative deviations when determining the overall grade.

1.10.5.1. If the flight manual recommends a specific airspeed range for performance of a maneuver, the flight examiner will apply the grading criteria to the upper and lower limits of that range (pilots only).

1.10.5.2. Flight examiners will use the grading criteria in this instruction and the (MTL/ESD) to assist in determining proper grades, not to replace flight examiner judgment.

**1.11. Grading System.** *NOTE:* This paragraph is for reference only and duplicates information in AFI 11-202V2 to allow the evaluator a single source instruction to conduct an evaluation. When a conflict occurs, use AFI 11-202V2.

1.11.1. Overall Qualification Levels.

1.11.1.1. Qualification Level 1 (Q-1). The aircrew member demonstrated desired performance and knowledge of procedures, equipment, and directives within tolerances specified in this instruction and the MTL/ESD. Qualification Level 1 will be awarded when no discrepancies were noted and may be awarded when discrepancies are noted if:

1.11.1.1.1. The discrepancies resulted in no lower than a “Q-” grade being given in any area(s)/subarea(s).

1.11.1.1.2. In the judgment of the flight examiner, none of the discrepancies preclude awarding of an overall Q-1.

1.11.1.1.3. All discrepancies noted during the evaluation were cleared during the debrief of that evaluation.

1.11.1.2. Qualification Level 2 (Q-2). The aircrew member demonstrated the ability to perform duties safely, but:

1.11.1.2.1. There was one or more area(s)/subarea(s) where additional training was assigned.

1.11.1.2.2. A non-critical area/subarea grade of “U” was awarded.

1.11.1.2.3. In the judgment of the flight examiner, there is justification based on performance in one or several areas/subareas.

1.11.1.3. Qualification Level 3 (Q-3). The aircrew member demonstrated an unacceptable level of safety, performance or knowledge.

1.11.1.3.1. An area grade of “U” awarded in a critical area requires an overall “Q-3” for the evaluation.

1.11.1.3.2. An overall “Q-3” can be awarded if, in the judgment of the flight examiner, there is justification based on performance in one or several areas/subareas.

1.11.1.4. The flight examiner will indicate all appropriate restriction(s) and additional training on the AF Form 8.

1.11.2. Area/Subarea Grades. Areas will have a two-level (Q/U) or three-level (Q/Q-/U) grading system. The overall area grade will be the lowest of any subarea grade awarded.

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

1.11.2.2. A “Q-” indicates the examinee is qualified to perform the assigned area tasks, but requires debriefing or additional training as determined by the flight examiner. Deviations from established standards must not exceed the prescribed “Q-” tolerances or jeopardize flight safety.

1.11.2.3. Assign a “U” area grade for any breach of flight discipline, performance outside allowable parameters or deviations from prescribed procedures/ tolerances that adversely affected mission accomplishment or compromised flight safety. An examinee receiving an area grade of “U”

normally requires additional training. When, in the judgment of the flight examiner, additional training will not constructively improve examinee's performance, it is not required. In this case, the flight examiner must thoroughly debrief the examinee.

1.11.3. **Critical Areas.** Critical areas require adequate accomplishment by the aircrew member in order to successfully achieve the mission objectives. If an aircrew member receives an unqualified grade in any critical area, the overall grade for the evaluation will also be unqualified. Critical areas are identified by “(Critical)” in the areas' title and shading of Q- block on the AF Form 3862, **Aircrew Evaluation Worksheet** (see examples at [Attachment 2](#), [Attachment 3](#), [Attachment 4](#), and [Attachment 5](#)).

**1.12. Unsatisfactory Performance.** *NOTE:* This paragraph is for reference only and duplicates information in AFI 11-202V2, allowing the evaluator a single-source instruction for critical phases of the evaluation. When a conflict occurs, use AFI 11-202V2.

1.12.1. Conduct a thorough pre-mission briefing and post-mission debriefing to the examinee and applicable aircrew members on all aspects of the evaluation.

1.12.2. Immediately correct breaches of flying safety or flight discipline. When an examinee jeopardizes safety of flight, the evaluator may assume the duties of that aircrew member. This does not mean the flight examiner must assume the examinee's position any time unsatisfactory performance is observed.

1.12.3. Assign a qualification level of "Q-3" for unsatisfactory performance in any critical area/subarea or if the flight examiner assumes the examinee's duties.

1.12.4. Immediately notify the examinee's squadron commander/operations officer and flight commander, if available, when less than Q-1 performance is observed.

1.12.5. Unsatisfactory performance in a non-critical area/subarea will result in no higher than a qualification level “Q-2.”

1.12.6. Flight examiners observing unsatisfactory performance by a crewmember other than the examinee (including one in a different crew position) will comply with the requirements in AFI 11-202V2.

### **1.13. Conduct of Evaluations.**

1.13.1. Flight examiners will pre-brief the examinee on the conduct, purpose, requirements of the evaluation, and all applicable evaluation criteria. Flight examiners will then evaluate the examinee in each graded area/subarea.

1.13.1.1. Flight examiners should not evaluate personnel they have primarily trained, recommended for upgrade evaluation, or who render their effectiveness/performance reports.

1.13.2. Unless otherwise specified, flight examiners may conduct the evaluation in any crew position/seat that will best enable the flight examiner to observe the examinee's performance. If occupying a primary crew position, the evaluator will perform all duties required of that position (e.g., mandatory advisory calls, etc.).

1.13.3. Note discrepancies and deviations from prescribed tolerances and performance criteria during the evaluation. Compare the examinee's performance with the tolerances provided in the grading criteria and assign an appropriate grade for each area.

1.13.3.1. An evaluation will not be changed to a training mission to avoid documenting substandard performance, nor will a training mission be changed to an evaluation.

1.13.3.2. The judgment of the flight examiner, guidance provided in AFI 11-202V2, (MTL/ESD), and this instruction will be the determining factors in assigning an overall grade. The flight examiner will thoroughly critique all aspects of the flight. During the critique, the flight examiner will review the examinee's overall rating, specific deviations, area/subarea grades assigned, and any additional training required.

1.13.3.3. In the event of unsatisfactory performance, the flight examiner will determine additional training requirements. Normally, additional training should not be accomplished on the same flight.

**EXCEPTION:** Additional training on the same flight is allowed when unique situations presenting valuable training opportunities (i.e., thunderstorm avoidance, crosswind landings, etc.) exist. This option requires the utmost flight examiner discretion and judicious application. When used, the examinee must be informed of when the additional training begins and ends.

1.13.3.4. When evaluations are less than Q-1 performance, the flight examiner will debrief the examinee and examinee's commander (supervisor). Notify the squadron commander/operations officer and flight commander/chief, if available.

1.13.4. The ATD may be used to accomplish additional training and re-checks. Areas for additional training and rechecks should be limited to those areas/subareas that can be realistically accomplished in the ATD.

1.13.5. The flight examiner who administered the original evaluation should not normally administer the recheck.

**1.14. Use of AF Form 3862, Aircrew Evaluation Worksheet.** Units (normally OGV) will overprint AF Form 3862, using the examples at [Attachment 2](#), [Attachment 3](#), [Attachment 4](#), or [Attachment 5](#), to use as an evaluation worksheet. Copy each title, area number and text (in order illustrated), and shading to the appropriate blocks. Units may add special interest items and/or local evaluation requirements. Use the worksheet in flight to ensure all required areas are evaluated. Record positive and negative trend information and aircrew member's performance. File the worksheet or draft copy of the AF Form 8 in the aircrew member's Flight Evaluation Folder (FEF) immediately after the flight evaluation as a temporary record of the evaluation results. Maintain until the finished AF Form 8 is added to the FEF, then discard.

**1.15. Aircrew Testing.** See testing requirements in AFI 11-202V2 and include the following:

1.15.1. Formal training unit end-of-course (EOC) examinations may be credited toward written examination requirements provided they are administered as part of a formal syllabus and a passing score of 85 percent is attained. Individuals who do not receive a passing score of 85 percent will be required to complete the unit's open and closed book examinations.

1.15.2. Open-Book Exam (Open-Book). Conduct an open-book exam consisting of 60 to 100 questions. A portion of the open-book exam will include questions pertaining to each mission qualifica-

tion held by the examinee (e.g., instructor, AR, SOLL II). See crewmember chapters for additional testing requirement (if specified).

1.15.3. Closed-Book Exam (Closed-Book). The closed-book examination should be administered before the initial (see EOC examination above) flight evaluation and subsequently with periodic flight evaluations. The closed-book exam will consist of a minimum 20 questions derived from the Master Question File (MQF). Complete a Boldface exam in conjunction with the closed-book exam, if applicable. See crewmember chapters for additional testing requirements (if specified). 15AF/DOV and 21AF/DOV manage the C-141 MQF.

1.15.4. Initial Instructor Open Book Exam (INIT INSTR Open Book). Complete EOC instructor examination, or if not available, administer an initial instructor open book examination. The instructor open book examination is requisite for INIT and RQ INSTR flight evaluations only. The exam will be a minimum 20 questions derived from AFMAN 36-2236, *Guidebook for Air Force Instructors*, AFI 11-2C-141V1, AFI 11-2C-141V3, this AFI, and other applicable sources. The questions will be specific to instructor duties and scenario-based.

1.15.5. Instrument Exam. Pilots and navigators only, see AFI 11-202V2 requirements.

1.15.6. Boldface Exam. Complete Boldface as a requisite to the Qualification evaluation.

**1.16. Equivalent C-141 Model Aircraft.** Accomplish difference training/qualification IAW AFI 11-2C-141V1, *C-141 Aircrew Training* and this instruction. A periodic evaluation may be accomplished in any aircraft model the individual is qualified/certified in. Attempt to accomplish requisite testing in the same aircraft model in which the flight evaluation is flown, or expected to be flown. Pilots and Navigators require difference training and a flight evaluation for B to C- or B to C qualification. Pilots, Navigators, and Flight Engineers qualified in the C-141C may accomplish periodic evaluations in any "C" model aircraft in which they are qualified. For loadmasters, all models of the C-141 (i.e., C-141A, B, C-, and C) are considered equivalent for the purposes of aircrew member qualification.

**1.17. Typical C-141 Evaluation Profile(s).** The unit will determine the evaluation profile(s) suitable for in-flight evaluations with unit OG/OGV approval (approval of the units flying schedule satisfies this requirement). See specific aircrew chapters for enroute, SOLL II, and airdrop mission profile requirements.

**1.18. Senior Officer Requirements.** See AFI 11-202V1, *Aircrew Training and AFI 11-2C-141V1, C-141 Aircrew Training*.

## Chapter 2

### PILOT EVALUATIONS

**2.1. General.** This chapter standardizes initial, periodic, and re-qualification evaluations, including requirements for instrument, qualification, mission, and instructor evaluations.

**2.2. Instrument Evaluations.** Conduct C-141 instrument evaluations in conjunction with the qualification evaluations.

**2.3. Qualification/Mission Evaluations (Initial, Periodic, and Requalification).** This evaluation will qualify the C-141 Copilot, First Pilot, and Aircraft Commanders (AC) for unsupervised flight for the air-land mission (ACs see enroute mission evaluation). Include all areas under GENERAL, QUALIFICATION/MISSION, and INSTRUMENT.

#### 2.3.1. Evaluator Notes:

2.3.1.1. Evaluate engine out landing, engine out operations, and engine out go-around/engine failure takeoff continued (EFTOC) only for pilots as detailed in AFI 11-2C-141V1. Evaluate pilots not meeting those criteria on all engine go-around. Evaluate only aircraft commanders and above on no flap landings.

2.3.1.2. Area 17, "Landing Roll/Braking/Reverse Thrust" must be evaluated during a full stop landing.

2.3.1.3. Area 30A PAR may be evaluated in the ATD or verbally if not available in flight.

2.3.1.4. Aircraft commanders accomplish Cat II ILS approaches and landings from the left seat. Initial instrument/qualification evaluations require demonstration of a missed approach and a landing. Subsequent evaluations require one approach to either a missed approach or landing.

2.3.1.5. Two non-precision approaches should be evaluated; one flown as a straight-in, the other as a circle approach.

2.3.1.6. Evaluate dual-seat qualified AC and first pilots on at least one instrument approach and landing in both left and right seats.

2.3.1.7. Copilots will occupy the right seat for evaluations.

#### 2.4. Additional Mission Evaluations.

2.4.1. Receiver AR. All initial, periodic and re-qualification evaluations will include all areas under GENERAL and AIR REFUELING. Receiver AR may also be evaluated in conjunction with a QUALIFICATION/MISSION/INSTRUMENT evaluation.

2.4.1.1. If evaluating a pilot for only Receiver AR qualification, annotate AF Form 8 as a MSN evaluation. On AF Form 8 add remarks, "Receiver AR-Qualified." Add an expiration date for reference only (C-141 qualification is based on the QUALIFICATION/MISSION/ INSTRUMENT evaluation expiration date, see paragraph 1.3.5.).

2.4.1.2. Rendezvous or closure from a minimum of 1 NM is required. Pilots will demonstrate sustained contacts. Evaluate ACs in left seat. Evaluate instructors in either seat. Manual boom

latching and overrun procedures may be evaluated verbally. Conduct a portion of the evaluation with tanker autopilot off.

2.4.2. Airdrop. All initial, periodic and re-qualification evaluations will include all areas under GENERAL and AIRDROP. Airdrop qualification requires unit commander approval. Before being designated airdrop qualified, pilots complete an initial airdrop and formation AR evaluation. Fly initial and recurring airdrop evaluations with at least two aircraft (two aircraft for refueling). An airdrop qualification may be evaluated in conjunction with a QUALIFICATION/MISSION/ INSTRUMENT evaluation.

2.4.2.1. If evaluating a pilot for airdrop qualification, annotate AF Form 8 as a MSN evaluation. On AF Form 8 add remarks, "Airdrop-Qualified". Remarks should describe appropriate level of qualification. Add an expiration date for reference only (C-141 qualification is based on the QUALIFICATION/MISSION/ INSTRUMENT evaluation expiration date).

2.4.2.2. Conduct an airdrop evaluation on a tactical mission profile. This profile will include a departure (or rejoin), low level route, airdrop, and a tactical recovery. If conditions after departure result in a no-drop (slowdown checklist must be completed), the flight examiner may use discretion to determine if the evaluation is complete.

2.4.2.2.1. Non-Lead Pilot. Initial Formation Wing--Evaluate pilots in a wing position during a SKE profile and a visual low-level and drop. Plan to fly formation AR portion of initial wing evaluation with at least three receiver aircraft. A minimum of two aircraft will be used. Concentrate on procedural knowledge and formation positions. Periodic wing airdrop evaluations require a SKE wing profile and a visual airdrop.

2.4.2.2.2. Lead Pilot. Initial Formation Lead--Pilots will be airdrop qualified before an initial lead evaluation. The examinee plans, briefs, and leads the formation. The evaluation consists of a visual lead profile and a SKE lead profile. Plan to fly formation AR portion of initial lead evaluation with at least three receiver aircraft. A minimum of two aircraft will be used. The examinee will lead the formation AR and thoroughly demonstrate a knowledge of formation refueling procedures and positions. Recurring lead evaluations require a SKE profile as formation lead and a visual airdrop (wing or lead). Evaluate formation AR procedures verbally if not observed.

2.4.2.2.3. Copilot. Initial Copilot--One of the airdrop routes must be flown in the wing position. Conduct periodic copilot evaluations in any airdrop formation position. As a minimum, evaluate copilot formation AR knowledge and procedures verbally during the evaluation if not observed.

2.4.3. SOLL II. All initial, periodic and re-qualification evaluations will include all areas under GENERAL and SOLL II. SOLL II qualification requires unit commander approval.

2.4.3.1. When evaluating a pilot for SOLL II qualification, annotate AF Form 8 as a MSN evaluation. On AF Form 8 add remarks, "SOLL II Left Seat-Qualified" or "SOLL II Right Seat-Qualified" as appropriate. Add an expiration date for reference only (C-141 qualification is based on the QUALIFICATION/MISSION/ INSTRUMENT evaluation expiration date).

2.4.3.2. Initial SOLL II evaluation profile will include:

2.4.3.2.1. Covert takeoff, low level route, airborne radar approach (ARA), missed approach, covert landing (left seat pilots who will be instructors will accomplish a touch-and-go landing,

a right seat landing, and a left seat landing), taxi (a 180-degree turn on NVGs for initial left seat evaluation), and ground operations.

2.4.3.2.2. Evaluate threat analysis, mission planning, and mission briefings. Evaluate night vision goggles (NVG) limitations, SOLL II restrictions and forward area refueling point (FARP) operations (if not accomplished during the mission) verbally. Left and right seat pilots receive initial and periodic flight evaluations. Safety pilots require initial certification only.

2.4.4. Enroute Evaluation. All pilots who have not been an AC in a mobility aircraft (with worldwide capability) will receive a one-time enroute evaluation before operating the C-141 in command. Include all areas under GENERAL and ENROUTE (Aircraft Cmdrs Only).

2.4.4.1. The enroute evaluation profile will consist of at least two mission legs, an instrument approach, and a landing. At least one leg must be flown over a category I route with different departure and arrival locations. If qualified in more than one mobility aircraft, only one enroute evaluation is required. **EXCEPTION:** O-6 or higher incumbents of higher headquarters, wing, or group flying positions do not require enroute evaluation unless flying in command on line missions.

2.4.4.2. Annotate AF Form 8 as a SPOT evaluation (do not include an expiration date) and add remarks, "Enroute-Qualified".

2.4.5. Prime Nuclear Airlift Force (PNAF) (when MAJCOM-approved). All initial, periodic or re-qualification evaluations will include all areas under GENERAL and PNAF. PNAF qualification requires unit commander approval. Use the following:

2.4.5.1. Conduct initial PNAF evaluations on missions with actual or live munitions to the maximum extent possible. If the number of actual missions or mission segments are insufficient (i.e., if waiting for an actual/live munitions mission (s) would adversely affect individual's upgrade or result in an unacceptable upgrade delay for the unit), the initial evaluation may be conducted using training or inert munitions. If training or inert munitions are used, all aspects of the mission (including ground security and munitions personnel) must simulate actual or live munitions procedures.

2.4.5.2. When evaluating a pilot for PNAF qualification, annotate AF Form 8 as a MSN evaluation. On AF Form 8 add remarks, "PNAF-Qualified." Add an expiration date for reference only (C-141 qualification is based on the QUALIFICATION/MISSION/ INSTRUMENT evaluation expiration date).

2.4.5.3. Flight examiners (not nuclear qualified) may give a spot evaluation or a N/N evaluation on a nuclear mission provided they meet security clearance requirements of the mission. A designated crewmember will escort flight examiners who are not certified under the Personnel Reliability Program (PRP) according to AFI 11-299, *Nuclear Airlift Operations*. Flight examiners who do not maintain PNAF currency will not fly on mission legs carrying nuclear cargo unless they obtain ACM approval.

2.4.6. Difference Training/Evaluation. Each pilot will complete a C- or C Model evaluation (from an A or B model) as a SPOT evaluation. As a minimum, include all areas under GENERAL, QUALIFICATION/ MISSION areas 11, 21, 22, 23, and INSTRUMENT area 26. Include an expiration date as a reference only. Pilot may elect to convert the evaluation to meet their periodic evaluation. See AFI 11-202V2 for options available.

**2.5. Instructor Evaluations.** Flight examiners will place particular emphasis on the examinee's ability to recognize student difficulties and provide timely, effective corrective action. As a minimum, demonstrate and instruct a variety of instrument/visual approaches (minimum of one approach and landing). Conduct initial or re-qualification instructor evaluations with a qualified pilot occupying the other seat. The examinee will normally occupy the right seat.

2.5.1. Include all areas under GENERAL, QUALIFICATION/MISSION (see Paragraph 2.3.1.), AIR REFUELING (for A/R IP evaluations only), AIRDROP/FORMATION (for airdrop IP evaluations only), and INSTRUCTOR.

**NOTES:**

1. Pilots who desire to realign the INSTM/QUAL/MSN evaluation expiration date during the initial (or re-qualification) instructor evaluation must also demonstrate all required areas/subareas in "INSTRUMENT" and written examinations.
2. Initial instructor AR evaluations will include a boom limits demonstration from the right seat.
3. Before being designated airdrop instructor qualified, instructors and flight examiners will receive a one-time instructor evaluation while instructing airdrop procedures.

2.5.2. Periodic: Instructor pilots will be evaluated on their ability to instruct on all periodic evaluations in which they are instructor qualified. Evaluations will be administered in conjunction with required qualification/instrument evaluations in accordance with Paragraph 2.2. and Paragraph 2.3.

**2.6. Emergency Procedures Evaluation (EPE).** Pilots will accomplish the EPE in an ATD, during the preflight briefing, during the flight evaluation, or any combination of these. The EPE should cover a cross section of aircraft systems and the examinee should be able to demonstrate an understanding of aircraft systems in emergency scenarios.

**2.7. Additional Information.**

2.7.1. Evaluators may conduct evaluations when scheduled as primary aircrew members.

2.7.2. Instructor and flight examiner pilots receiving periodic evaluations may be evaluated in either seat, but are not required to be evaluated in both.

**2.8. Pilot Grading Criteria.** The final grade in any area is at the discretion of the evaluator. The evaluator may accept greater deviations if the pilot is applying proper corrections to attain the desired flight profile. See MTL/ESD for specific performance tolerances. The MTL/ESD tolerances are also referred to as "Q- criteria". Tolerances are offered as a guide for use in normal flight conditions. Abnormal flight conditions and configurations may be taken into account.

**2.9. General.**

**Area 1, Directives and Publications.**

- Q** Possessed a high level of knowledge of all applicable aircraft publications and procedures and understood how to apply both to enhance mission accomplishment. Publications were current and properly posted.
- Q-** Unsure of some directives but could locate information in appropriate publications. Publications were current, but improperly posted.
- U** Unaware of established procedures and/or could not locate them in the appropriate publication in a timely manner. Publications were not current.

**Area 2, Mission Preparation/Planning/Performance.**

- Q** Checked all factors applicable to flight such as weather, NOTAMs, alternate airfields, airfield suitability, fuel requirements, charts, etc. Displayed a high level of knowledge of performance capabilities and operating data. Evaluated performance data intended for use during takeoff/landing after final adjustments and corrections have been made.
- Q-** Made minor errors or omissions in checking all factors that could have detracted from mission effectiveness. Marginal knowledge of performance capabilities and/or operating data.
- U** Made major errors or omissions that would have prevented a safe or effective mission. Unsatisfactory knowledge of performance capabilities and/or operating data.

**Area 3, Use of Checklists.**

- Q** Consistently used and called for the correct checklist and gave the correct response at the appropriate time throughout the mission.
- Q-** Checklist responses were untimely and/or aircrew member required continual prompting for correct response.
- U** Used or called for incorrect checklist or consistently omitted checklist items. Unable to identify the correct checklist to use for a given situation. Did not complete checklist prior to event.

**Area 4, Safety Consciousness (Critical).**

- Q** Aware of and complied with all safety factors required for safe aircraft operation and mission accomplishment.
- U** Not aware of or did not comply with all safety factors required for safe aircraft operation or mission accomplishment. Operated aircraft in a dangerous manner.

**Area 5, Judgment/Compliance (Critical).**

- Q** Prepared and completed mission in compliance with existing regulations and directives. Demonstrated knowledge of operating procedures and restrictions and where to find them in the correct publications.
- U** Unaware of established procedures and/or could not locate them in the appropriate publication in a timely manner. Failed to comply with a procedure that could have jeopardized safety or mission success.

**Area 6, Crew Coordination/Crew Resource Management (CRM). See AFI 11-290, *Cockpit/Crew Resource Management Training Program*, and use AF Form 4031, **CRM Skills Criteria Training/Evaluation**, as a reference.**

- Q** Effectively coordinated with other aircrew members throughout the assigned mission. Demonstrated operational knowledge of other aircrew members' duties and responsibilities. Effectively applied CRM skills throughout the mission.
- Q-** Crew coordination adequate to accomplish mission. Demonstrated limited knowledge of other aircrew members' duties and responsibilities.
- U** Poor crew coordination or unsatisfactory knowledge of other aircrew member duties and responsibilities negatively affected mission accomplishment or safety of flight.

**Area 7, Communication Procedures.**

- Q** Complete knowledge of and compliance with correct communications procedures. Makes radio and interphone transmissions concise with proper terminology. Complied with and knowledge of all required instructions including successful operation of HAVE QUICK, IFF, and secure voice equipment.
- Q-** Occasional deviations from procedures that required re-transmissions or resetting codes. Slow in initiating or missed several required radio calls. Transmissions contained extraneous matter, were not in proper sequence, or used non-standard terminology. Difficulty in configuring or operating HAVE QUICK, IFF, and secure voice equipment with little or no mission impact.
- U** Incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Omitted numerous radio calls. Unable to configure or operate HAVE QUICK, IFF, and secure voice equipment with a direct impact on mission success.

**Area 8, Life Support Systems/Egress.**

- Q** Displayed thorough knowledge of location and use of life support systems and equipment. Demonstrated and emphasized the proper procedures used to operate aircraft egress devices such as doors, windows, hatches, slides, rafts, and escape ropes, etc.
- Q-** Limited knowledge of location and use of life support systems and equipment. Unsure of the proper operating procedures for some of the aircraft egress devices.
- U** Displayed unsatisfactory knowledge of location and use of life support systems and equipment. Unable to properly operate aircraft egress devices.

**Area 9, Knowledge/Completion of Forms.**

- Q** All required forms and/or flight plans were complete, accurate, readable, accomplished on time and in accordance with applicable directives. Related an accurate debrief of significant events to applicable agencies (intelligence, maintenance, etc.).
- Q-** Minor errors on forms and/or flight plans did not affect conduct of the mission. Incorrectly or incompletely reported some information due to minor errors, omissions, and/or deviations.
- U** Did not accomplish required forms and/or flight plans. Omitted or incorrectly reported significant information due to major errors, omissions, and/or deviations.

**Area 10, Airmanship/Situational Awareness.**

- Q** Executed the assigned mission in a timely, efficient manner. Demonstrated strict professional flight and crew discipline throughout all phases of flight. Conducted the flight with a sense of understanding and comprehension.
- Q-** Untimely or inappropriate decisions degraded or prevented accomplishment of a portion of the mission. Resources were not always effectively used to the point that specific mission objectives were not achieved.
- U** Decisions or lack thereof, resulted in failure to accomplish the assigned mission. Failed to exhibit strict flight and crew discipline.

**2.10. Qualification/Mission.** See MTL/ESD for specific performance tolerances. The MTL/ESD tolerances are also referred to as “Q- criteria”. Use the following criteria as general tolerances for airspeed, altitude, and heading/course with all engines operating:

- Q** *Airspeed: +10/-5 KIAS*  
*Altitude: +/-100 feet*  
*Heading/Course: +/-5 degrees*
- Q-** Exceeds Q criteria but does not exceed:  
*Airspeed: +15/-5*  
*Altitude: +/-200 feet*  
*Heading/Course: +/-10 degrees*

U Exceeds Q- criteria.

**NOTE 1:** Airspeed tolerances apply when a specific airspeed has been assigned by Air Traffic Control or prescribed in the flight manual. Airspeed “minus” tolerances are based on minimum maneuvering speed for aircraft configuration.

**NOTE 2:** Add 50 feet (when practical) and 2 degrees to “all engines operating” criteria for “operations with an engine out” criteria.

**NOTE 3:** See MTL/ESD for other specific performance tolerances. These tolerances are also referred to as “Q- criteria.”

### **Area 11, Ground Operations.**

- Q Established and adhered to station, start engine, taxi, and take-off time to assure thorough preflight, check of personal equipment, crew/passenger briefings, etc. Accurately determined readiness of aircraft for flight. Completed all systems pre-flight/post-flight inspections IAW flight manual. Conducted taxi operations according to the flight manual, AFI 11-218, *Aircraft Operations and Movement on the Ground*, and local procedures.
- Q- Same as above except for minor procedural deviations that did not detract from mission effectiveness.
- U Crew errors directly contributed to a late takeoff that degraded the mission. Failed to accurately determine readiness for flight. Failed to preflight/post-flight a critical component or could not conduct a satisfactory preflight/post-flight inspection.

### **Area 12, Takeoff.**

- Q Maintained smooth, positive aircraft control throughout the takeoff. Performed the takeoff in accordance with flight manual and as published/directed.
- Q- Minor deviations from published procedures without affecting safety of flight. Control was rough or erratic. Hesitant in application of procedures/corrections.
- U Takeoff was potentially dangerous. Attempted to exceed aircraft/systems limitations. Failed to establish proper climb attitude. Excessive deviation from intended flight path. Violated flight manual procedures.

### **Area 13, Radar Operations/Weather Avoidance/Windshear.**

- Q Effectively demonstrated procedures for operating weather radar. Updated weather radar/analysis throughout the mission. Highly knowledgeable of windshear detection and avoidance equipment. Used all available sources to determine if and/or to what degree severe weather conditions exist. Complied with all weather separation and windshear avoidance directives.
- Q- Minor deviations observed when operating weather radar. Did not update radar/weather analysis during worsening weather conditions. Limited knowledge of windshear detection and avoidance equipment.
- U Unable to demonstrate proper use of weather radar. Failed to update radar/weather analysis during the mission. Displayed unsatisfactory knowledge of windshear detection and avoidance equipment. Failed to comply with weather separation or windshear avoidance procedures that may have jeopardized safety or mission success.

### **Area 14, Fuel Conservation.**

- Q Possessed a high knowledge level of all applicable aircraft publications/directives and understood how to apply both to enhance fuel conservation. Successfully applied fuel conservation procedures in all areas of the mission.
- Q- Possessed some knowledge of applicable aircraft publications/directives and understood how to apply both to enhance fuel conservation. Successfully applied some fuel conservation procedures, but failed to apply fuel conservation procedures in all areas of the mission.
- U Unaware of fuel conservation procedures. Failed to apply any fuel conservation procedures in any area of the mission.

**Area 15, VFR Pattern.**

- Q** Performed traffic pattern and turn to final/final approach in accordance with published procedures. Aircraft control was smooth and positive. Did not over/under-shoot the final approach. Constantly cleared area of intended flight.
- Q-** Performed traffic pattern and turn to final/final approach with minor deviations to procedures as published/directed. Aircraft control was safe, but not consistently smooth and positive. Over/under shot final approach, but was able to intercept normal glide path. Adequately cleared area of intended flight.
- U** Did not perform traffic pattern and/or turn to final/final approach in accordance with published procedures. Displayed erratic aircraft control. Over-shot/under-shot final approach by a wide margin requiring a go-around or potentially unsafe maneuvering on final. Did not clear area of intended flight.

**Area 16, Landings.** (Includes Subareas: 16A, Full Flap; 16B, Partial Flap, 16C, No Flap; 16D, Engine Out; 16E, Touch and Go; and 16F, Right Seat).

- Q** Performed landings as published/directed IAW flight manual and met the following criteria:  
*Airspeed: +5/-0 KIAS*  
*Touchdown zone: 800-3,000 feet*  
*Centerline: +/-10 feet left or right*  
*TCH: +25/-0 feet*
- Q-** Performed landings with minor deviation to procedures as published/directed. Landed in a slight crab. Exceeded Q criteria but not the following:  
*Airspeed: +10/-5 KIAS*  
*Touchdown zone: Threshold-3,000 feet*  
*Centerline: +/-25 feet left or right*  
*TCH: +50/-0 feet*
- U** Landing not performed as published/directed. Exceeded Q- criteria.

**NOTE 1:** Specific items to evaluate include threshold altitude/airspeed, runway alignment, flare, touchdown, and crosswind landings.

**NOTE 2:** Airspeed tolerances apply to computed threshold speed.

**Area 17, Landing Roll/Braking/Reverse Thrust.**

- Q** Performed as published/directed in accordance with flight manual. Maintained centerline within 15 feet throughout landing roll. Braking action and reverse thrust actuation prompt and smooth.
- Q-** Performed with minor deviation to procedures as published/directed. Maintained centerline within 25 feet throughout landing roll. Braking action and reverse thrust actuation unnecessarily delayed or not smooth.
- U** Not performed as published/directed. Braking or reverse thrust actuated prior to touchdown.

**Area 18, All Engine Go-Around (GA).**

- Q** Initiated and performed go-around promptly and in accordance with flight manual and directives. Applied smooth control inputs. Attained and maintained a positive climb.
- Q-** Slow or hesitant to initiate go-around. Slightly over-controlled the aircraft. Minor deviations did not affect mission accomplishment or compromise safety.
- U** Did not initiate go-around when appropriate or directed. Major deviations or misapplication of procedures could have led to an unsafe condition.

**Area 19, Engine Out Operations.**

**NOTE:** Use approach criteria for the type of approach being flown and the following:

- Q** Proper control inputs were used to correct asymmetric condition. Aircraft was properly trimmed. Proper consideration was given to maneuvering the aircraft with regard to the "dead" engine.
- Q-** Minor deviations in aircraft control occasionally caused uncoordinated flight.

- U Aircraft was not properly trimmed. Aircraft control was erratic and consistently resulted in uncoordinated flight. Maneuvering the aircraft with regard to the “dead” engine was potentially unsafe.

#### **Area 20, Engine Out GA/Engine Failure Takeoff Continued.**

- Q Performed all required procedures in accordance with the flight manual and directives. Applied smooth, positive, and coordinated control inputs. Rudder and aileron inputs were in correct direction.
- Q- Made procedural errors, which did not affect safety. Aircraft control was not consistently smooth and positive. Rudder and aileron inputs were in correct direction but some over-/under-control. Exceeded Q criteria.
- U Rudder and/or aileron inputs were incorrect. Exceeded Q- criteria.

#### **Area 21, Boldface Emergency Procedures (Critical).**

- Q Correct, immediate responses. Maintained aircraft control. Coordinated proper crew actions.
- U Incorrect sequence, unsatisfactory response, or unsatisfactory performance of corrective actions.

#### **Area 22, Other Emergency Procedures.**

- Q Operated within prescribed limits and correctly diagnosed problems. Performed/explained proper corrective action for each type of malfunction. Effectively used available aids and checklists.
- Q- Operated within prescribed limits but slow to analyze problems or apply proper corrective actions. Did not effectively use and/or experienced delays, omissions, or deviations in use of checklist and/or available aids.
- U Attempted to exceed limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids effectively.

#### **Area 23, Systems Operations/Knowledge/Limitations.**

- Q Demonstrated/explained a complete knowledge of aircraft systems operations/limitations and proper procedural use of systems.
- Q- Marginal knowledge of aircraft systems operations and limitations in some areas. Used individual technique instead of established procedure and was unaware of differences.
- U Unsatisfactory systems knowledge. Unable to demonstrate/explain the procedures for aircraft systems operations.

#### **Area 24, Tactical Maneuvers (If Observed).**

- Q Performed maneuver in accordance with published procedures. Aircraft control was smooth and positive. Constantly cleared area of intended flight.
- Q- Performed maneuver with minor deviations to published procedures. Aircraft control was safe but not consistently smooth and positive. Adequately cleared area of intended flight.
- U Did not perform maneuver in accordance with published procedures. Displayed erratic aircraft control. Did not clear area of intended flight. Exceeded Q- criteria.

**2.11. Instrument.** Use the following criteria as general tolerances for airspeed, level-off altitude, and heading/course with all engines operating:

- Q *Airspeed: +10/-5 KIAS*  
*Level-off Altitude: +/-100 feet*  
*Heading/Course: +/-5 degrees*
- Q- *Exceeds Q criteria but does not exceed:*  
*Airspeed: +15/-5*  
*Level-off Altitude: +/-200 feet*  
*Heading/Course: +/-10 degrees*
- U Exceeds Q- criteria.

**NOTE 1:** Airspeed tolerances apply when a specific airspeed has been assigned by Air Traffic Control or prescribed in the flight manual. Airspeed “minus” tolerances are based on minimum maneuvering speed for aircraft configuration.

**NOTE 2:** Add 5 KIAS, 50 feet (when practical), and 2 degrees to all engines operating criteria for operations with an engine out criteria.

**NOTE 3:** See MTL/ESD for other specific performance tolerances. These tolerances are also referred to as “Q- criteria.”

### **Area 25, Instrument Departure/SID.**

- Q** Complied with all restrictions or controlling agency instructions. Made all required reports. Applied course/heading corrections promptly. Demonstrated smooth, positive control.
- Q-** Minor deviations in navigation occurred during departure. Slow to comply with controlling agency instructions or unsure of reporting requirements. Slow to apply course/heading corrections. Aircraft control was not consistently smooth and positive.
- U** Failed to comply with published/directed departure, or controlling agency instructions. Accepted an inaccurate clearance. Aircraft control was erratic.

### **Area 26, En Route Navigation/FMS (If installed).**

- Q** Satisfactory capability to navigate using all available means. Used appropriate navigation procedures. Complied with clearance instructions. Aware of position at all times. Remained within the confines of assigned airspace.
- Q-** Minor errors in procedures/use of navigation equipment. Slow to comply with clearance instructions. Had some difficulty in establishing exact position and course. Slow to adjust for deviations in time and course.
- U** Major errors in procedures/use of navigation equipment. Could not establish aircraft position. Failed to recognize checkpoints or adjust for deviations in time and course. Did not remain within the confines of assigned airspace. Exceeded Q- criteria.

### **Area 27, Holding.**

- Q** Performed entry and holding in accordance with published procedures and directives.
- Q-** Performed entry and holding procedures with minor deviations.
- U** Holding was not in accordance with flight manual, directives, or published procedures. Exceeded Q- criteria.

### **Area 28, Use of NAVAIDS.**

- Q** Ensured NAVAIDS were properly tuned, identified, and monitored.
- Q-** Some deviations in tuning, identifying, and monitoring NAVAIDS.
- U** Did not ensure NAVAIDS were tuned, identified, and monitored.

### **Area 29, Descent/Arrival.**

- Q** Performed descent as directed. Complied with all flight manual, controlled-issued, or STAR restrictions in a proficient manner. Accomplished all required checks.
- Q-** Performed descent as directed with minor deviations that did not compromise mission safety. Slow to accomplish required checks.
- U** Performed descent with major deviation(s). Did not accomplish required checks. Erratic corrections. Exceeded flight manual limitations.

**Area 30, Precision Approaches.** Includes subareas PAR and ILS. Use the following criteria as general tolerances for airspeed, altitude, heading, glide slope, and azimuth:

- Q** *Airspeed: +10/-5 KIAS*  
*Altitude: Initiated missed approach at decision height +50/-0 feet*  
*Heading: +/-5 degrees of controller's instructions (PAR)*  
*Glide Slope: Within one dot (ILS)*  
*Azimuth: Within one dot (ILS)*
- Q-** *Exceeds Q criteria but does not exceed:*  
*Airspeed: +15/-5*  
*Altitude: Initiated missed approach at decision height +100/-0 feet*  
*Heading: +/-10 degrees of controller's instructions (PAR)*  
*Glide Slope: Within one dot low, two dots high (ILS)*  
*Azimuth: Within two dots (ILS)*
- U** Exceeded Q- criteria.

**NOTE 1:** Airspeed tolerances are based on computed approach speed.

**NOTE 2:** Add 5 KIAS, 50 feet (when practical), and 2 degrees to all engines operating criteria for operations with an engine out criteria.

**Subarea 30A, PAR** (If not available verbally evaluate).

- Q** Approach was in accordance with published procedures. Smooth and timely response to controller's instructions. Established initial glide path and maintained with only minor deviations. Azimuth did not exceed slightly left or slightly right of course. Complied with decision height. Position would have permitted a safe landing. Elevation did not exceed slightly above or slightly below glide path.
- Q-** Performed approach with minor deviations. Slow to respond to controller's instructions and make corrections. Improper glide path control. Complied with decision height. Azimuth did not exceed well left or well right of course. Position would have permitted a safe landing. Elevation did not exceed well above or well below glide path.
- U** Approach not in accordance with flight manual, directives, or published procedures. Erratic corrections. Did not respond to controller's instructions. Did not comply with decision height and/or position would not have permitted a safe landing. Erratic glide path control. Exceeded Q- criteria.

**Subarea 30B, ILS.**

- Q** Approach was in accordance with published procedures. Smooth and timely corrections to azimuth and glide slope. Complied with decision height. Position would have permitted a safe landing. Maintained glide path with only minor deviations.
- Q-** Performed approach with minor deviations. Slow to make corrections. Slow to comply with decision height. Position would have permitted a safe landing. Improper glide path control.
- U** Approach not in accordance with flight manual, directives, or published procedures. Erratic corrections. Did not comply with decision height and/or position at decision height would not have permitted a safe landing. Exceeded Q- criteria.

**Subarea 30C, Cat II ILS.** See additional requirements in AFI 11-2C-141V3, *C-141 Operations Procedures*, Chapter 6 and the following:

- Q** Approach was in accordance with published procedures. Smooth and timely corrections to azimuth and glide slope. Complied with decision height. Position would have permitted a safe landing. Maintained glide path with only minor deviations.
- Q-** Performed approach with minor deviations. Slow to make corrections. Slow to comply with decision height. Position would have permitted a safe landing. Improper glide path control.

- U Approach not in accordance with flight manual, directives, or published procedures. Erratic corrections. Did not comply with decision height and/or position at decision height would not have permitted a safe landing. Exceeded Q-criteria.

**Area 31, Non-precision Approaches.** Minimum two required, Includes subarea; 31A, NDB; 31B, Localizer/VOR; 31C, ASR; 31D, TACAN; and 31E, GPS (if equipped) approaches. Use the following description and criteria as general tolerances for airspeed, altitude at MDA, heading, course, timing, and distance with all engines operating:

- Q *Approach was IAW published procedures. Used appropriate descent rate to arrive at MDA at or before VDP. Position would have permitted a safe landing. Smooth and timely response to controller's instructions (ASR).*  
*Airspeed: +10/-5 KIAS*  
*MDA: +100/-0 feet*  
*Course: +/-5 degrees at MAP (NDB, VOR, TACAN), less than one dot deflection (LOC, GPS)*  
*Timing: Compute/adjusted timing to determine MAP within 20 seconds (when required).*  
*Distance: Determined MAP within +/-0.5 Miles*
- Q- Performed approach with minor deviations. Arrived at MDA at or before the MAP, but past the VDP. Position would have permitted a safe landing. Slow to respond to controller's instructions and make corrections (ASR). Exceeded Q criteria but does not exceed:  
*Airspeed: +15/-5 KIAS*  
*MDA: +150/-50 feet*  
*Course: +/-10 degrees at MAP (NDB, VOR, TACAN), more than one dot but less than two dots deflection (LOC, GPS)*  
*Timing: Computed/adjusted timing to determine MAP within 30 seconds (when required).*  
*Distance: Determined MAP within +/-0.5 Miles*
- U Approach not IAW published procedures. Maintained steady-state flight below the MDA, even though the -50 foot limit was not exceeded. Position would not have permitted a safe landing. Failed to compute or adjust timing to determine MAP (when required). Exceeded Q- criteria.

**NOTE 1:** Airspeed tolerances are based on computed approach speed.

**NOTE 2:** Add 5 KIAS, 50 feet (when practical), and 2 degrees to all engines operating criteria for operations with an engine out criteria.

### Area 32, Circling Approach.

- Q Properly identified aircraft category for the approach and remained within the lateral limits for that category. Complied with controller's instructions. Attained runway alignment without excessive bank angles. Did not descend from the MDA until in a position to place the aircraft on a normal glide path or execute a normal landing.
- Q- Slow to identify aircraft category for the approach and remained within the lateral limits for that category. Slow to comply with controller's instructions. Attained runway alignment, but occasionally required excessive bank angles or maneuvering.
- U Did not properly identify aircraft category or exceeded the lateral limits of circling airspace. Did not comply with controller's instructions. Excessive maneuvering to attain runway alignment was potentially unsafe. Descended from the MDA before the aircraft was in a position for a normal glide path or landing. Exceeded Q- criteria.

### Area 33, Missed Approach.

- Q Executed missed approach in accordance with published procedures. Complied with controller's instructions. Applied smooth control inputs.
- Q- Executed missed approach with minor deviations to published procedures. Slow to comply with controller's instructions. Slightly over-controlled the aircraft.
- U Did not execute missed approach in accordance with flight manual, directives, or published procedures. Did not comply with controller's instructions. Deviation or misapplications of procedures could have led to an unsafe condition. Exceeded Q- criteria.

## 2.12. Enroute (Initial Aircraft Commanders Only).

### Area 34, Aircraft Commander Responsibilities.

- Q Effectively determined equipment required for mission and coordinated for waiver to operate with degraded capability, if required. Kept command and control (C2) agencies apprised of mission status changes. Effectively coordinated support activities to ensure timely mission activity flow.
- Q- Occasionally misinterpreted maintenance status regarding mission requirements, but did not significantly impact mission accomplishment. Unsure of procedures to obtain waiver to operate with degraded capability. Slow to make decisions regarding mission continuation. Did not consistently communicate status and intentions to C2 functions. Poor coordination with support agencies disrupted mission flow.
- U Unable to determine equipment or waiver required for mission performance. Failed to make proper decision to start, continue or delay mission and/or did not communicate mission-essential information to C2 agencies. Ineffective support function coordination precluded mission accomplishment.

### Area 35, En Route Procedures.

- Q Continually coordinated crew activities during flight (e.g., work/rest plans) to maximize mission effectiveness. Monitored mission progress and aware of possible impacts at all times. Possessed a high level of knowledge of all applicable aircraft publications and other governing directives.
- Q- Slow to coordinate crew activities during flight or ineffective use of crew resources. Had difficulty recognizing or planning for unexpected occurrences that may affect mission. Possessed some knowledge of applicable aircraft publications and other governing directives.
- U Did not coordinate crew activities during flight such that mission accomplishment may not be possible. Failed to recognize impact of changing circumstances on mission performance or did not adequately adapt to complete the mission.

### Area 36, Descent/Arrival.

- Q Effective planning and coordination among crewmembers provide for smooth arrival. Coordinated requirements and intentions to C2 agencies in accordance with current directives.
- Q- Slow to plan or coordinate arrival activities. Deviations occurred, but did not preclude successful arrival. Late communication with C2 agencies.
- U Could not plan or coordinated for successful arrival. Failed to coordinate crew activities. Did not communicate with destination C2 agencies, significantly affecting mission performance.

### Area 37, Landing.

- Q Planned and performed landing in accordance with directives. Evaluated aircraft configuration, arrival weather, airfield factors, and other variables and corrected appropriately.
- Q- Marginal evaluation of external factors on aircraft performance during landing detracted from effectiveness.
- U Did not evaluate external variables or did not take appropriate action based on those factors. Exceeded Q- criteria.

### Area 38, Post-Flight/RON Procedures.

- Q Accomplished all post-flight activities in a timely manner. Coordinated with C2 agencies for subsequent mission tasking. Managed crew activities during crew rest to provide necessary rest and crewmember availability.
- Q- Slow to perform post-flight duties. Marginal coordination with C2 agencies.
- U Could not accomplish post-flight duties without impacting subsequent mission. Failed to coordinate mission requirements and/or tasking with C2 agencies. Poor management of crew during crew rest impacted required rest or crewmember availability.

**Area 39, Authentication/Aircraft Security.**

- Q** Demonstrated thorough knowledge of authentication documents and procedures. Ensured aircraft security in accordance with current directives and/or mission tasking requirements.
- Q-** Displayed satisfactory knowledge of authentication documents and procedures. Limited understanding of aircraft security requirements but complied with basic security directives.
- U** Unable to demonstrate proper use of authentication materials. Unaware of aircraft security requirements. Failed to ensure basic aircraft security measures that may/did lead to a security issue degrading the mission.

**Area 40, Engines Running On/Offload.**

- Q** Demonstrated thorough knowledge of ERO procedures. Planned and coordinated crew activities to minimize ground time and ensure safe operation. Monitored on/offload and provided guidance as required. Accomplished all procedures as directed by applicable directives and checklists. Monitored communication with external agencies (e.g., C2, ATC, weather) for subsequent mission segment.
- Q-** Displayed satisfactory knowledge of ERO procedures. Marginal planning and/or crew coordination resulted in minor confusion or delays during operation. Minor omissions or errors in procedures.
- U** Unacceptable level of ERO procedures knowledge. Poor or nonexistent planning precluded successful accomplishment of ERO. Failure to monitor operation resulted in potentially dangerous situation. Failed to perform procedures in accordance with directives and/or major omissions/errors in checklist items.

**2.13. Air Refueling.** Includes the following subareas: rendezvous, closure, position/ control, overrun, breakaway, emergency procedures, and IP demonstrating right-seat air refueling and limits.

**Area 41, Air Refueling--General.**

- Q** Established and maintained proper refueling position. Aircraft control was positive and smooth. Demonstrated a complete knowledge of rendezvous and closure procedures. Performed all procedures in accordance with applicable checklists and other governing directives.
- Q-** Slow to recognize and apply needed corrections to establish and maintain proper refueling position. Aircraft control was not always positive and smooth, but was adequate. Accomplished rendezvous and closure with deviations that did not affect safety of flight or the successful completion of air refueling. Performed all procedures in accordance with applicable checklists and other governing directives with only minor omissions or deviations.
- U** Erratic or dangerous in the pre-contact/refueling position. Had deviations/omissions that affected safety of flight and/or successful completion of air refueling. Did not perform all procedures in accordance with applicable checklists and other governing directives or omitted major items. Exceeded Q- limits.

**Subarea 41A, Rendezvous.****Subarea 41B, Closure.****Subarea 41C, Position/Control.****Subarea 41D, Overrun Procedures.****Subarea 41E, Breakaway Procedures.****Subarea 41F, Emergency Procedures.****Subarea 41G, Right Seat Air Refueling/Limits Demonstration (IP only).**

**2.14. Prime Nuclear Airlift Force (PNAF) (If qualified).**

**Area 42, Knowledge of PNAF Procedures.**

- Q Demonstrated satisfactory knowledge of PNAF procedures and restrictions IAW associated directives.
- Q- Demonstrated marginal knowledge of PNAF procedures and restrictions IAW associated directives. Minor deviations not impacting safe mission accomplishment.
- U Unsatisfactory knowledge of PNAF procedures and restrictions. Major deviations and/or safety was compromised.

**Area 43, Mission Preparation/Execution.**

- Q Pre-planned mission itinerary and cargo loads IAW applicable directives. Accomplished all required pre-departure and en route duties in compliance with associated directives.
- Q- Difficulty planning and/or executing mission. Minor deviations from required pre-departure and/or en route duties that did not detract from safe mission effectiveness.
- U Did not accomplish all required pre-departure and/or en route duties. Major deviations that could have impacted mission effectiveness or Nuclear Surety (safety and security).

**Area 44, Aircraft/Cargo Procedures.**

- Q Satisfactorily demonstrated aircraft and cargo security requirements during ground and flight phases of the mission.
- Q- Minor deviations from aircraft and/or cargo security requirements that could have detracted from mission effectiveness. Nuclear Surety was not compromised.
- U Failed to adequately explain/demonstrate aircraft or cargo security requirements. Nuclear Surety was compromised and/or mission effectiveness could have been impacted.

**Area 45, No-Lone Zone/Two-Person Concept.**

- Q Satisfactorily demonstrated No-Lone Zone and Two-person requirements during ground and flight phases of the mission.
- Q- Minor deviations from No-Lone Zone and Two-person requirements could have detracted from mission effectiveness. Nuclear Surety was not compromised.
- U Failed to adequately explain/demonstrate No-Lone Zone or Two-person requirements. Nuclear Surety was compromised and/or mission effectiveness could have been impacted.

**Area 46, Acceptance/Transfer of Custody.**

- Q Satisfactorily demonstrated cargo custody procedures and restrictions IAW associated directives.
- Q- Demonstrated marginal knowledge and/or execution of cargo custody procedures and restrictions. Minor errors or omissions could have detracted from mission effectiveness.
- U Displayed inadequate knowledge and/or execution of cargo custody procedures and restrictions. Nuclear Surety was compromised or major errors precluded compliance with directives.

**Area 47, Onloading/Offloading Procedures.**

- Q Satisfactorily demonstrated the ability to supervise loading/off loading operations IAW associated directives.
- Q- Minor deviations supervising loading/off loading operations that did not impact mission effectiveness. Nuclear Surety was not compromised.
- U Failed to adequately supervise loading/off loading operations IAW applicable publications. Nuclear surety was compromised or mission effectiveness could have been impacted.

**Area 48, Emergency Procedures.**

- Q** Satisfactorily explained/demonstrated emergency procedures associated with nuclear and nuclear-related cargo missions.
- Q-** Difficulty explaining/demonstrating emergency procedures associated with nuclear and nuclear-related cargo missions. Mission effectiveness was not impacted. Nuclear Surety was not compromised.
- U** Unable to explain/demonstrate emergency procedures associated with nuclear and nuclear-related cargo missions. Nuclear Surety was compromised or major errors precluded compliance with directives.

**2.15. Airdrop/Formation.****Area 49, Knowledge of Airdrop Procedures.**

- Q** Demonstrated thorough knowledge of procedures and restrictions. Prepared and executed mission in compliance with associated directives.
- Q-** Demonstrated satisfactory knowledge of procedures and restrictions. Prepared and executed mission in compliance with associated directives, but minor errors or omissions could have detracted from mission effectiveness.
- U** Displayed inadequate knowledge of procedures and restrictions. Major errors or omissions precluded compliance with directives or safe mission accomplishment.

**Area 50, Threat Analysis/Chart Preparation.**

- Q** Demonstrated thorough knowledge of defensive systems/tactics applicable to mission. Adequately analyzed, degraded, and avoided all threats to ensure effective mission accomplishment. Charts completed in accordance with current directives.
- Q-** Demonstrated limited knowledge of defensive systems/tactics for the mission. Adequately analyzed and avoided all threats; however, selected some tactics not appropriate for the situation.
- U** Demonstrated unsatisfactory level of knowledge of defensive systems/tactics for the mission. Failed to analyze and avoid threat(s), exposing aircraft to known threats. Chart not completed in compliance with current guidance.

**Area 51, Ground Operations.**

- Q** Established and adhered to station, engine start, taxi and takeoff times. Accurately determined aircraft mission readiness.
- Q-** Made some minor errors or omissions in preflight duties, which did not detract from mission accomplishment. Some difficulty determining aircraft readiness for mission.
- U** Made major errors or omissions, which precluded safe mission accomplishment. Unable to determine aircraft readiness for mission.

**Area 52, Departure/Assembly.** Use Area 26 criteria and the following**Lead Criteria.**

- Q** Smooth on controls. Good wingman consideration. Complied with all restrictions or controlling agency instructions. Made all required reports. Applied course/heading corrections promptly.
- Q-** Minor deviations in procedures occurred during departure. Slow to comply with controlling agency instructions or unsure of reporting requirements. Slow to apply course/heading corrections. Occasionally rough on controls. Wingman consideration made it difficult for wingmen to maintain position.
- U** Departure not IAW flight manuals, directives or published procedures. Rough on controls. No wingman consideration.

**Wingman Criteria.**

- Q** Complied with published procedures. Smooth on controls. Maintained position with only momentary deviations. Maintained good separation and complied with leader's instructions. Smooth, timely rejoin.

- Q-** Minor deviations to published procedures. Over controlled the aircraft to the extent that formation position varied considerably. Slow to respond to leader's instructions. Slow to rejoin.
- U** Procedures not IAW flight manuals, directives or published procedures. Rough on controls. Abrupt position corrections. Did not maintain safe separation or formation position. Failed to comply with leader's instructions. Unsafe rejoin.

### **Area 53, Formation Procedures.**

#### **Lead Criteria.**

- Q** Positive control of formation/element. Established appropriate formations. Smooth on controls and considered wingman. Planned ahead and made timely decisions. Ensured wingman flew proper position.
- Q-** Minor deviations to published procedures. Limited flight management. Occasionally rough on controls. Excessive maneuvering made it difficult for wingman to maintain position. Did not always plan ahead and/or hesitant in making decisions.
- U** Procedures not IAW flight manual, directives or published procedures. Did not establish appropriate formations. Rough on the controls. Erratic maneuvering caused wingmen to breakout or overrun formation. Little consideration for wingmen. Indecisive. Failed to ensure wingman maintained proper position. Placed formation/wingmen in unsafe position or circumstances.

**NOTE:** For SKE missions, add the following:

- Q** Did not rush FCIs. Identified and complied with SKE system fault code requirements.
- Q-** Rushed or occasionally missed FCIs causing potential wingman confusion. Slow to identify or comply with SKE system fault code requirements.
- U** Consistently missed FCIs. Did not identify or failed to comply with SKE system fault code requirements.

#### **Wingman Criteria.**

- Q** Maintained position with only momentary deviations. Smooth and immediate position corrections. Maintained safe separation and complied with leader's instructions. Smooth, timely rejoin.
- Q-** Minor deviations to published procedures. Slow to comply with leader's instructions. Varied position considerably. Over controlled. Slow to rejoin.
- U** Procedures not IAW flight manual, directives or published procedures. Did not comply with leader's instructions. Unable to maintain formation position. Abrupt position corrections. Did not maintain safe separation. Unsafe rejoin.

**NOTE:** For SKE missions, add the following:

- Q** Identified and complied with FCIs and SKE system fault code requirements.
- Q-** Occasionally missed or slow to respond to FCIs or SKE system fault code requirements.
- U** Did not identify or comply with FCIs or SKE system fault code requirements.

### **Area 54, Low/Mid Level Navigation.**

- Q** Remained within 3 NM of course centerline (EXCEPTIONS: threat avoidance, weather deviation, ATC assigned heading, time control, etc.). Thorough knowledge of en route time status in relation to objective area. Complied with all altitude restrictions. Airspeed control contributed to reliable DR. Adhered to all airspace restrictions.
- Q-** Uncertain of exact aircraft position due to marginal navigational procedures. Flew 3 to 5 NM from course without the above exceptions. Better awareness of required timing events or en route time status could have avoided excessive, unplanned maneuvering or prevented degraded DR.
- U** Exceeded 5 NM during en route navigation without the above exceptions. Unable to maintain position awareness throughout most of the route. Unable to accurately assess required timing or unaware of mission time status, jeopardizing mission accomplishment. Violated airspace restrictions. Poor airspeed control resulted in numerous or extreme airspeed adjustment. Descended below minimum altitude restrictions. Major deviations from procedures that negatively affected mission accomplishment, formation integrity or flight safety.

**Area 55, Ingress/Slowdown.**

- Q** Departed initial point (IP) on a drift-corrected heading to the computed air release point (CARP). Initiated slowdown as directed by the navigator and configured aircraft as required. Maintained appropriate airdrop altitude.
- Q-** Minor deviations from established procedures/direct course to the CARP that did not detract from airdrop effectiveness. Slow to initiate slowdown procedures or properly configure the airplane.
- U** Did not follow established procedures. Unable to establish course to the CARP. Failed to slowdown as directed or configure the aircraft appropriately.

**Area 56, Drop Zone Acquisition/Track.**

- Q** Correctly identified the drop zone (DZ) and made appropriate corrections to fine-tune track. Track was according to mission plan or as updated by crew.
- Q-** Minor deviations to established procedures did not detract from airdrop effectiveness. Slow to identify DZ despite clear marking and sufficient landmarks. Alignment was satisfactory but angled.
- U** Unable to identify the DZ due to poor technique or pilot error. Did not maintain proper alignment or unaware of alignment error. Mission not accomplished due to poor DZ acquisition, alignment or deviation from procedure caused by pilot error or omission.

**Area 57, Release Procedures.**

- Q** Correctly identified the release point, activated proper switches, and initiated checklists at the appropriate time. Performed post airdrop procedures satisfactorily. If required, correct no drop actions performed.
- Q-** Slow to identify release point, activate switches, and initiate checklists. Failed to initiate appropriate check list without prompting from other crewmembers. Performed post airdrop procedures with minor deviations. Minor deviations to procedures that did not detract from airdrop effectiveness.
- U** Failed to identify release point, activate switches, and initiate checklists IAW established procedures. Deviations to procedures caused an unsatisfactory drop or not stopping jumpers from exiting the aircraft at the end of usable DZ. Failed to complete post airdrop procedures according to guidelines.

**Area 58, Airdrop Procedures.**

- Q** Maintained the following:  
Airspeed +/- 5 knots  
Altitude +50/-0 feet
- Q-** Exceeded Q criteria, but not the following:  
Airspeed +10/-5 knots  
Altitude +100/-50 feet
- U** Failed to recognize a no drop situation. Exceeded Q- criteria.

**Area 59, Descent/Recovery/Landing.**

- Q** Initiated escape procedures and post-drop checklists at appropriate times. Maneuvered in accordance with established guidance.
- Q-** Slow to initiate escape procedures or post-drop checklists. Minor deviations in maneuvering did not detract from mission performance or jeopardize flight safety.
- U** Failed to perform escape procedures or accomplish post-drop activities. Major deviations from established procedure precluded safe mission accomplishment.

**Area 60, Formation Recovery.**

- Q** (Visual) Rolled out on final in position to intercept glide path to touchdown. (SKE) Aircraft in position to fly a normal glide path to touchdown at the DH/MAP.
- Q-** (Visual) Rolled out on final high or drug-in but able to make a normal landing. Slow to recognize need for an unplanned go-around. Slow to initiate unplanned go-around. Unplanned go-around due to poor pilot procedure or technique. (SKE) Slow to identify the need for an unplanned go-around. Slow to initiate an unplanned go-around.
- U** (Visual) Rolled out on final in position requiring go-around due to poor pilot procedure or technique. Did not initiate unplanned go-around when required. (SKE) Missed Approach/Go-Around required due to poor pilot procedures or technique. Did not identify need for an unplanned go-around. Did not initiate an unplanned go-around when required.

**Area 61, Formation Landing.** Use Area 16 Criteria and the following

- Q** Good formation position throughout landing. Followed briefed procedures for reversing and braking.
- Q-** Landing separation exceeded 19,000 feet for SKE or 75 seconds for visual landings. Long landing interval did not cause following aircraft to execute go-around/missed approach.
- U** Attempted to touchdown with less than 12,000 (SKE) or 45 seconds (visual) spacing from the previous aircraft. Long landing interval caused following aircraft to execute go-around/missed approach. Did not follow briefed reversing and braking procedures.

**Area 62, Formation Air Refueling.**

- Q** Performed all procedures IAW applicable directives. Good formation position throughout procedure. While in awaiting AR, no closer than  $\frac{3}{4}$  mile from tanker, no farther than 1  $\frac{1}{2}$  miles. Good situational awareness of all receivers and tankers at all times. All position changes were squared off. Contacts were made in a timely manner with minimal disconnects.
- Q-** Minor deviations to established procedures did not detract from air refueling effectiveness. Less than timely position changes from awaiting AR to contact and contact to post AR, did not cause any aircraft from getting fuel.
- U** Slow position change and contacts causing other formation aircraft to not receive their onload or air refueling contact time. Poor situational awareness, starts position change before being cleared or altitude changes not IAW procedure.

**Area 63, Lead Airdrop/Formation Qualification.**

- Q** Demonstrated satisfactory knowledge of threat analysis and route construction. Applied appropriate tactics to avoid the threat and minimize exposure. Correctly planned the route of flight, with emphasis on obstruction clearance. Made timely and appropriate inputs to target/crew study. Thoroughly coordinated mission with other agencies, if applicable. Relayed all flight commands consistent with procedures, briefings, and threat. Passed information to formation aircraft in a timely manner. Provided positive guidance in leading the formation. Stayed abreast of time status and worked with crew to determine corrective action. Able to verbalize corrective action for gaining or losing time.
- Q-** Minor errors in route construction, threat analysis, or tactics selection. Unfamiliar with appropriate tactic for a given scenario. Minor errors in providing signals, or signals not given appropriately for type formation or threat. Flight profile erratic but did not jeopardize safety of follower aircraft. Provided minimal leadership in the conduct of the flight. TOT within limits (+/-60 seconds) but did not contribute to solution to maintain or recover TOT. Unable to clearly verbalize TOT adjustment techniques.
- U** Made major errors in threat analysis or route construction. Could not safely fly planned profile. Unable to locate classified threat parameters. Did not contact appropriate agencies. Poor planning resulted in an unsuccessful mission. Did not pass critical information to other aircraft in-flight. Flying below planned night VFR altitudes. Exceeded Q-TOT criteria due to poor procedures or technique; made no attempt to maintain or recover TOT.

**2.16. SOLL II (If qualified).**

**Area 64, Knowledge of SOLL II Procedures.**

- Q** Demonstrated thorough knowledge of procedures and restrictions. Prepared and executed mission in compliance with associated directives.
- Q-** Demonstrated satisfactory knowledge of procedures and restrictions. Prepared and executed mission in compliance with associated directives, but minor errors or omissions could have detracted from mission effectiveness.
- U** Displayed inadequate knowledge of procedures and restrictions. Major errors or omissions precluded compliance with directives or safe mission accomplishment.

**Area 65, Threat Analysis/Chart Preparation.**

- Q** Demonstrated thorough knowledge of defensive systems/tactics applicable to mission. Adequately analyzed, degraded, and avoided all threats to ensure effective mission accomplishment. Charts completed in accordance with current directives.
- Q-** Demonstrated limited knowledge of defensive systems/tactics for the mission. Adequately analyzed and avoided all threats; however, selected some tactics not appropriate for the situation.
- U** Demonstrated unsatisfactory level of knowledge of defensive systems/tactics for the mission. Failed to analyze and avoid threat(s), exposing aircraft to known threats. Chart not completed in compliance with current guidance.

**Area 66, Ground Operations.**

- Q** Established and adhered to station, engine start, taxi and takeoff times. Accurately determined aircraft mission readiness.
- Q-** Made some minor errors or omissions in preflight duties which did not detract from mission accomplishment. Some difficulty determining aircraft readiness for mission.
- U** Made major errors or omissions which precluded safe mission accomplishment. Unable to determine aircraft readiness for mission.

**Area 67, Departure.**

- Q** Complied with all restrictions or controlling agency instructions. Made all required reports. Applied course/heading corrections promptly. Demonstrated smooth, positive control.
- Q-** Minor deviations in navigation occurred during departure. Slow to comply with controlling agency instructions or unsure of reporting requirements. Slow to apply course/heading corrections. Aircraft control was not consistently smooth and positive.
- U** Failed to comply with published/directed departure, or controlling agency instructions. Accepted an inaccurate clearance. Aircraft control was erratic.

**Area 68, Low/Mid Level Navigation.**

- Q** Remained within 3 NM of course centerline (Exceptions: threat avoidance, weather deviation, ATC assigned heading, time control, etc.). Thorough knowledge of en route time status in relation to objective area. Complied with all altitude restrictions. Airspeed control contributed to reliable DR. Adhered to all airspace restrictions.
- Q-** Uncertain of exact aircraft position due to marginal navigational procedures. Flew 3 to 5 NM from course without the above exceptions. Better awareness of required timing events or en route time status could have avoided excessive, unplanned maneuvering or prevented degraded DR.
- U** Exceeded 5 NM during en route navigation without the above exceptions. Unable to maintain position awareness throughout most of the route. Unable to accurately assess required timing or unaware of mission time status, jeopardizing formation integrity or mission accomplishment. Violated airspace restrictions. Poor airspeed control resulted in numerous or extreme airspeed adjustment. Descended below minimum altitude restrictions. Major deviations from procedures that negatively affected mission accomplishment, formation integrity or flight safety.

**Area 69, Ingress/Slowdown.**

- Q** Departed initial point (IP) on a heading to the airborne radar approach (ARA) as directed by the navigator. Initiated slowdown as directed by the navigator and configured airplane as required. Maintained appropriate altitude.
- Q-** Minor deviations from headings did not detract from approach effectiveness. Slow to initiate slowdown procedures or properly configure the airplane.
- U** Unable to comply with navigator's headings. Failed to slowdown as directed or configure the airplane appropriately.

**Area 70, Runway Acquisition/Track.**

- Q** Correctly identified the Runway and made appropriate corrections to fine-tune track. Track was according to mission plan or as updated by crew.
- Q-** Slow to identify Runway despite clear marking and sufficient landmarks. Alignment was satisfactory but angled.
- U** Unable to identify the Runway due to poor technique or pilot error. Did not maintain proper alignment or unaware of alignment error. Mission not accomplished due to poor Runway acquisition, alignment or deviation from procedure caused by pilot error or omission.

**Area 71, Descent/Airborne Radar Approach.**

- Q** Complied with navigator's direction and advisories during entire approach procedure. Properly configured airplane for approach as planned and briefed. Maintained contact with Runway and landed in accordance with established procedures.
- Q-** Minor deviations from navigator's direction did not preclude accomplishment of approach. Slow to configure airplane as planned or briefed.
- U** Major deviations from navigator's direction precluded safe accomplishment of approach. Failed to properly configure airplane or comply with established landing procedures.

**2.17. Instructor.****Area 72, Instructor Ability (Critical).**

- Q** Demonstrated the ability to communicate effectively. Provided appropriate guidance when necessary. Planned ahead and made timely decisions. Identified and corrected potentially unsafe maneuvers/situations.
- U** Unable to effectively communicate or provide timely feedback to the student. Gave instruction that was unsafe or contradicted published directives. Did not provide corrective action when necessary. Did not plan ahead or anticipate student problems. Did not identify unsafe maneuvers/situations in a timely manner. Made no attempt to instruct.

**Subarea 72A, Demonstration of Maneuvers (Critical).**

- Q** Effectively demonstrated correct procedures, systems operation, or flight maneuvers. Thorough knowledge of applicable aircraft systems, procedures, publications, and directives.
- U** Ineffective or incorrect demonstration of procedures, systems operation, or flight maneuvers. Insufficient depth of knowledge about applicable aircraft systems, procedures, and/or proper source material.

**Subarea 72B, Student Briefing/Critique (Critical).**

- Q** Briefings were well organized, accurate, and thorough. Reviewed student's present level of training and defined mission events to be performed. During the critique, demonstrated an effective ability to reconstruct the flight, offer mission analysis, and provide guidance where appropriate. Training grade reflected the actual performance of the student relative to the standard. Pre-briefed the student's next mission, if required.
- U** Briefings were marginal or non-existent. Did not review the student's past performance. Failed to adequately critique student or analyze the mission. Training grade did not reflect actual performance of student. Overlooked or omitted major discrepancies. Incomplete pre-briefing of student's next mission, if required.

**2.18. Unit.** Units will include MAJCOM-specific and local evaluation areas in **Chapter 6**. Include the evaluation areas on AF Form 3862 (see Paragraph **1.14**).

## Chapter 3

### NAVIGATOR EVALUATIONS

**3.1. General.** The criteria contained in this chapter apply to all C-141 navigator flight evaluations. This chapter standardizes initial, periodic, and re-qualification evaluations, including requirements for navigator qualification, mission, and instructor evaluations.

**3.2. Objective.** The examinee must satisfactorily demonstrate the ability to perform all navigator duties safely and effectively, including the operation of appropriate aircraft systems IAW applicable flight manuals and AFI 11-2C-141V3.

**3.3. Qualification/Mission Evaluations (Initial, Periodic and Re-qualification).** This evaluation will qualify the C-141 Navigator for unsupervised flight for the airland mission. Include all areas under GENERAL and QUALIFICATION/MISSION. Complete the evaluation on a single flight profile if possible.

3.3.1. When evaluating a navigator for the airland qualification, annotate AF Form 8 as a QUAL/MSN evaluation, Crew Position as "MN."

3.3.2. The evaluation profile should include a Category I route or a Category II route using Category I procedures, of sufficient length to demonstrate proficiency in navigation procedures. This evaluation may be completed on any mission. However, on periodic evaluations, the airland qualification/mission evaluation is normally conducted in conjunction with the airdrop evaluation.

3.3.3. Basic air refueling procedures will be verbally evaluated if not performed in the aircraft.

#### **3.4. Additional Mission Evaluations.**

3.4.1. Airdrop (Wing and Lead). All initial, periodic and re-qualification evaluations will include all areas under GENERAL, and appropriate additional mission areas. The additional mission areas apply to both wing and lead positions. Apply the areas/subareas accordingly for the position flown.

3.4.1.1. When evaluating a navigator for airdrop qualification, annotate AF Form 8 as a MSN evaluation. On AF Form 8 add remarks, "Airdrop Wing-Qualified" or "Airdrop Lead-Qualified" as appropriate. In any case, ensure the remarks adequately describe the level of qualification. Add an expiration date for reference only (C-141 qualification is based on the QUALIFICATION/MISSION evaluation expiration date, see Paragraph 1.3.5.).

3.4.1.2. Conduct tactical SKE/VFR evaluations on a mission that provides approximately 30 minutes between takeoff and TOT. Approximately 30-minutes of the mission must be flown using appropriate low-level procedures. Actual airdrops are required for all tactical mission evaluations. A scored VFR airdrop (adjusted for wing position) is required.

3.4.1.3. Grade adjusted INS, SKE and ZM drops on proper programming of the INS and adherence to published SKE procedures. On SKE drops, if a malfunction prevents the load from exiting the aircraft, the evaluation may still be completed. The evaluation is not complete if a SKE or ZM malfunction prevents the airdrop.

3.4.1.4. Initial lead airdrop evaluations require a minimum of a two-ship formation and should be flown on an unfamiliar low level to an unfamiliar DZ, if possible. Formation is not required for

periodic lead evaluations, however, use this option only as a last resort. If accomplished in this manner, all checklists and Flight Command Indicator (FCI) signals are required.

3.4.1.5. Fly airdrop evaluations on a tactical mission profile. The profile will consist of the following:

- 3.4.1.5.1. SKE departure
- 3.4.1.5.2. SKE route
- 3.4.1.5.3. SKE drop
- 3.4.1.5.4. SKE escape
- 3.4.1.5.5. VFR route
- 3.4.1.5.6. VFR drop
- 3.4.1.5.7. VFR escape
- 3.4.1.5.8. SKE recovery

3.4.1.6. Formation A/R will be evaluated on every periodic airdrop evaluation. If not flown, formation A/R procedures must be verbally evaluated.

3.4.2. SOLL II (Map and Radar). All initial, periodic and re-qualification evaluations will include all areas under GENERAL and SOLL II. SOLL II qualification requires unit commander approval.

3.4.2.1. When evaluating a navigator for SOLL II qualification, annotate AF Form 8 as a MSN evaluation. On AF Form 8 add remarks, "SOLL II Map Navigator-Qualified" or "SOLL II Radar Navigator-Qualified." Add an expiration date for reference only (Not required for Map Navigator qualification).

3.4.2.2. Initial SOLL II evaluation. Evaluate an entire SOLL II mission including mission planning and briefings, en route low-level navigation (approximately 30-minutes), threat analysis, knowledge of SOLL II procedures, ARA, and taxi/ground operations. Evaluate NVG limitations verbally. Evaluate map navigator examinees only on map navigator duties. Initial Map Navigator evaluations require an airdrop and should be flown to an unfamiliar ARA. The ARA must place the aircraft within ½ NM of centerline by two NM before touchdown.

3.4.2.3. Recurring SOLL II evaluation. Radar navigators complete this evaluation in the radar navigator position (radar navigators are considered map navigator qualified). Otherwise, areas evaluated are the same as for the initial evaluation. Map navigators do not require recurring evaluations.

**3.5. Instructor Evaluations.** Flight examiners will place particular emphasis on the examinee's ability to recognize student difficulties and provide timely, effective corrective action. Include all areas under GENERAL, QUALIFICATION/MISSION, INSTRUCTOR and if appropriate, AIRDROP and SOLL II.

3.5.1. Navigators will be "Lead" qualified before upgrade to instructor. **EXCEPTION:** Units that do not require formation qualifications may upgrade single ship airdrop instructor navigators. Normally, a C-141 navigator will not upgrade to airland only instructor status. Request MAJCOM/DOV approval for airland-only instructor. If airland only instructor qualified, add remarks on AF Form 8 to read "Airland-Only Instructor Qualified."

3.5.2. Conduct initial or re-qualification instructor navigator evaluations with actual students if possible. If a student is not available, the examiner may act as a student to fulfill the evaluation requirements. Initial or re-qualification instructor evaluations should be administered on a mission representative of the examinee's highest qualification.

3.5.3. Instructor Navigators will be evaluated on their ability to instruct on all periodic evaluations. Navigators who desire to realign the QUAL/MSN evaluation expiration date during the initial (or re-qualification) instructor evaluation must also demonstrate all required areas/subareas and complete written examinations.

**3.6. Emergency Procedures Evaluation (EPE).** Navigators will accomplish the EPE in an ATD, during the preflight briefing, during the flight evaluation, or any combination of these. The EPE should cover a cross section of aircraft systems and the examinee should be able to demonstrate an understanding of aircraft systems in emergency scenarios.

**3.7. Navigator Grading Criteria.** The final grade in any area is at the discretion of the evaluator. The evaluator may accept greater deviations if the navigator is applying proper corrections to attain the desired flight profile. See MTL/ESD for specific performance tolerances. The MTL/ESD tolerances are also referred to as "Q- criteria". Abnormal flight conditions and configurations may be taken into account.

### **3.8. General.**

#### **Area 1, Directives and Publications.**

- Q** Possessed a high level of knowledge of all applicable aircraft publications and procedures and understood how to apply both to enhance mission accomplishment. Publications were current and properly posted.
- Q-** Possessed limited knowledge of directives but could locate information in appropriate publications. Publications were current but improperly posted.
- U** Unaware of established procedures and/or could not locate them in the appropriate publication in a timely manner. Publications were not current.

#### **Area 2, Mission Preparation/Planning/Performance.**

- Q** Checked all factors applicable to flight such as: Weather, NOTAMs, alternate airfields, airfield suitability, fuel requirements, charts, FLIP, Foreign Clearance Guide, etc. Adequate knowledge of performance capabilities and operating data.
- Q-** Made minor errors or omissions in checking all factors that could have detracted from mission effectiveness. Marginal knowledge of performance capabilities or approved operating procedures/rules.
- U** Made major errors or omissions would have prevented a safe or effective mission. Unsatisfactory knowledge of performance capabilities and/or operating data. Performance calculations exceeded Q- limits.

#### **Area 3, Use of Checklists.**

- Q** Consistently used and called for the correct checklist and gave the correct response at the appropriate time throughout the mission.
- Q-** Checklist responses were untimely and/or crewmember required continual prompting for correct response.
- U** Used or called for incorrect checklist or consistently omitted checklist items. Unable to identify the correct checklist to use for a given situation. Did not complete checklist prior to event.

**Area 4, Safety Consciousness (Critical).**

- Q** Aware of and complied with all safety factors required for safe aircraft operation and mission accomplishment.
- U** Not aware of or did not comply with all safety factors required for safe aircraft operation or mission accomplishment. Operated aircraft equipment in a dangerous manner.

**Area 5, Judgment/Compliance (Critical).**

- Q** Prepared and completed mission in compliance with existing regulations and directives. Demonstrated knowledge of operating procedures and restrictions and where to find them in the correct publications.
- U** Unaware of established procedures and/or could not locate them in the appropriate publication in a timely manner. Failed to comply with a procedure that could have jeopardized safety or mission success.

**Area 6, Crew Coordination/Crew Resource Management (CRM).** See AFI 11-290, *Cockpit/Crew Resource Management Program*, and use AF Form 4031, **CRM Skills Criteria Training/Evaluation**, as a reference.

- Q** Effectively coordinated with other aircrew members throughout the assigned mission. Demonstrated operational knowledge of other crewmembers duties and responsibilities. Effectively applied CRM skills throughout the mission.
- Q-** Crew coordination adequate to accomplish mission. Demonstrated limited knowledge of other crewmembers duties and responsibilities.
- U** Poor crew coordination or unsatisfactory knowledge of other crewmember duties and responsibilities negatively affected mission accomplishment or safety of flight.

**Area 7, Communications Procedures.**

- Q** Complete knowledge of, and compliance with, correct communications procedures. Makes radio and interphone transmissions concise with proper terminology. Consistently backed up pilots for all ATC calls.
- Q-** Occasional deviations or omissions from required procedures, calls or acknowledgments. Occasional missed ATC calls. Limited operational knowledge of communication equipment.
- U** Incorrect procedures or poor performance caused confusion. Did not back up pilots for ATC calls. Displayed poor operational knowledge or inability to operate communication equipment.

**Area 8, Life Support Systems/Egress.**

- Q** Displayed thorough knowledge of location and use of life support systems and equipment. Demonstrated and emphasized the proper operating procedures used to operate aircraft egress devices such as doors, windows, hatches, slide rafts, and escape ropes, etc.
- Q-** Limited knowledge of location and use of life support systems and equipment. Unsure of the proper operating procedures used to operate some of the aircraft egress devices.
- U** Displayed unsatisfactory knowledge of location and use of life support systems and equipment. Unable to properly operate aircraft egress devices.

**Area 9, Knowledge/Completion of Forms.**

- Q** All required forms and/or flight plans were complete, accurate, readable, accomplished on time and IAW applicable directives. Related an accurate debrief of significant events to applicable agencies (intelligence, maintenance, etc.)
- Q-** Minor errors on forms and/or flight plans did not affect conduct of the mission. Incorrectly or incompletely reported some information due to minor errors, omissions, and/or deviations.
- U** Did not accomplish required forms and/or flight plans. Omitted or incorrectly reported significant information to applicable agencies due to major errors, omissions, and/or deviations.

**Area 10, Airmanship/Situational Awareness.**

- Q** Executed the assigned mission in a timely, efficient manner. Demonstrated strict professional flight and crew discipline throughout all phases of flight. Conducted the flight with a sense of understanding and comprehension.
- Q-** Untimely or inappropriate decisions degraded or prevented accomplishment of a portion of the mission. Resources were not always effectively used to the point that specific mission objectives were not achieved.
- U** Decisions, or lack thereof, resulted in failure to accomplish the assigned mission. Failed to exhibit strict flight and crew discipline.

**Area 11, Briefings.**

- Q** Contributed to the briefing content to ensure it included all applicable information. Briefings effectively organized and presented in a logical sequence. Covered all pertinent items. Effectively used available briefing aids.
- Q-** Allowed omission of items pertinent but not critical to the mission. Briefings lacked continuity or contained unnecessary repetition. Some difficulty communicating clearly. Did not make effective use of available briefing aids. Dwelled on non-essential items.
- U** Failed to conduct/attend required briefings. Failed to use briefing aids. Omitted essential items or did not correct erroneous information that could affect mission accomplishment. Demonstrated lack of knowledge of subject. Briefing poorly organized and not presented in a logical sequence, resulting in confusion. Presented erroneous information that would affect safe/effective mission accomplishment.

**3.9. Qualification/Mission.****Area 12, Preflight.**

- Q** Manually completed a flight plan or demonstrated manual flight planning procedures if a computer flight plan was used. Selected current navigation charts of a proper scale and type for the mission profile. Charts constructed IAW current directives. Accurately accomplished aircraft preflight without error IAW current directives.
- Q-** Flight plan contained minor errors or omissions that would not have adversely affected mission accomplishment. Minor errors or omissions on aircraft preflight that would not have adversely affected mission accomplishment.
- U** Flight plan was not completed, could not demonstrate manual procedures, or computer flight plan was not reviewed. Navigator flight plan contained major errors/omissions. Selected an improper or obsolete chart. Did not accomplish aircraft preflight IAW current directives. Actions caused extended delays or mission failure.

**Area 13, Fuel Planning.**

- Q** Knowledgeable with the type and use of data contained in the fuel planning regulation. Correctly computed fuel computation and ETP, when required.
- Q-** Displayed limited knowledge of the fuel planning regulation. Fuel computations and/or ETP computed with minor mathematical errors or omissions that would not adversely affect mission accomplishment.
- U** Displayed inadequate knowledge of the fuel planning directives. Fuel computations and/or ETP were not completed or contained major errors or omissions.

**Area 14, Departure.**

- Q** Monitored headings, airspeeds, altitudes and aircraft position throughout departure. Used a SID and/or appropriate scale departure area chart. Provided headings, ETA's, and other required information in a timely manner, as required. Monitored appropriate radios and clearances to ensure crew compliance. Provided updated information when the clearance caused a change in the planned departure. Used a terrain chart.
- Q-** Monitored aircraft position, but slow to provide headings, ETA's or other required information when requested. Performance did not degrade mission accomplishment nor compromise flight safety.
- U** Did not monitor departure headings, airspeeds or altitudes. Unaware of aircraft position and unable to provide updated information when required. Did not use a SID and/or an appropriate scale departure area chart. Allowed major deviations that degraded mission accomplishment or compromised safety.

**Area 15, Radar Operations/Weather Avoidance/Windshear.**

- Q** Demonstrated thorough knowledge and understanding of radar equipment. Effectively demonstrated procedures for operating weather radar. Updated weather radar/analysis throughout the mission. Used all available sources to determine if and/to what degree severe weather conditions exist. Complied with all weather separation and windshear avoidance procedures.
- Q-** Demonstrated adequate knowledge of equipment, but occasionally used improper operating procedures. Had difficulty identifying radar returns. Did not update radar/weather analysis during worsening weather conditions.
- U** Displayed unsatisfactory knowledge of radar equipment and weather avoidance procedures. Used improper operating procedures that were potentially harmful to system components/personnel. Failed to correctly interpret returns. Unable to demonstrate proper use of weather radar. Failed to update radar/weather analysis during the mission. Failed to comply with weather separation or windshear avoidance procedures that may have jeopardized safety or mission success.

**Area 16, General Navigation.****Subarea 16A, Plotting/Fixing/Pacing.**

- Q** Accurately performed plotting and position fixing to accomplish the mission. Plotting errors were minimal, but did not detract from dead reckoning. Proper pacing allowed for smooth mission accomplishment.
- Q-** Performed plotting and position fixing, but pacing was not smooth and timely, but did not detract from mission accomplishment. Plotting errors were minimal, but affected pacing.
- U** Plotting, fixing and pacing were not performed in an accurate or timely manner. Plotting errors resulted in unreliable position of aircraft, and jeopardized mission success.

**Subarea 16B, Course Adherence.**

- Q** Remained within 3 NMs of course centerline or as dictated by FLIP publications. (Exceptions: Threat avoidance, weather deviation, ATC assigned heading, time control, etc.). Complied with all altitude restrictions. Adhered to all airspace restrictions.
- Q-** Flew 3 to 5 NMs from course without the above exceptions. Did not fully monitor altitude and course restrictions but did not detract from mission completion.
- U** Exceeded 5 NMs during en route navigation without the above exceptions. Did not inform crew of altitude violations or restrictions. Resulted in violations or mission failure.

**Area 17, Radio Navigation.**

- Q** Accurately tuned, identified, read and interpreted readings of TACAN, VOR or NDBs. Consistently selected stations that afforded the best LOPs. Position accuracy within 4 NMs.
- Q-** Better use of radio aids could have enhanced navigation. Difficulty resolving a fix or accurate plotting. Position accuracy greater than 4NM but did not exceed 8 NMs.
- U** Unable to accurately tune and identify radio aids. Did not understand VOR/TACAN/NDB bearing procedures or was unable to obtain position by means of radio aids. Position error greater than 8 NMs.

**Area 18, Equipment Operation (Knowledge/Use).** Criteria below used for subareas 18A, INS/FSAS/GPS; 18B, Compass Systems; 18C, Defensive Systems and 18D, Communication Systems (Secure Comm).

- Q** Demonstrated thorough knowledge of equipment and operating procedures. Use of equipment enhanced mission accomplished.
- Q-** Demonstrated only a basic knowledge of equipment and operating procedures. Minor errors in operation of equipment detracted from mission completion.
- U** Displayed inadequate knowledge of equipment and operating procedures. Improper operation procedures could have resulted in damage to equipment or disrupted mission accomplishment.

**Subarea 18A, INS/FSAS/GPS/FMS-C Model.**

**Subarea 18B, Compass Systems.**

**Subarea 18C, Communication Systems (Secure Comm).**

**Area 19, Defensive Systems/Tactics/Threat Avoidance.**

- Q** Thorough knowledge of necessary defensive systems/tactics applicable to the mission. Adequately analyzed, degraded, and avoided threats ensuring effective mission accomplishment.
- Q-** Limited knowledge of defensive systems/tactics applicable to the mission. Adequately analyzed, degraded, and avoided threats; however, selected some tactics not appropriate for the situation.
- U** Unsatisfactory knowledge of defensive systems/tactics applicable to the mission. Failed to ensure mission effectiveness by not adequately analyzing, degrading, and avoiding threat(s). Aircraft exposed to known threats due to crew error.

**Area 20, Descent/Approach Monitor.**

- Q** Monitored aircraft position, approach instructions and primary approach navigation aids. Furnished headings, ETAs and other information to the pilot as required. Thoroughly understood approach and missed approach procedures. Ensured terrain clearance during approach by use of all available aids/area chart.
- Q-** Monitored aircraft position but did not fully understand approach instructions/procedures. Slow to provide headings, ETAs or other appropriate information, as required.
- U** Failed to monitor aircraft position. Did not ensure terrain clearance during approach. Area chart not available.

**Area 21, Air Refueling Procedures.**

- Q** Thorough knowledge of A/R procedures.
- Q-** Limited knowledge of A/R procedures, however, mission accomplishment not adversely affected.
- U** Unsatisfactory knowledge affected mission accomplishment.

**Area 22, Emergency Equipment.**

- Q** Displayed thorough knowledge of location and use of emergency equipment.
- Q-** Displayed limited knowledge of location and use of emergency equipment.
- U** Displayed unsatisfactory knowledge of emergency equipment.

**Area 23, Emergency Procedures.** Includes the following: Emergency signals; ground emergencies; in-flight emergencies (fuselage fire/smoke and fume elimination, rapid decompression, bailout procedures); landing emergencies (ditching), etc.

- Q** Correctly analyzed, stated, and understood aircraft emergencies and performed required procedures to correct the emergency.
- Q-** Correctly analyzed and understood aircraft emergencies, but had difficulty stating the EP. Performed required procedures to correct the emergency.
- U** Failed to analyze, state, and did not understand aircraft emergencies and/or could not perform required procedures to correct the emergency.

**Area 24, Boldface Emergency Procedures (Critical).**

- Q** Correct, immediate responses. Coordinated proper crew actions.
- U** Incorrect sequence, unsatisfactory response, or unsatisfactory performance of corrective actions.

### 3.10. Airdrop.

**Area 25, Tactical/Airdrop Mission Planning.**

**Subarea 25A, Route/Objective/Threat Analysis.**

- Q** Accurately assessed objective area and threats. Able to develop route to accomplish mission and defeat threats.
- Q-** Adequately analyzed, degraded, and avoided all threats, however, selected some tactics not appropriate for the situation.
- U** Unsatisfactory assessment of threats and objective area. Route failed to ensure threat degradation or avoidance. Aircraft exposed to known threats due to crew error.

**Subarea 25B, Briefings.**

- Q** Contributed to the briefing content to ensure it included all applicable information. Briefings effectively organized and presented in a logical sequence. Covered all pertinent items. Effectively used available briefing aids.
- Q-** Allowed omission of items pertinent but not critical to the mission. Briefings lacked continuity or contained unnecessary repetition. Some difficulty communicating clearly. Did not make effective use of available briefing aids. Dwelled on non-essential items.
- U** Failed to conduct/attend required briefings. Failed to use briefing aids. Omitted essential items or did not correct erroneous information that could affect mission accomplishment. Demonstrated lack of knowledge of subject. Briefing poorly organized and not presented in a logical sequence, resulting in confusion. Presented erroneous information that would affect safe/effective mission accomplishment.

**Subarea 25C, Flight Plan/Airdrop Data/Charts.**

- Q** Thorough knowledge of procedures. All flight plan data accurately computed. CARP data completed in entirety with negligible errors. Charts completed IAW current directives. Leg distances and course headings completed to provide adequate terrain clearance and threat avoidance. Slowdown computed to provide aircraft/formation enough distance to accomplish slowdown maneuver and objective.
- Q-** Limited knowledge of procedures. Minor errors or omissions that would not have adversely affected mission accomplishment. Slowdown distance did not provide adequate distance for smooth formation procedures.
- U** Unsatisfactory knowledge of procedures. Flight plan and/or CARP data were not completed or contained major errors/omissions. Selected an improper or obsolete chart. Errors resulted in unsafe operations and/or adversely affected mission effectiveness.

**Area 26, Low Level Departure (VFR and SKE).**

- Q** Monitored headings, airspeeds, altitudes and aircraft position throughout departure. Used a SID and/or appropriate scale departure area chart. Provided headings, ETAs, course guidance and other required information in a timely manner. Monitored appropriate radios and clearances to ensure crew compliance. Provided updated information when the clearance caused a change in the planned departure. Complied with SKE or VFR formation tactical procedures as applicable. Terrain chart used.
- Q-** Had difficulty monitoring aircraft position; slow to provide headings, ETAs, course guidance or other required information. Performance did not degrade mission accomplishment nor compromise flight safety.
- U** Did not monitor departure headings, airspeeds or altitudes. Unaware of aircraft position and unable to provide updated information when required. Did not use a SID and/or an appropriate scale departure area chart for terrain clearance. Did not comply with SKE or VFR formation tactical procedures as applicable. Allowed major deviations that degraded mission accomplishment or compromised safety. Terrain chart not used.

**Area 27, Low Level Navigation.****Subarea 27A, ETAs.**

- Q** Thorough knowledge of enroute time status in relation to objective area. Accurately computed ETAs in a timely manner.
- Q-** Better awareness of required timing events or enroute time status could have avoided excessive, unplanned maneuvering or prevented degraded DR. Computed ETAs with errors but did not hamper mission accomplishment.
- U** Unable to accurately assess required timing or unaware of mission time status, jeopardizing formation integrity or mission accomplishment. Did not compute ETAs or did so with major errors resulting in mission failure or degradation.

**Subarea 27B, Navigation Procedures/Course Tolerance.**

- Q** Remained within 3 NM of course centerline and was certain of aircraft position (Exceptions to course centerline tolerance: Threat avoidance, weather deviation, ATC assigned heading, time control, or as required by route restrictions, etc.). Adhered to all airspace restrictions and altitude restrictions. Effectively used charts in flight to maintain position (VFR map reading).
- Q-** Uncertain of exact aircraft position due to marginal navigational procedures. Flew 3 to 5 NMs from course without the above exceptions, however, did not affect safety of flight. Better use of charts in flight could have avoided excessive, unplanned maneuvering or prevented degraded DR (VFR map reading).
- U** Exceeded 5 NMs during enroute navigation without the above exceptions. Unable to maintain position awareness throughout most of the route. Poor in-flight chart use. Violated airspace restrictions. Descended below minimum altitude restrictions. Safety became a factor.

**Subarea 27C, Pacing.**

- Q** Conducted required duties in a timely manner.
- Q-** Fell behind the aircraft enough to adversely impact required duties.
- U** Was unable to complete required duties due to pacing problems.

**Subarea 27D, In-flight Advisories.**

- Q** In-flight advisories provided clear and concise information in a timely manner.
- Q-** In-flight advisories contained minor errors or omitted non-critical advisories that did not adversely affect mission completion.
- U** Did not provide required in-flight advisories or made errors that adversely affected safe mission accomplishment.

**Subarea 27E, SKE Procedures.**

- Q** Thorough knowledge of SKE components and procedures. Correctly passed and/or interpreted SKE information in a timely manner.
- Q-** Limited knowledge of SKE components and procedures, however, mission was not adversely affected. Often passed/interpreted SKE information incorrectly or late but did not adversely affect formation integrity.
- U** Unsatisfactory knowledge affected mission accomplishment. Failure to pass or interpret SKE information created an unsafe condition, degraded formation position or caused a no-drop situation.

**Subarea 27F, Radar Operations.**

- Q** Demonstrated adequate knowledge of radar components and procedures. Able to properly cross-check preceding aircraft relative position (formation procedures).
- Q-** Limited knowledge of radar components and procedures but did not adversely affect mission. Interpreted radar information incorrectly but did not jeopardize the mission. Had difficulty establishing/maintaining required cross-check of preceding aircraft relative positions, however, formation integrity was not adversely affected.
- U** Unsatisfactory knowledge affected mission accomplishment. Misinterpretation of radar information caused a no-drop situation or adversely affected formation integrity/mission accomplishment. Failed to properly cross-check preceding aircraft relative position when required.

**Area 28, Slowdown.**

- Q** Thorough knowledge of slowdown procedures. Complied with all published/briefed procedures.
- Q-** Limited knowledge of slowdown procedures. Minor deviations did not affect mission accomplishment or formation integrity.
- U** Unsatisfactory knowledge of slowdown procedures. Major deviations adversely affected mission accomplishment or formation integrity.

**Area 29, DZ/Runway Acquisition/Alignment.**

- Q** Timely identification of the DZ/Runway allowed for a smooth approach to the objective area. Complied with all published/briefed procedures.
- Q-** Late identification of the DZ/Runway caused an abrupt change in course into the objective area, but did not affect mission accomplishment. Minor deviations did not affect mission accomplishment or formation integrity.
- U** Did not identify the DZ/Runway or late identification negatively affected mission accomplishment.

**Area 30, TOT/TOA Criteria (Critical).**

- Q** VFR and IFR operations +/-60 seconds from scheduled TOT/TOA. For SOLL II airland and airdrop use +/-30 seconds.
- U** Exceeded Q criteria.

**Area 31, In-flight Airdrop Computations.**

- Q** CARP properly reevaluated in-flight.
- Q-** CARP not properly reevaluated, but airdrop was successful.
- U** CARP not reevaluated or not properly reevaluated in-flight leading to a no-drop, unsuccessful drop or negatively affecting the airdrop.

**Area 32, Airdrop Accuracy (Critical).**

- Q** Within the following Circular Error (CE) in meters. Wingmen airdrops must meet these criteria after adjustment is made from lead's drop score:

	<b>C-141 Airdrop</b>	<b>C-141 SOLL II Airdrop</b>
Personnel (1,2,3)	300	Blind – 300    Marked – 200
HE (2,3)	300	300
CDS (2,4)	200	300
SATB (2)	300	300

**NOTES:**

1. Including door/ramp bundles.
2. For night visual drops, add 50 meters.
3. For personnel/heavy drops above minimum drop altitude specified for type of load, add 15 meters for each 100 feet.
4. For CDS drops, add 20 meters for each 100 feet above 600 feet AGL to a maximum of 200 additional meters.

**U** Exceeded Q criteria.

**Area 33, Escape/Recovery (Visual and SKE).**

- Q** Escape and recovery executed IAW published or briefed procedures.
- Q-** Limited understanding and/or poor execution in escape and/or recovery procedures that did not affect mission accomplishment.
- U** Major deviations from procedures that negatively affected mission accomplishment, formation integrity, flight safety, or ATC restrictions.

**Area 34, Formation Air Refueling Procedures.**

- Q** Thorough knowledge of formation A/R procedures and geometries.
- Q-** Limited knowledge of formation A/R procedures and geometries but did not adversely affect safety or mission accomplishment.
- U** Unsatisfactory knowledge of procedures which hampered mission effectiveness or produced an unsafe situation.

**3.11. Special Operations Low Level (SOLL II).****Area 35, Special Operations Procedures.**

- Q** Thorough knowledge of procedures; accomplished duties in an effective manner.
- Q-** Limited knowledge of procedures but did not adversely impact safety or mission accomplishment.
- U** Unsatisfactory knowledge of procedures which caused loss of mission effectiveness or produced an unsafe situation.

**Area 36, Airborne Radar Approach (Map and Radar Navigator Positions).**

- Q** ARA executed within established tolerances and IAW published or briefed procedures. Successfully directed the aircraft to ARA minimums so that a safe landing could be made. Used proper terminology; instructions were clear and concise during the entire approach.
- Q-** Minor errors in ARA maneuvers/procedures that did not negatively impact mission accomplishment. ARA briefing was incomplete. Required excessive course corrections on final approach but directed the aircraft to a point where a safe landing could be made.
- U** Displayed unsatisfactory knowledge of ARA procedures. Unable to direct the aircraft to a point from which a safe landing could be made. Major deviations from established procedures or failure to meet tolerances; errors would have compromised safety and prevented mission accomplishment.

**Area 37, Night Vision Goggles (NVG) Operations.**

- Q** Correctly described the use/limitations of NVGs. Properly pre-flighted, handled, and used NVGs during the flight, as required.
- Q-** Made minor omissions or deviations in describing the use/limitations of NVGs. Did not properly preflight, handle, or use NVGs during the flight, but caused no damage to equipment. Mission success not negatively affected.
- U** Procedures for using NVGs were incorrect. Caused damage to equipment. Mission unsuccessful as a result of improper NVG usage.

**Area 38, TOT/TOA (Critical).** See Area 30.**Area 39, Airdrop Accuracy (Critical).** See Area 32.**3.12. Instructor.****Area 40, Instructor Ability (Critical).**

- Q** Demonstrated the ability to communicate effectively. Provided appropriate guidance when necessary. Planned ahead and made timely decisions. Identified and corrected potentially unsafe situations.
- U** Unable to effectively communicate or provide timely feedback to the student. Gave instruction that was unsafe or contradicted published directives. Did not provide corrective action when necessary. Did not plan ahead or anticipate student problems. Did not identify unsafe situations in a timely manner. Made no attempt to instruct.

**Area 41, Instructor Demonstration (Critical).**

- Q** Effectively demonstrated correct procedures or systems operation. Thorough knowledge of applicable aircraft systems, procedures, publications, and directives.
- U** Ineffective or incorrect demonstration of procedures or systems operation. Insufficient depth of knowledge about applicable aircraft systems, procedures, and/or proper source material.

**Area 42, Student Briefing/Critique (Critical).**

- Q** Briefings were well organized, accurate, and thorough. Reviewed student's present level of training and defined mission events to be performed. Showed an excellent ability during the critique to reconstruct the flight, offer mission analysis, and provide guidance where appropriate. Training grade reflected the actual performance of the student relative to the standard. Pre-briefed the student's next mission, if required.
- U** Briefings were marginal or non-existent. Did not review student's past performance. Failed to adequately critique student or analyze the mission. Training grade did not reflect actual performance of student. Overlooked or omitted major discrepancies. Incomplete pre-briefing of student's next mission, if required.

**3.13. Unit.** Units will include MAJCOM-specific and local evaluation areas in **Chapter 6**. Include the evaluation areas on AF Form 3862 (see Paragraph **1.14**).

## Chapter 4

### FLIGHT ENGINEER EVALUATIONS

**4.1. General.** This chapter standardizes second and first flight engineer initial, periodic and re-qualification evaluations, including requirements for qualification/mission, additional mission, and instructor evaluations. The term second flight engineer refers to those who have completed the C-141 Flight Engineer Initial Qualification (FIQ) training course. See AFI 11-2C-141V1 for second flight engineer certification and training procedures.

**4.2. Qualification/Mission Evaluations (Initial, Periodic, and Requalification).** Include all areas under GENERAL and QUALIFICATION/MISSION.

4.2.1. Second Flight Engineer. This evaluation is administered at the completion of the Flight Engineer Initial Qualification Course. Upon successful completion, the AF Form 8 will indicate Crew Position as "FF", flight phase INIT QUAL/MSN. On AF Form 8 add remarks, "Second Flight Engineer-Qualified." Annotate expiration date according to AFI 11-202V2. Second Flight Engineers may perform the following duties unsupervised:

4.2.1.1. Normal takeoff and landing data.

4.2.1.2. Engineer and scanner's preflight.

4.2.1.3. May occupy the engineer's station during all phases of flight.

**EXCEPTION:** Second Flight Engineers will not occupy the flight engineer station, unless under the direct supervision of an instructor flight engineer, during transition, aerial refuel (AR), airdrop (AD), and engine running on-load/off-load (ERO), until successful completion of a second flight engineer local evaluation (125-hour).

4.2.1.4. Scanner's inflight duties.

4.2.1.5. Ground refueling.

4.2.2. Second Flight Engineer Local Evaluation. This evaluation qualifies the second engineer to occupy the flight engineer station unsupervised on all training flights, to include transition, AR, AD, and ERO. At the discretion of the unit, a one-time evaluation of second flight engineers may be conducted after a minimum of 125 hours in the C-141. This evaluation will consist of, but is not limited to, knowledge of all the unit's local training missions (transition, AR, AD as necessary) and an EPE. It will be accomplished on any local training mission. Upon successful completion, the AF Form 8 will indicate Crew Position as "FF", flight phase SPOT. Ensure the AF Form 8 remarks adequately describe all missions the individual is qualified to perform.

4.2.3. First Engineer (fully qualified). This evaluation will be completed in unit. Upon successful completion, the AF Form 8 will indicate Crew Position as "MF", flight phase QUAL/MSN. First flight engineers are qualified to perform unsupervised duties for Airland, AR and AD. Aerial refueling and airdrop may be verbally evaluated on initial and periodic evaluations. Units that have no airdrop commitment and AFRC/ANG unit members not A/R qualified will not be evaluated on Airdrop/Air Refueling procedures. Annotate the "Yes" block under restrictions and use the following statement in the Remarks section of the AF Form 8: "Airdrop/Air Refueling procedures were not evalu-

ated” (as applicable). Include crew position codes on the flight orders to reflect airdrop and air refueling qualification.

**4.3. Additional Mission Evaluations.** Special Operations Low Level (SOLL) II mission evaluations will be conducted on an actual or SOLL II exercise mission. Crewmembers wishing to align recurring QUAL/MISSION and additional mission qualifications will complete all the requirements for a QUAL/MISSION evaluation in addition to additional mission requirements.

4.3.1. Initial and recurring SOLL II evaluations will include (as a minimum) areas under GENERAL and SOLL II.

**4.4. Instructor Evaluations.** Flight examiners will place particular emphasis on the examinee’s ability to recognize student difficulties and provide timely, effective corrective action. Instructor evaluations should be administered on a mission representative of the examinee’s highest qualification.

4.4.1. Include all areas under GENERAL, QUALIFICATION/MISSION, and INSTRUCTOR.

*NOTE:* Aircrew members desiring to realign the qualification evaluation during the initial instructor evaluation must “demonstrate” all items under QUALIFICATION/MISSION and complete all required written examinations.

4.4.2. Periodic. Instructor Flight Engineers will be evaluated on their ability to instruct on all periodic evaluations. Ensure basic and instructor duties are observed.

**4.5. Emergency Procedures Evaluations (EPE).** Conduct the EPE in the simulator (preferred method), if possible, in conjunction with all initial, periodic and re-qualification evaluations. Use a contractor-developed scenario or a unit Stan/Eval approved and flight examiner provided scenario. Unit/flight examiner provided scenarios must be coordinated with the contractor a minimum of one day before the evaluation to ensure compatibility with ATD software. The EPE should cover a cross section of aircraft systems and the examinee should be able to demonstrate an understanding of aircraft systems in emergency scenarios. If an ATD is not available/feasible, the EPE may be conducted on the aircraft. Evaluate only areas that can be evaluated realistically, without compromising safety. Evaluate all flight engineers in a random selection of abnormal and emergency procedures and Boldface.

*NOTE:* Approximately 2-hours is needed (examinee at the panel) to conduct a thorough EPE in the simulator.

**4.6. Additional Information.**

4.6.1. Flight examiners will not conduct evaluations when scheduled as primary aircrew members.

**4.7. Flight Engineer Grading Criteria.**

**4.8. General.**

**Area 1, Directives and Publications.**

- Q** Possessed a high level of knowledge of all applicable aircraft publications and procedures and understood how to apply both to enhance mission accomplishment. Publications were current and properly posted.
- Q-** Unsure of some directives but could locate information in appropriate publications. Publications were current but improperly posted.
- U** Unaware of established procedures and/or could not locate them in the appropriate publication in a timely manner. Publications were not current.

**Area 2, Use of Checklists.**

- Q** Consistently ensured all appropriate checklists were used and completed in a timely manner without omission.
- Q-** Completed in an untimely manner or with minor omissions which did not detract from safety or mission effectiveness.
- U** Used incorrect checklist or omitted checklist items which detracted from safety or mission effectiveness. Did not complete checklist prior to event.

**Area 3, Safety Consciousness (Critical).**

- Q** Aware of and complied with all safety factors required for safe aircraft operation and mission accomplishment.
- U** Not aware of or did not comply with all safety factors required for safe aircraft operation or mission accomplishment. Operated aircraft systems in a dangerous manner.

**Area 4, Judgment/Compliance (Critical).**

- Q** Demonstrated proper judgement in decisions. Prepared for and completed mission in compliance with existing regulations and directives. Demonstrated knowledge of operating procedures and restrictions and where to find them in the correct publications.
- U** Demonstrated lack of judgement in decision making. Unaware of established procedures and/or could not locate them in the appropriate publication in a timely manner. Failed to comply with a procedure that could have jeopardized safety or mission success.

**Area 5, Crew Coordination / Crew Resource Management (CRM).** See AFI 11-290, *Cockpit/Crew Resource Management Program*, and use AF Form 4031, **CRM Skills Criteria Training/Evaluation**, as a reference.

- Q** Effectively coordinated with other aircrew members throughout the assigned mission. Demonstrated operational knowledge of other aircrew members duties and responsibilities. Effectively applied CRM skills throughout the mission.
- Q-** Crew coordination adequate to accomplish mission. Demonstrated limited knowledge of other aircrew members' duties and responsibilities.
- U** Poor crew coordination or unsatisfactory knowledge of other aircrew member duties and responsibilities negatively affected mission accomplishment or safety of flight.

**Area 6, Communication Procedures.**

- Q** Demonstrated a thorough knowledge of communication procedures. Accomplished required calls and acknowledgments with standard terminology. Consistently backed up pilots for all ATC calls. Demonstrated satisfactory use of UHF, VHF, HF, and L-Band SATCOM radios.
- Q-** Occasional deviation or omissions from required procedures, calls or acknowledgments. Occasional backup for ATC calls. Limited operational knowledge of communication equipment that did not detract from mission effectiveness.
- U** Incorrect procedures or poor performance caused confusion. Did not back up pilots for ATC calls. Displayed poor operational knowledge or inability to operate communication equipment.

**Area 7, Life Support Systems/Egress.**

- Q** Displayed thorough knowledge of location and use of life support systems and equipment. Demonstrated and emphasized the proper operating procedures used to operate aircraft egress devices such as doors, windows, hatches, slide rafts, and escape ropes/ladders.
- Q-** Limited knowledge of location and use of life support systems and equipment. Unsure of the proper operating procedures used to operate some of the aircraft egress devices.
- U** Displayed unsatisfactory knowledge of location and use of life support systems and equipment. Unable to properly operate aircraft egress devices.

**Area 8, Knowledge/Completion of Forms.**

- Q** All required forms were complete, accurate, readable, accomplished on time and IAW applicable directives. Related an accurate debrief of significant events to applicable agencies (Maintenance, etc.).
- Q-** Minor errors on forms did not affect conduct of the mission. Incorrectly or incompletely reported some information due to minor errors, omissions, and/or deviations.
- U** Did not accomplish required forms. Omitted or incorrectly reported significant information to applicable agencies due to major errors, omissions, and/or deviations.

**Area 9, Situational Awareness.**

- Q** Executed the assigned mission in a timely, efficient manner. Demonstrated strict professional flight and crew discipline throughout all phases of flight. Participated in the flight with a sense of understanding and comprehension.
- Q-** Untimely or inappropriate decisions/recommendations degraded or prevented accomplishment of a portion of the mission. Resources were not always effectively used to the point that specific mission objectives were not achieved.
- U** Decisions, or lack thereof, resulted in failure to accomplish the assigned mission. Failed to exhibit strict flight and crew discipline.

**Area 10, Professional Equipment.**

- Q** All mission specific required equipment was carried. At least 1 flight engineer carried a tool kit.
- Q-** Equipment or uniform was in disrepair or out of date/inspection. Wrong type of equipment was carried.
- U** Mission specific personal equipment not carried on mission. No flight engineers tool kit aboard aircraft.

**4.9. Qualification/Mission.** The MTL/ESD performance tolerances define “Q- criteria.”**Area 11, Mission Preparation/Planning.**

- Q** Completed all applicable forms. Checked all factors concerning take-off and landing data. Attended all required briefings. Complied with all directives prior to flight.
- Q-** Made minor deviations completing forms. Minor omissions checking factors concerning take-off and landing data which did not detract from safety or mission effectiveness. Did not fully comply with directives, but did not detract from safety or mission effectiveness.
- U** Major omissions completing applicable forms. Failed to check major factors effecting take-off and landing data. Did not comply with directives that would effect mission effectiveness.

**Area 12, Aircraft Preflight.**

- Q** Timely completion of all pre-flight checks and procedures without omissions. Proper coordination with maintenance and crew when required. Ensured readiness of aircraft for flight.
- Q-** Same as above except for minor omissions or deviations which did not detract from safety or directly contribute to a late take-off.
- U** Failed to pre-flight a critical component or system. Errors, omissions or deviations directly contribute to a late take-off or detracted from safety or mission effectiveness.

**Area 13, Takeoff Data.**

- Q** Normal and abnormal takeoff data computed without error or omission. Demonstrated a thorough knowledge of all takeoff concepts, to include obstacle/climbout performance.
- Q-** Same as above except for minor procedural deviations that did not detract from mission effectiveness. Minor errors in data that did not exceed limits outlined in the C-141 Evaluation Standards Document (ESD) Appendix F.
- U** Errors that exceed those listed above. Lacked knowledge of takeoff concepts/procedures. Numerous minor errors in computed data that effected safety.

**Area 14, Departure Procedures/Checklists.**

- Q** Timely completion of all checklists from the Before Starting Engines through After Take-off Climb without omission. Monitored systems indicators. Informed pilot of malfunctions/abnormalities.
- Q-** Same as above, except for minor procedural deviations. Minor documentation errors.
- U** Errors directly degraded mission effectiveness or caused delays. Failed to complete checklists and procedures in a timely manner. Omitted major checklist items. Failed to monitor or detect system malfunction/abnormal indication.

**Area 15, Departure Monitoring.**

- Q** Monitored all systems instruments. Monitored aircraft departure, able to appropriately call out traffic. Monitored all appropriate radios. Performed all other duties IAW the flight manual.
- Q-** Had difficulty accurately identifying and communicating traffic conflicts. Minor procedural deviations that did not detract from mission effectiveness.
- U** Did not monitor aircraft systems, any limitation exceeded. Unable to identify call out conflicting traffic. Did not monitor appropriate radios.

**Area 16, Cruise Procedures/Checklists.**

- Q** Timely completion of cruise checklist without omission. Computed required performance data for cruise and flight maneuvers (when required). Monitored systems indicators. Informed pilot of malfunctions/abnormalities. Monitored appropriate radios and backed up pilots as required. Timely back up of altitudes and airspeeds. Accurately completed all required in-flight documentation.
- Q-** Same as above, except for minor procedural deviations. Occasional back up for radio calls, altitudes and airspeeds. Minor documentation errors.
- U** Errors directly degraded mission effectiveness or caused delays. Failed to complete checklists and procedures in a timely manner. Omitted major checklist items. Failed to monitor or detect system malfunction/abnormal indication. Did not complete required in-flight documentation. Did not back up pilots for radio calls or altitudes/airspeeds.

**Area 17, Air Refueling.**

- Q** Maintained fuel system limitations during all phases of air refueling. Timely completion of air refueling checklists without omission or deviation. Balanced fuel in a timely manner. Correctly computed power setting. Monitored appropriate radios. Backed up pilots as directed.
- Q-** Same as above except minor deviations from checklist/air refueling procedures that would not detract from safety or major delay in air refueling operations.
- U** Unsatisfactory knowledge of fuel system limitations. Exceeded any fuel system limitation. Incorrectly computed required performance. Untimely completion of procedures which caused a major delay in air refueling operations.

**Area 18, Arrival Procedures/Checklists.**

- Q** Timely completion of Descent, Approach, Before Landing, After Landing, Engine Shutdown, and Before Leaving Aircraft checklists without omission. Computed required performance data for descent, approach, and landing. Monitored systems indicators. Informed pilot of malfunctions/abnormalities. Monitored appropriate radios and backed up pilots as required. Timely back up of altitudes and airspeeds. Accurately completed all required documentation.
- Q-** Same as above, except for minor procedural deviations. Occasional back up for radio calls, altitudes and airspeeds. Minor documentation errors.
- U** Errors directly degraded mission effectiveness or caused delays. Failed to complete checklists and procedures in a timely manner. Omitted major checklist items. Failed to monitor or detect system malfunction/abnormal indication. Did not complete required documentation. Did not back up pilots for radio calls or altitudes/airspeeds.

**Area 19, Landing Data.**

- Q** Computed all normal and abnormal landing data without error and within ESD Appendix F tolerances. Demonstrated a thorough knowledge of approach, landing, and go around performance. Accurately computed and monitored energy management during the approach.
- Q-** Same as above except had minor errors in landing data. Knowledge of landing and go-around performance was marginal, but did not compromise safety.
- U** Major errors in landing data. Did not monitor energy management. Lacked knowledge of landing and go-around performance.

**Area 20, Postflight.**

- Q** Accomplished all postflight duties without omission. Demonstrated a thorough knowledge of bed down and security procedures. Completed aircraft and aircrew forms without error.
- Q-** Marginal knowledge of postflight duties/forms completion.
- U** Unsatisfactory knowledge of postflight duties. Failed to properly bed down aircraft complete forms.

**Area 21, Boldface Emergency Procedures (Critical).**

- Q** Correct, immediate responses. Proper crew coordinated actions.
- U** Incorrect sequence, unsatisfactory response, or unsatisfactory performance of corrective actions.

**Area 22, APU/Fuselage Fire-Crew Not In Place.**

- Q** Took timely and appropriate actions.
- Q-** Same as above with minor errors that did not effect the safe outcome of the situation.
- U** Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

**Area 23, Fire on the Ground.**

- Q Took timely and appropriate actions.
- Q- Same as above with minor errors that did not effect the safe outcome of the situation.
- U Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

**Area 24, Abort/Brake Limits.**

- Q Properly identified systems malfunctions requiring abort. Computed brake limits without error. Demonstrated a thorough knowledge of abort procedures.
- Q- Same as above with minor errors that did not effect the safe outcome of the situation. Brake limits computed with minor errors within limits outlined in ESD Appendix F.
- U Exceeded limitations of Q- when computing brake limits. Unable or failed to analyze problem or take proper corrective action. Inadequate knowledge of abort procedures.

**Area 25, Smoke and Fume Elimination.**

- Q Took timely and appropriate actions.
- Q- Same as above with minor errors that did not effect the safe outcome of the situation.
- U Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

**Area 26, Wing Fire.**

- Q Took timely and appropriate actions.
- Q- Same as above with minor errors that did not effect the safe outcome of the situation.
- U Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

**Area 27, Bleed Air Smoke.**

- Q Took timely and appropriate actions.
- Q- Same as above with minor errors that did not effect the safe outcome of the situation.
- U Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

**Area 28, Bleed Duct Overheat.**

- Q Took timely and appropriate actions.
- Q- Same as above with minor errors that did not effect the safe outcome of the situation.
- U Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

**Area 29, Electrical Fire.**

- Q Took timely and appropriate actions.
- Q- Same as above with minor errors that did not effect the safe outcome of the situation.
- U Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

**Area 30, Rapid Decompression.**

- Q Took timely and appropriate actions.
- Q- Same as above with minor errors that did not effect the safe outcome of the situation.
- U Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

**Area 31, Fuel Jettison.**

- Q Took timely and appropriate actions.
- Q- Same as above with minor errors that did not effect the safe outcome of the situation.
- U Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

**Area 32, Cargo Jettison/Bailout.**

- Q Took timely and appropriate actions.
- Q- Same as above with minor errors that did not effect the safe outcome of the situation.
- U Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

**Area 33, Wheels-Up Landing/Ditching.**

- Q Took timely and appropriate actions.
- Q- Same as above with minor errors that did not effect the safe outcome of the situation.
- U Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

**Area 34, Battery Start.**

- Q Demonstrated thorough knowledge of battery start procedures. Accomplished checklist without error or omission.
- Q- Same as above with minor errors that did not effect the safe outcome of the situation.
- U Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

**Area 35, Fire Handle Start.**

- Q Demonstrated thorough knowledge of fire handle start procedures. Accomplished checklist without error or omission.
- Q- Same as above with minor errors that did not effect the safe outcome of the situation.
- U Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

**Area 36, Push Back/Tow.**

- Q Demonstrated thorough knowledge of push back/tow procedures. Accomplished checklist without error or omission.
- Q- Same as above with minor errors that did not effect the safe outcome of the situation.
- U Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

**Area 37, Backing the Aircraft.**

- Q** Demonstrated thorough knowledge of backing the aircraft procedures. Accomplished checklist without error or omission.
- Q-** Same as above with minor errors that did not effect the safe outcome of the situation.
- U** Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

**Area 38, Three Engine/Zero Flap Takeoff.**

- Q** Demonstrated thorough knowledge of abnormal configuration takeoff procedures. Takeoff data accomplished without error. Accomplished checklist without error or omission.
- Q-** Same as above with minor errors that did not effect the safe outcome of the situation or exceed the tolerances of the C-141 ESD Appendix F.
- U** Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

**Area 39, Engines/APU**

- Q** Demonstrated a thorough knowledge of normal, abnormal and emergency operation of the engines and APU. Properly monitored engine/APU operation.
- Q-** Same as above with minor deviations not effecting the safe operation of the engines or APU.
- U** Lacked knowledge of engine/APU operation. Failed to properly monitor indications during flight or ground operations.

**Area 40, Fuel/Air Refueling.**

- Q** Demonstrated a thorough knowledge of fuel/air refueling system normal, abnormal, and emergency operation. Demonstrated/explained a thorough knowledge of normal/concurrent refueling procedures/limitations IAW applicable maintenance technical orders and T.O. 00-25-172. Completed all normal and emergency checklists for Air Refueling without error or omission.
- Q-** Same as above with minor deviations that did not effect safety.
- U** Lacked knowledge of fuel/air refuel system normal, abnormal, and emergency operation. Unsatisfactory knowledge of normal/concurrent refueling procedures. Exceeded any fuel system limitation. Major deviations from checklist or lack of knowledge of air refueling procedures.

**Area 41, Electrical.**

- Q** Demonstrated a thorough knowledge of normal, abnormal and emergency operation of the electrical system. Properly monitored electrical system operation.
- Q-** Same as above with minor deviations not effecting the safe operation of the electrical system.
- U** Lacked knowledge of electrical system operation. Failed to properly monitor indications during flight or ground operations.

**Area 42, Bleed Air.**

- Q** Demonstrated a thorough knowledge of normal, abnormal and emergency operation of the bleed air system. Properly monitored bleed air system operation.
- Q-** Same as above with minor deviations not effecting the safe operation of the bleed air system.
- U** Lacked knowledge of bleed air system operation. Failed to properly monitor indications during flight or ground operations.

**Area 43, Air Conditioning.**

- Q** Demonstrated a thorough knowledge of normal, abnormal and emergency operation of the air conditioning system. Properly monitored air conditioning system operation.
- Q-** Same as above with minor deviations not effecting the safe operation of the air conditioning system.
- U** Lacked knowledge of air conditioning system operation. Failed to properly monitor indications during flight or ground operations.

**Area 44, Pressurization.**

- Q** Demonstrated a thorough knowledge of normal, abnormal and emergency operation of the pressurization system. Properly monitored pressurization.
- Q-** Same as above with minor deviations not effecting safe pressurization or depressurization.
- U** Lacked knowledge of the pressurization system operation. Failed to properly monitor indications during flight or ground operations.

**Area 45, Anti/De-icing.**

- Q** Demonstrated a thorough knowledge of normal, abnormal and emergency operation of the anti/de-icing system. Properly monitored anti/de-icing operation.
- Q-** Same as above with minor deviations not effecting the safe operation of the anti/de-icing system.
- U** Lacked knowledge of anti/de-icing operation. Failed to properly monitor indications during flight or ground operations.

**Area 46, Hydraulics.**

- Q** Demonstrated a thorough knowledge of normal, abnormal and emergency operation of the hydraulic systems. Properly monitored hydraulic systems operation.
- Q-** Same as above with minor deviations not effecting the safe operation of the hydraulic systems.
- U** Lacked knowledge of hydraulic system operation. Failed to properly monitor indications during flight or ground operations.

**Area 47, Flight Controls.**

- Q** Demonstrated a thorough knowledge of normal, abnormal and emergency operation of the flight controls. Properly monitored flight control operation.
- Q-** Same as above with minor deviations not effecting the safe operation of the flight controls.
- U** Lacked knowledge of flight control operation. Failed to properly monitor indications during flight or ground operations.

**Area 48, Landing Gear/Brakes.**

- Q** Demonstrated a thorough knowledge of normal, abnormal and emergency operation of the landing gear and brakes. Properly monitored landing gear and brake operation.
- Q-** Same as above with minor deviations not effecting the safe operation of the landing gear or brakes.
- U** Lacked knowledge of landing gear and brake operation. Failed to properly monitor indications during flight or ground operations.

**Area 49 Avionics.**

- Q** Demonstrated a thorough knowledge of normal, abnormal and emergency operation of the avionics systems. Properly monitored avionics operation.
- Q-** Same as above with minor deviations not effecting the safe operation of the avionics.
- U** Lacked knowledge of avionics systems operation. Failed to properly monitor indications during flight or ground operations.

**Area 50, Lighting.**

- Q** Demonstrated a thorough knowledge of normal, abnormal and emergency operation of the lighting systems. Properly monitored lighting system operation.
- Q-** Same as above with minor deviations not effecting the safe operation of the lighting systems.
- U** Lacked knowledge of lighting systems. Failed to properly monitor indications during flight or ground operations.

**Area 51, Doors/Ramps/Hatches.**

- Q** Demonstrated a thorough knowledge of normal, abnormal and emergency operation of the cargo doors system and emergency exits.
- Q-** Same as above with minor deviations not effecting the safe operation of the cargo doors.
- U** Lacked knowledge of cargo door system operation and/or emergency exits. Failed to properly monitor indications during flight or ground operations.

**Area 52, Oxygen.**

- Q** Demonstrated a thorough knowledge of normal, abnormal and emergency operation of the oxygen systems. Properly monitored oxygen system operation.
- Q-** Same as above with minor deviations not effecting the safe operation of the oxygen system.
- U** Lacked knowledge of oxygen system operation. Failed to properly monitor indications during flight or ground operations.

**Area 53, Warning Systems.**

- Q** Demonstrated a thorough knowledge of normal, abnormal and emergency operation of warning systems. Properly monitored the warning systems.
- Q-** Same as above with minor deviations not effecting the safe operation of the aircraft.
- U** Lacked knowledge of warning systems. Failed to properly monitor indications during flight or ground operations.

**Area 54, Tactical Mission Planning.**

- Q** Demonstrated thorough knowledge of tactical mission planning to include EPA.
- Q-** Minor deviations to procedures which did not affect safety.
- U** Lacked knowledge of or failed to plan for a tactical mission.

**Area 55, Combat Entry/Exit Checklist.**

- Q** Accomplished the Combat Entry and Exit checklist without error. Demonstrated a thorough knowledge of configuring and de-configuring the aircraft for combat operations.
- Q-** Same as above but with minor errors that did not effect safety.
- U** Lacked knowledge of combat operations. Omissions or errors were committed that effected safety.

**Area 56, Air Drop.**

- Q** Accomplished all data within tolerances of ESD, Revision F. Timely and accurate completion of all checklists without omission or deviation. Proper use of parachute, life support equipment as required. Complete knowledge of air-drop limitations.
- Q-** Same as above except minor deviations from checklists that would not detract from safety.
- U** Unsatisfactory knowledge of Airdrop procedures. Data not accomplished within ESD tolerances. Untimely or inaccurate completion of procedures that affected safety. Unsatisfactory knowledge of airdrop limitations.

**4.10. SOLL II.**

**Area 57, SOLL Procedures.**

- Q** Demonstrated a thorough knowledge of SOLL procedures. All checklists performed without error.
- Q-** Demonstrated a satisfactory knowledge of SOLL procedures. Checklist accomplished with minor deviations that did not effect safety.
- U** Unsatisfactory knowledge of procedures or unsafe accomplishment of checklists.

**4.11. Instructor.****Area 58, Instructor Ability (Critical).**

- Q** Demonstrated the ability to communicate effectively. Provided appropriate guidance when necessary. Planned ahead and made timely decisions. Identified and corrected potentially unsafe actions/situations.
- U** Unable to effectively communicate or provide timely feedback to the student. Did not provide corrective action when necessary. Did not plan ahead or anticipate student problems. Did not identify unsafe actions/situations in a timely manner. Made no attempt to instruct.

**Area 59, Technical Knowledge (Critical).**

- Q** Effectively demonstrated procedures and techniques. Thorough knowledge of applicable aircraft systems, procedures, publications, and directives.
- U** Did not demonstrate correct procedure or techniques. Insufficient depth of knowledge about applicable aircraft systems, procedures, and/or proper source material.

**Area 60, Student Briefing/Critique (Critical).**

- Q** Briefings were well organized, accurate, and thorough. Reviewed student's present level of training and defined mission events to be performed. During the critique, demonstrated an effective ability to reconstruct the flight, offer mission analysis, and provide guidance where appropriate. Training grade reflected the actual performance of the student relative to the standard. Pre-briefed the student's next mission, if required.
- U** Briefings were marginal or non-existent. Did not review student's past performance. Failed to adequately critique student or analyze the mission. Training grade did not reflect actual performance of student. Overlooked or omitted major discrepancies. Incomplete pre-briefing of student's next mission, if required.

**4.12. Unit.** Units will include MAJCOM-specific and local evaluation area in **Chapter 6**. Include the evaluation areas on AF Form 3862 (see paragraph **1.14**).

## Chapter 5

### LOADMASTER EVALUATIONS

**5.1. General.** This chapter standardizes initial, periodic, and re-qualification evaluation requirements for second and mission loadmasters, including requirements for qualification, mission, and instructor evaluations. The term “second loadmaster” refers to those who have completed the C-141 Loadmaster Initial Qualification (LIQ) training course. See AFI 11-2C-141V1 for second loadmaster certification and training requirements.

**5.2. Qualification/Mission Evaluations (Initial, Periodic, and Requalification).** Evaluations will include a complete aircraft preflight, cargo loading, flight, offload, and post flight. If a periodic qualification evaluation is combined with an additional mission evaluation, an airdrop platform can be used for the evaluation loading requirement. If a load is not available for a periodic evaluation, palletized cargo, airdrop platforms, or vehicular cargo may be static loaded upon completion of the flight portion.

5.2.1. All initial, periodic, and re-qualification evaluations include (as a minimum) areas under GENERAL and appropriate areas under QUALIFICATION/MISSION.

5.2.2. Second Loadmaster Initial. This evaluation is administered at the completion of LIQ. Upon successful completion of the initial Second Loadmaster qualification evaluation, the first AF Form 8 will indicate Crew Position as “FL”, flight phase QUAL/MSN. On AF Form 8 add remarks, “Second Loadmaster-Qualified.” Annotate expiration date according to AFI 11-202V2. The second loadmaster is qualified to perform the following on two loadmaster missions:

- 5.2.2.1. Preflight checklists.
- 5.2.2.2. Operate aircraft hydraulic, oxygen, and door systems.
- 5.2.2.3. Compute weight and balance (form F).
- 5.2.2.4. Load/offload palletized cargo.
- 5.2.2.5. Load wheeled vehicles with pneumatic tires weighing up to 15,000 pounds.
- 5.2.2.6. Load wheeled vehicles with tire inflation pressure under 100 psi.
- 5.2.2.7. Load solid wheeled equipment weighing up to 150 pounds per inch of width.
- 5.2.2.8. Passenger loadmaster duties (following in-unit certification).

5.2.3. Second loadmasters are qualified to perform the following tasks while under the direct supervision of a qualified loadmaster:

- 5.2.3.1. Perform loading procedures requiring use of the winch.
- 5.2.3.2. Perform loading procedures contained in Section VI of T.O. 1C-141B-9.

5.2.4. Initial second loadmaster qualification, mission loadmaster qualification (fully qualified), and additional mission evaluations (Airdrop, SOLL II, and PNAF) will be documented on separate AF Forms 8. For all mission evaluations other than second loadmaster, the AF Form 8 will indicate Crew Position as “ML.”

5.2.5. Mission loadmaster evaluations will be evaluated on a single mission. Upon successful completion of this evaluation, the AF Form 8 will indicate crew position as “ML” flight phase QUAL/

MSN. The loadmaster is qualified to perform unsupervised loadmaster duties for “airland” (e.g., cargo/passenger). Include an expiration date. This expiration date supercedes the second loadmaster expiration date.

5.2.6. If both periodic qualification/mission and additional mission evaluations are successfully completed on the same flight, use a single line entry under flight phase indicating “QUAL/MSN” and date. Use separate line entries if more than one flight is necessary to complete the evaluation. Expiration date is based on earliest flight phase accomplished.

**5.3. Additional Mission Evaluations.** Additional mission evaluations include airdrop, Special Operations Low-Level (SOLL II), and Prime Nuclear Airlift Force (PNAF).

5.3.1. Airdrop. All initial, periodic and re-qualification evaluations will include all areas under GENERAL and AIRDROP. Airdrop qualification requires unit commander approval.

5.3.1.1. Initial. When evaluating a loadmaster for initial airdrop qualification, annotate AF Form 8 as a MSN evaluation. On AF Form 8 add remarks, “Airdrop-Qualified”. Add an expiration date for reference only (C-141 qualification is based on the QUALIFICATION/MISSION evaluation expiration date, see paragraph 1.3.5.). The initial airdrop evaluation will be conducted in two phases.

5.3.1.1.1. Phase I. Examinee must perform primary loadmaster duties for an initial airdrop evaluation. Initial airdrop evaluations will include an actual sequential platform equipment airdrop. (*EXCEPTION*: If a sequential platform equipment airdrop cannot be made, but the examinee demonstrates proper sequential platform rigging procedures before flight, a single platform airdrop may be made).

5.3.1.1.2. Phase II. An actual personnel airdrop will be accomplished. Both phases must be completed before flying as a primary airdrop loadmaster.

5.3.1.2. During initial and periodic evaluations, an airdrop sortie and evaluation may be credited if an unplanned no-drop is called after completion of the Slowdown Checklist provided the no-drop was not due to loadmaster error.

5.3.1.3. Periodic. An actual equipment airdrop is required. All other modes of airdrop may be evaluated verbally. Two loadmasters may receive periodic airdrop evaluations on the same airdrop provided each loadmaster performs an airdrop preflight, all required rigging, and in-flight airdrop duties.

5.3.1.4. CDS Qualification. Initial evaluation will include an actual CDS drop using the center-line vertical restraint (CVR) system. Periodic evaluations are not required, however, CDS procedures will be verbally evaluated.

5.3.2. SOLL II. All initial, periodic and re-qualification evaluations will include all areas under GENERAL and SOLL II. Requires unit commander approval.

5.3.2.1. Initial and periodic SOLL II evaluation consists of onload and offload procedures, NVG operations, special equipment and emergency procedures. Complete the initial evaluation on an operational mission or training exercise.

5.3.2.2. When evaluating a loadmaster for SOLL II qualification, annotate AF Form 8 as a MSN evaluation. On AF Form 8 add remarks, “SOLL II-Qualified.” Add an expiration date for refer-

ence only (C-141 qualification is based on the QUALIFICATION/MISSION evaluation expiration date).

5.3.3. Prime Nuclear Airlift Force (PNAF). All initial, periodic and re-qualification evaluations will include all areas under GENERAL and PNAF. PNAF qualification requires unit commander approval. Use the following:

5.3.3.1. Conduct initial PNAF evaluations on missions with actual or live munitions to the maximum extent possible. If the number of actual missions or mission segments are insufficient (e.g., if waiting for an actual/live munitions mission(s) would adversely affect individual's upgrade or result in an unacceptable upgrade delay for the unit), the initial evaluation may be conducted using training or inert munitions. If training or inert munitions are used, all aspects of the mission (including ground security and munitions personnel) must simulate actual or live munitions procedures.

5.3.3.2. When evaluating a loadmaster for PNAF qualification, annotate AF Form 8 as a MSN evaluation. On AF Form 8 add remarks, "PNAF-Qualified." Add an expiration date for reference only (C-141 qualification is based on the QUALIFICATION/MISSION evaluation expiration date).

5.3.3.3. Flight examiners (not nuclear qualified) may give a spot evaluation or a N/N evaluation on a nuclear mission provided they meet security clearance requirements of the mission. Escort flight examiners who are not certified under the Personnel Reliability Program (PRP) according to AFI 11-299. Flight examiners who do not maintain PNAF currency will not fly on mission legs carrying nuclear cargo unless they obtain ACM approval.

**5.4. Instructor Evaluations.** Flight examiners will place particular emphasis on the examinee's ability to recognize student difficulties and provide timely, effective corrective action. Include all areas under GENERAL, QUALIFICATION/MISSION, and INSTRUCTOR (include areas under AIRDROP, SOLL II, and PNAF if applicable). In addition, instructor evaluations should be administered on a mission representative of the examinee's highest qualification.

5.4.1. To initially qualify as an instructor, the crewmember must successfully complete a dedicated initial instructor evaluation. Accomplish initial instructor evaluations during actual instructional missions when possible. When students are not available or mission requirements/crew composition requirements prevent inclusion of students, the flight examiner may serve as the student for the purpose of evaluating the examinee's instructional ability.

5.4.2. Loadmasters who desire to realign their QUALIFICATION/MISSION evaluation during the initial instructor evaluation (update qualification expiration date) must complete all required written examinations.

5.4.3. Instructor loadmasters will be evaluated on their ability to instruct on all periodic evaluations.

**5.5. Emergency Procedures Evaluations (EPE).** Evaluate an aircrew member's knowledge of emergency procedures during all initial, re-qualification, and periodic qualification evaluations. This may be accomplished in-flight or on the ground.

**5.6. Additional Information.** Flight examiners will not conduct evaluations when scheduled as primary aircrew members.

## 5.7. Loadmaster Grading Criteria.

## 5.8. General.

### Area 1, Directives and Publications.

- Q** Possessed a high level of knowledge of all applicable aircraft publications and procedures and understood how to apply both to enhance mission accomplishment. Publications were current and properly posted.
- Q-** Unsure of some directives but could locate information in appropriate publications. Publications were current but improperly posted.
- U** Unaware of established procedures and/or could not locate them in the appropriate publication in a timely manner. Publications were not current.

### Area 2, Mission Preparation/Planning. Evaluate the following areas: Arming Procedures, Crew Rest/Alert Procedures, Currency, FCIF, Mission Knowledge, Professional Equipment, and Trip Kit.

- Q** Individual is Mission Ready. Possesses required professional equipment/documents. Read and initialed for all items in FCIF. Complied with all directives. Attended/obtained required briefings.
- Q-** Same as above except for deviations or omissions which would not impair mission effectiveness. Did not fully comply with local directives.
- U** Individual was not Mission Ready. Did not possess required professional equipment/documents. FCIF was not reviewed or initialed. Failed to attend/obtain required briefings. Failed to comply with directives.

### Area 3, Use of Checklists.

- Q** Procedures and checklist items required by flight manual and applicable directives were accomplished in a satisfactory and proficient manner.
- Q-** Procedures and checklist items required by flight manuals and applicable directives were accomplished with omissions, deviations, or errors, which detracted from the overall efficient conduct of the mission. Performance was the minimum acceptable.
- U** Procedures or checklist items required by flight manual and applicable directives were accomplished with omissions, deviations, or errors which did, or could adversely affect the successful accomplishment of the mission or task.

### Area 4, Safety Consciousness (Critical).

- Q** Aware of and complied with all safety factors required for safe aircraft operation and mission accomplishment.
- U** Unaware of or did not comply with all safety factors required for safe aircraft operation or mission accomplishment. Operated aircraft or equipment in a dangerous manner.

### Area 5, Judgment/Compliance (Critical).

- Q** Made sound and reasonable decisions, used common sense, and showed insight and perceptiveness. Prepared and completed mission in compliance with existing regulations and directives. Demonstrated knowledge of operating procedures and restrictions and where to find them in the correct publications.
- U** Failed to make sound and reasonable decisions, use common sense, or show insight and perceptiveness. Unaware of established procedures and/or could not locate them in the appropriate publication in a timely manner. Failed to comply with a procedure that could have jeopardized safety or mission success.

**Area 6, Crew Coordination/Crew Resource Management (CRM).** See AFI 11-290, *Cockpit/Crew Resource Management Training Program*, and use AF Form 4031, **CRM Skills Criteria Training/Evaluation**, as a reference. Evaluate the following areas: Aircraft Commander and NCOIC Duties, Loadmaster Coordination Briefing, Medical Crew Duties, and Scanning Duties.

- Q** Effectively coordinated with other aircrew members throughout the assigned mission. Demonstrated understanding of other crewmembers duties and responsibilities.
- Q-** Crew coordination marginal to accomplish mission. Demonstrated limited understanding of other crewmembers duties and responsibilities.
- U** Poor crew coordination or unsatisfactory understanding of other crewmember duties and responsibilities. Negatively affected mission accomplishment or safety of flight.

**Area 7, Communication Procedures.**

- Q** Displayed a satisfactory knowledge of, and compliance with, correct communication procedures. Transmissions were concise and used proper terminology. Accomplished required calls and acknowledged transmissions in a manner that enhanced mission effectiveness.
- Q-** Displayed marginal communication procedures (slow or not concise in making transmissions). Transmissions contained erroneous information or included non-standard terminology. Mission effectiveness was not jeopardized.
- U** Incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Omitted required transmissions or transmitted erroneous information.

**Area 8, Life Support Equipment/Egress.** Evaluate the following areas: Crash Axe, Crew Oxygen Masks, EPOS, Emergency Exit Lights, Escape Hatches, Escape Ropes/Ladders, Escape Routes, Fire Extinguishers, First Aid Kits, Life Rafts, Life Vests, Passenger Oxygen Masks, Personal Breathing Equipment (EEBD), Portable Oxygen Bottle, Protective Clothing Kit, and Restraint Harness.

- Q** Displayed satisfactory knowledge of location and use of life support equipment. Demonstrated and/or emphasized the proper operating procedures used to operate aircraft egress devices such as doors, windows, hatches, escape ropes and ladders.
- Q-** Limited knowledge of location and use of life support equipment. Unsure of the proper operating procedures used to operate some of the aircraft egress devices.
- U** Displayed unsatisfactory knowledge of location and use of life support equipment. Unable to properly operate aircraft egress devices.

**Area 9, Knowledge/Completion of Forms.**

- Q** All required forms were complete, accurate, readable, and accomplished on time IAW applicable directives. Related an accurate debrief of significant events to applicable agencies (ATOC, Safety, Maintenance, etc.)
- Q-** Minor errors on forms that did not affect mission accomplishment. Incorrectly or incompletely reported some information due to minor errors, omissions, and/or deviations.
- U** Did not accomplish required forms. Omitted or incorrectly reported significant information due to major errors, omissions, and/or deviations.

**Area 10, Airmanship/Situational Awareness.** Evaluate the following areas: Crew Discipline, Flight Discipline, Professionalism, and Time Management

- Q** Executed the assigned mission in a timely, efficient manner. Demonstrated strict professional flight and crew discipline throughout all phases of flight. Conducted the flight with a sense of understanding and comprehension.
- Q-** Untimely or inappropriate decisions degraded or prevented accomplishment of a portion of the mission. Resources were not always effectively used to the point that specific mission objectives were not achieved.
- U** Decisions, or lack thereof, resulted in failure to accomplish the assigned mission. Failed to exhibit strict flight and crew discipline.

## 5.9. Qualification/Mission.

### Area 11, Preflight/Aircraft Configuration.

- Q** Accomplished all aircraft preflights and ensured the aircraft was properly configured to accomplish the mission. Familiar with various configurations as outlined in applicable regulations.
- Q-** Accomplished preflights with minor deviations or omissions that would not impair mission effectiveness. Difficulty configuring the aircraft but did not impede mission accomplishment. Limited knowledge of various configurations as outlined in applicable regulations.
- U** Failed to complete aircraft preflights or accomplished preflights with deviations or omissions that would impair mission effectiveness. Failed to ensure proper aircraft configuration or caused loading delays.

### Area 12, Load Planning/Inspection. Evaluate the following areas: Allowable Cabin Load, Cargo Documentation, Loading Charts and Graphs, Palletized Cargo, Rolling Stock, Sequencing of Cargo, and Zero Fuel CG Computations.

- Q** Accurately planned a load of cargo and/or passengers and met aircraft CG limits. Inspected cargo for proper preparation and documentation.
- Q-** Difficulty planning a load of cargo and/or passengers to meet CG limits. Difficulty inspecting cargo for proper preparation and documentation.
- U** Unable to plan a load of cargo and/or passengers and meet CG limits. Failed to inspect cargo for proper preparation and documentation.

### Area 13, On/Offloading Procedures.

- Q** Correctly on/off loaded cargo in a safe and timely manner.
- Q-** Experienced difficulty during on/off loading of cargo.
- U** Failed to correctly or safely on/off load cargo. Loading procedures caused undue delay.

### Area 14, Engine Running Onload/Offload. Evaluate the following areas: Briefings and Crew Coordination, Prior to Landing, On/Offload Procedures, and Restrictions.

- Q** Followed/explained proper procedures for engine running on/off loading operations.
- Q-** Difficulty following/explaining proper procedures for engine running on/off loading operations.
- U** Did not follow/explain proper procedures for engine running on/off loading operations.

### Area 15, Tie Down/Restraint. Evaluate the following areas: Cargo Barricades, Chain Gates and Bridles, General Cargo, Palletized Cargo, Restraint Criteria, Rolling Stock, and Types/Capacities/Restrictions.

- Q** Correctly calculated and applied correct amount of restraint to a given item. Understood and could state the principals of restraint.
- Q-** Difficulty calculating and applying restraint. Did not fully understand the principals of restraint.
- U** Failed to correctly calculate/apply the correct amount of restraint. Did not understand, and could not state the principals of restraint.

**Area 16, Passenger Handling Procedures.** Evaluate the following areas: Boarding Sequence, Briefings, In-flight, Manifesting, Oxygen Requirements, Passenger Service Kit, Personnel Limitation Chart, Seating Restrictions, and Special Category.

- Q** Correctly briefed and performed passenger handling procedures.
- Q-** Difficulty briefing and/or performing passenger handling procedures.
- U** Failed to brief and/or did not perform proper passenger handling procedures.

**Area 17, Weight and Balance.** Evaluate the following areas: Form F Completion/Corrections, Formulas, Limitations, Maximum A/R Fuel Computations, and Out of Sequence Fuel.

- Q** Completed DD Form 365-4, **Weight and Balance**, accurately with only minor mistakes. Errors in takeoff, zero fuel, or landing gross weights did not exceed 500 pounds. Percent of MAC was within 0.3 percent of actual CG. Did not exceed aircraft weight or center of gravity limitations.
- Q-** Errors in takeoff, zero fuel, or landing gross weights did not exceed 1,000 pounds. Percent of MAC was within 0.5 percent of actual CG. Did not exceed aircraft weight or center of gravity limitations.
- U** Failed to complete DD Form 365-4 accurately. Takeoff, zero fuel, or landing gross weight errors in excess of 1,000 pounds or percent of MAC error greater than 0.5 percent of actual CG. Exceeded aircraft weight or center of gravity limitations.

**Area 18, Systems Knowledge/Operation.** Evaluate the following subareas: 18A. Cargo Doors and Ramp, 18B. Cargo Rails and Rollers, 18C. External Power Procedures, 18D. Interphone/Public Address/Radios, and 18E. Oxygen Systems.

- Q** Demonstrated/explained a satisfactory knowledge of specific aircraft systems.
- Q-** Marginal knowledge/demonstration of specific aircraft systems. Slow to analyze problems or apply proper corrective action. Would not have impacted mission effectiveness.
- U** Unsatisfactory knowledge/demonstration of specific aircraft systems. Unable to analyze problems or apply proper corrective action. Could have impacted mission effectiveness.

**Area 19, Winching Procedures.** Evaluate the following areas: Aircraft Brakes, Cable Pull Computations, Configurations, and Operation.

- Q** Correctly demonstrated and/or explained winching procedures.
- Q-** Difficulty demonstrating and/or did not completely explain correct winching procedures. Safety was not compromised.
- U** Failed to demonstrate and/or did not explain correct winching procedures. Safety was compromised.

**Area 20, Hazardous Material.** Evaluate the following areas: Aircraft Loading/Passenger Movement, Aircrew Responsibilities, Certification Procedures, Hazard Classifications, Tactical, and Contingency Operations.

- Q** Demonstrated/explained a satisfactory knowledge of aircrew hazardous material procedures IAW AMCH 11-214. Complied with the provisions of AFJMAN 24-204 and AFJI 11-204.
- Q-** Demonstrated/explained marginal knowledge of aircrew hazardous material procedures with minor deviations. Complied with the provisions of AFJMAN 24-204 and AFJI 11-204. Safety was not compromised.
- U** Did not understand aircrew hazardous material procedures IAW AMCH 11-214. Did not comply with the provisions of AFJMAN 24-204 and AFJI 11-204. Safety was compromised.

**Area 21, Aircraft Limitations.** Evaluate the following areas: Cargo Floor/Ramp, Roller Limitations, Shoring requirements/Calculations, and Tracked Vehicle Limitations.

- Q** Demonstrated/explained a satisfactory knowledge of limitations associated with the aircraft and associated on/off-loading equipment. Could apply aircraft limitations to actual loading situations.
- Q-** Demonstrated/explained marginal knowledge of limitations associated with the aircraft and associated on/off-loading equipment with minor deviations. Safety would not be compromised. Could apply aircraft limitations to actual loading situations.
- U** Failed to demonstrate/explain a satisfactory knowledge of limitations associated with the aircraft and associated on/off-loading equipment. Safety was compromised. Could not apply aircraft limitations to actual loading situations.

**Area 22, Loading Aids.** Evaluate the following areas: Auxiliary Ground Loading Ramps, Bridge Plates, Cargo Loading Stabilizer Struts, Flatbeds, Forklifts, K-Loaders, and Prime Movers.

- Q** Demonstrated/explained a satisfactory knowledge of the use of loading aids and their limitations.
- Q-** Demonstrated/explained marginal knowledge of the use of loading aids and their limitations. Safety was not compromised.
- U** Failed to demonstrate/explain a satisfactory knowledge of the use of loading aids and their limitations. Safety was compromised.

**Area 23, Boldface Emergency Procedures (Critical).** Evaluate the following areas: Bleed Air Smoke, Electrical Fire, Fuselage Fire-Crew Not In Place, and Smoke and Fume Elimination.

- Q** Correct, immediate responses. Coordinated proper crew actions. Performed/explained proper procedures for each type of emergency situation.
- U** Incorrect sequence, unsatisfactory response, or unsatisfactory performance of corrective actions.

**Area 24, Other Emergency Procedures.** Evaluate the following areas: APU Fire-Crew Not In Place, Cargo Loading/Offloading Operations, Depressurization/Rapid Depressurization, Ditching, Fire On The Ground, In-flight Door Warning, Jettisoning, Signals, and Wheels-up Landing.

- Q** Operated within prescribed limits and correctly diagnosed problems. Performed/explained proper procedures for each type of emergency situation. Effectively used available equipment.
- Q-** Operated within prescribed limits but slow to analyze problems or apply proper corrective actions. Deviated or omitted checklist procedures without compromising safety. Did not effectively use available equipment.
- U** Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available equipment.

## 5.10. Airdrop.

**Area 25, Knowledge of Airdrop Procedures.**

- Q** Demonstrated/explained a satisfactory knowledge of airdrop procedures.
- Q-** Marginal knowledge of airdrop procedures. Minor deviations/omissions without compromising safety. Mission effectiveness would not have been impacted.
- U** Unsatisfactory knowledge and application of airdrop procedures. Major deviations/omissions. Mission effectiveness could have been impacted. Safety was compromised.

**Area 26, Briefings.** Evaluate the following areas: Loadmaster Coordination Briefing, Parachutist Briefing, Pilot/Navigator/Loadmaster/Jumpmaster Brief, Specialist Briefing, and Tactical Briefing.

- Q** Demonstrated the ability to satisfactorily conduct and receive required briefings for the mission.
- Q-** Demonstrated marginal ability to conduct and receive required briefings for the mission. Minor omissions did not have an adverse mission impact or compromise safety.
- U** Failed to conduct or receive required briefings for the mission. Adversely impacted mission accomplishment or safety.

**Area 27, Pre-departure Requirements.** Evaluate the following areas: Aircraft Preparation/Preflight, Flight C/G Limits, Helmet/Parachute/Harness Inspection, and Rigging/Joint Inspection.

- Q** Satisfactorily accomplished aircraft airdrop preflights and ensured the aircraft was properly configured to accommodate oncoming load. Correctly rigged and inspected key airdrop components. Insured aircraft stayed within flight center of balance limits. Inspected and pre-fitted safety equipment before takeoff.
- Q-** Accomplished preflights with minor deviations or omissions that would not impair mission effectiveness. Unsure of proper aircraft configuration but did not impede loading of aircraft. Difficulty rigging and/or inspecting key airdrop components. Difficulty determining flight center of balance limits. Difficulty inspecting and fitting safety equipment.
- U** Failed to complete aircraft preflights or accomplished preflights with deviations or omissions that would impair mission effectiveness. Failed to ensure proper aircraft configuration or caused loading delays. Failed to properly rig and/or inspect key airdrop components. Failed to, or could not determine flight center of balance limits. Failed to, or could not properly inspect or fit safety equipment.

**Area 28, In-flight Procedures.** Evaluate the following areas: CDS, Door Bundles, Heavy Equipment, High Altitude Personnel, and SATB.

- Q** Safely and effectively accomplished all mission checklist duties. No omissions or deviations were noted.
- Q-** Accomplished checklist duties with minor omissions or deviations. Slow to analyze problems or apply proper corrective action. Safety was not compromised.
- U** Failed to accomplish all mission checklist duties. Major deviations and omissions. Unable to analyze problems or apply proper corrective action. Safety was compromised.

**Area 29, Emergency Procedures.**

- Q** Operated within prescribed limits and correctly diagnosed problems. Performed/explained proper corrective action for each type of malfunction. Effectively used available equipment.
- Q-** Operated within prescribed limits but slow to analyze problems or apply proper corrective actions. Did not effectively use and/or experienced delays, omissions, or deviations in use of checklist and/or available equipment.
- U** Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available equipment.

## 5.11. SOLL II.

**Area 30, Knowledge of SOLL II/Standard Operating Procedures (SOPs).**

- Q** Demonstrated/explained a satisfactory knowledge of SOLL II procedures/SOPs.
- Q-** Marginal knowledge of SOLL II procedures/SOPs. Minor deviations/omissions without compromising safety. Mission effectiveness would not have been impacted.
- U** Unsatisfactory knowledge and application of SOLL II procedures/SOPs. Major deviations/omissions and/or safety was compromised. Mission effectiveness could have been impacted.

**Area 31, Briefings.**

- Q** Demonstrated the ability to satisfactorily conduct and receive required briefings for the mission.
- Q-** Demonstrated marginal ability to conduct and receive required briefings for the mission. Minor omissions did not have an adverse mission impact.
- U** Failed to conduct or receive required briefings for the mission. Adversely impacted mission accomplishment or safety.

**Area 32, Predeparture Requirements.** Evaluate the following areas: Aircraft Preparation/Preflight, On/Offloading Procedures, and Tiedown/Restraint.

- Q** Satisfactorily accomplished aircraft SOLL II preflights and ensured the aircraft was properly configured to accommodate oncoming load. Correctly rigged and inspected key airdrop components. Inspected and pre-fitted safety equipment before takeoff.
- Q-** Accomplished preflights with minor deviations or omissions that would not impair mission effectiveness. Difficulty configuring the aircraft but did not impede loading of aircraft. Difficulty rigging and/or inspecting key airdrop components. Difficulty inspecting and fitting safety equipment.
- U** Failed to complete aircraft preflights or accomplished preflights with deviations or omissions that would impair mission effectiveness. Failed to ensure proper aircraft configuration or caused loading delays. Failed to properly rig and/or inspect key airdrop components. Failed to, or could not properly inspect or fit safety equipment.

**Area 33, In-flight Procedures.**

- Q** Safely and effectively accomplished all mission checklist duties. No omissions or deviations were noted.
- Q-** Accomplished checklist duties with minor omissions or deviations. Slow to analyze problems or apply proper corrective action. Safety was not compromised.
- U** Failed to accomplish all mission checklist duties. Major deviations and omissions. Unable to analyze problems or apply proper corrective action. Safety was compromised.

**Area 34, Safety (Blacked-Out Environment).**

- Q** Operated within prescribed limits and correctly diagnosed problems. Effectively used NVGs.
- Q-** Operated within prescribed limits but slow to analyze problems or apply proper corrective actions. Did not effectively use NVGs.
- U** Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use NVGs effectively.

**5.12. PNAF.****Area 35, Knowledge of PNAF Procedures.**

- Q** Demonstrated/explained a satisfactory knowledge of PNAF general duties, responsibilities, and aircrew coordination.
- Q-** Marginal knowledge of PNAF general duties and responsibilities. Marginal aircrew coordination. Minor deviations without compromising safety. Mission effectiveness was not impacted.
- U** Unsatisfactory knowledge and application of PNAF general duties and responsibilities. Unsatisfactory aircrew coordination. Major deviations and/or safety was compromised. Mission effectiveness could have been impacted.

**Area 36, Mission Planning/Preparation.**

- Q** Satisfactorily pre-planned cargo loads IAW applicable publications. Accomplished all required predeparture duties to include personal preparation and preflight.
- Q-** Difficulty pre-planning cargo loads IAW applicable publications. Minor deviations/omissions of required predeparture duties to include personal preparation and preflight. Did not impact mission effectiveness. Safety was not compromised.
- U** Did not pre-plan cargo loads IAW applicable publications. Did not accomplish all required predeparture duties to include personal preparation and preflight. Deviations/omissions could have impacted mission effectiveness. Safety was compromised.

**Area 37, En route Operations.**

- Q** Satisfactorily demonstrated/explained en-route operations to include ground operations, departure/arrival procedures, and emergency procedures.
- Q-** Marginally demonstrated/explained en-route operations to include ground operations, departure/arrival procedures, and emergency procedures. Minor deviations/omissions of required en-route duties. Did not impact mission effectiveness.
- U** Failed to adequately demonstrate/explain en-route operations to include ground operations, departure/arrival procedures, and emergency procedures. Deviations/omissions could have impacted mission effectiveness and/or safety was compromised.

**Area 38, Aircraft Security.**

- Q** Satisfactorily explained/demonstrated aircraft security requirements for departure, in-flight, and arrival.
- Q-** Minor deviations/omissions when explaining/demonstrating aircraft security requirements for departure, in-flight, and/or arrival. Mission effectiveness was not impacted. Safety was not compromised.
- U** Failed to adequately explain/demonstrate aircraft security requirements for departure, in-flight, and/or arrival. Mission effectiveness could have been impacted. Safety was compromised.

**Area 39, Loading/Off loading Operations.**

- Q** Satisfactorily demonstrated the ability to supervise loading/off-loading operations to include the use of loading aids and restraint.
- Q-** Difficulty with loading/off loading operations, use of loading aids, and/or application of restraint. Minor deviations/omissions did not impact mission effectiveness. Safety was not compromised.
- U** Failed to adequately supervise loading/off-loading operations. Did not use loading aids correctly and/or apply restraint IAW applicable publications. Mission effectiveness could have been impacted. Safety was compromised.

**5.13. Instructor.****Area 40, Instructor Ability (Critical).**

- Q** Demonstrated the ability to communicate effectively. Provided appropriate guidance when necessary. Planned ahead and made timely decisions. Identified and corrected potentially unsafe operations/situations.
- U** Unable to effectively communicate or provide timely feedback to the student. Did not provide corrective action when necessary. Did not plan ahead or anticipate student problems. Did not identify unsafe operations/situations in a timely manner. Made no attempt to instruct.

**Area 41, Technical Knowledge (Critical).**

- Q** Effectively demonstrated procedures and techniques. Thorough knowledge of applicable aircraft systems, procedures, publications, and directives.
- U** Did not demonstrate correct procedure or techniques. Insufficient depth of knowledge about applicable aircraft systems, procedures, and/or proper source material.

**Area 42, Student Briefing/Critique (Critical).**

- Q** Briefings were well organized, accurate, and thorough. Reviewed student's present level of training and defined mission events to be performed. During the critique, demonstrated an effective ability to reconstruct the flight, offer mission analysis, and provide guidance where appropriate. Training grade reflected the actual performance of the student relative to the standard. Pre-briefed the student's next mission, if required.
- U** Briefings were marginal or non-existent. Did not review student's past performance. Failed to adequately critique student or analyze the mission. Training grade did not reflect actual performance of student. Overlooked or omitted major discrepancies. Incomplete pre-briefing of student's next mission, if required.

**Area 43, Knowledge of Training Forms.**

- Q** All required forms were accomplished on time and IAW applicable directives. Demonstrated satisfactory knowledge of forms/publications required for mission accomplishment. Training documentation was concise and readable.
- Q-** Displayed limited knowledge of forms/publications. Required forms were completed with some delay and IAW applicable directives. Minor errors or omissions in training documentation.
- U** Knowledge of mission required forms/publication was inadequate. Did not accomplish required forms. Omitted or incorrectly documented significant training information.

**5.14. Unit.** Units will include MAJCOM-specific and local evaluation area in **Chapter 6**. Include the evaluation areas on AF Form 3862 (see Paragraph **1.14**).

**Chapter 6**

**LOCAL C-141B/C PROCEDURES**

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

MARVIN R. ESMOND, Lt General, USAF  
DCS, Air and Space Operations

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

AFPD 11-2, *Aircraft Rules and Procedures*  
AFI 11-202V1, *Aircrew Training*  
AFI 11-202V2, *Aircrew Standardization/Evaluation Program*  
AFI 11-2C-141V1, *C-141 Aircrew Training*  
AFI 11-2C-141V3, *C-141 Operations Procedures*  
AFI 11-215, *Flight Manuals Program (FMP)*  
AFI 11-218, *Aircraft Operation and Movement on the Ground*  
AFI 11-290, *Cockpit/Crew Resource Management Training Program*  
AFI 11-299, *Nuclear Airlift Operations*  
AFMAN 11-210, *Instrument Refresher Course Program*  
AFMAN 36-2236, *Guidebook for Air Force Instructors*  
AFMAN 37-139, *Records Disposition Schedule*

***Abbreviations and Acronyms***

**AC**—Aircraft Commander  
**AR**—Air Refueling  
**ARA**—Airborne Radar Approach  
**ASEV**—Aircrew Standardization and Evaluation Visit  
**ATC**—Air Traffic Control  
**ATD**—Aircrew Training Device  
**CARP**—Computed Air Release Point  
**CRM**—Crew Resource Management  
**EPE**—Emergency Procedures Evaluation  
**ESD**—Evaluation Standards Document  
**FARP**—Forward Areas Refueling Point  
**FCIF**—Flight Crew Information File  
**FEF**—Flight Evaluation File  
**GA**—Go-Around  
**GPS**—Global Positioning System

**ILS**—Instrument Landing System

**KIAS**—Knots Indicated Airspeed

**MDA**—Minimum Descent Altitude

**MQF**—Master Question File

**MTL**—Master Task List

**NVG**—Night Vision Goggles

**PAR**—Precision Approach Radar

**RON**—Remain Overnight

**RQ**—Requalification

**SATB**—Simulated Airdrop Training Bundle

**SCM**—Space Cargo Modification

**SID**—Standard Instrument Departure

**SOLL**—Special Operations Low Level

**SQB**—Secure Question Bank

**TAA/D**—Threat Avoidance Approach/Departure

**TOA**—Time of Arrival

**TOT**—Time Over Target

Attachment 2

PILOT AIRCREW EVALUATION WORKSHEET EXAMPLE

Figure A2.1. C-141 Pilot Aircrew Evaluation Worksheet.

AREA/SUBAREAS	O	D	U	T	REMARKS	AREA/SUBAREAS	O	D	U	T	REMARKS
<b>GENERAL</b>	■	■	■	X		39. Authentication/Aircraft Security					
1. Directives and Publications						40. Engines Running On/Offload					
2. Msn Preparation/Planning/Performance						<b>AIR REFUELING</b>	■	■	■	X	
3. Use of Checklists						41. Air Refueling--General					
4. Safety Consciousness		■				41A. Rendezvous					
5. Judgment/Compliance		■				41B. Closure					
6. Crew Coordination/CRM						41C. Position/Control					
7. Communication Procedures						41D. Overrun Procedures					
8. Life Support Systems/Egress						41E. Breakaway Procedures					
9. Knowledge/Completion of Forms						41F. Emergency Procedures					
10. Airmanship/Situational Awareness						41G. Rt Seat A/R, Limits Demo (IP Only)					
<b>QUALIFICATION/MISSION</b>	■	■	■	X		<b>PNAF</b>	■	■	■	X	
11. Ground Operations						42. Knowledge of PNAF Procedures					
12. Takeoff						43. Mission Preparation/Execution					
13. Rdr Ops/Wtr Avoidance/Windshear						44. Aircraft/Cargo Procedures					
14. Fuel Conservation						45. No-Lone Zone/Two-Person Concept					
15. VFR Pattern						46. Acceptance/Transfer of Custody					
16. Landings						47. Onloading/Offloading Procedures					
17. Landing Roll/Braking/Reverse Thrust						48. Emergency Procedures					
18. All Engine Go-Around (GA)						<b>AIRDROP/FORMATION</b>	■	■	■	X	
19. Engine Out Operations						49. Knowledge of Airdrop Procedures					
20. Engine Out GA/Eng Failure T/O Cont						50. Threat Analysis/Chart Preparation					
21. Boldface Emergency Procedures		■				51. Ground Operations					
22. Other Emergency Procedures						52. Departure/Assembly					
23. Systems Ops/Knowledge/Limitations						53. Formation Procedures					
24. Tactical Maneuvers (if observed)						54. Low/Mid Level Navigation					
<b>INSTRUMENT</b>	■	■	■	X		55. Ingress/Slowdown					
25. Instrument Departure/SID						56. Drop Zone Acquisition/Track					
26. Enroute Navigation/FMS (if installed)						57. Release Procedures					
27. Holding						58. Airdrop Procedures					
28. Use of NAVAIDS						59. Descent/Recovery/Landing					
29. Descent/Arrival						60. Formation Recovery					
30. Precision Approaches (Min. 2 Req)						61. Formation Landing					
30A. PAR (verbal if not observed)						62. Formation Air Refueling					
30B. ILS						63. Lead Airdrop/Formation Qualification					
30C. Cat II ILS						<b>SOLL II</b>	■	■	■	X	
31. Non-Precision Approaches						64. Knowledge of SOLL II Procedures					
32. Circling Approach						65. Threat Analysis/Chart Preparation					
33. Missed Approach						66. Ground Operations					
<b>ENROUTE (Aircraft Cmdrs Only)</b>	■	■	■	X		67. Departure					
34. Aircraft Cmdrs Responsibility						68. Low/Mid Level Navigation					
35. En Route Procedures						69. Ingress/Slowdown					
36. Descent/Arrival						70. Runway Acquisition/Track					
37. Landing						71. Descent/Airborne Radar Approach					
38. Post-Flight/RON Procedures						continue on reverse					



Attachment 3

NAVIGATOR AIRCREW EVALUATION WORKSHEET EXAMPLE

Figure A3.1. C-141 Navigator Aircrew Evaluation Worksheet.

AREA/SUBAREAS	Q	G	U	T	REMARKS	AREA/SUBAREAS	Q	G	U	T	REMARKS
<b>GENERAL</b>	■	■	■	X		29. DZ/Runway Acquisition/Alignment					
1. Directives and Publications						30. TOT/TOA		■			
2. Msn Preparation/Planning/Performance						31. In-flight Airdrop Computations					
3. Use of Checklists						32. Airdrop Accuracy		■			
4. Safety Consciousness		■				33. Escape/Recovery (Visual & SKE)					
5. Judgment/Compliance		■				34. Formation Air Refueling Procedures					
6. Crew Coordination/CRM						<b>SOLL II</b>	■	■	■	X	
7. Communication Procedures						35. Special Operations Procedures					
8. Life Support Systems/Egress						36. ARA (Map & Radar)					
9. Knowledge/Completion of Forms						37. NVG Operations					
10. Airmanship/Situational Awareness						38. TOT/TOA		■			
11. Briefings						39. Airdrop Accuracy		■			
<b>QUALIFICATION/MISSION</b>	■	■	■	X		<b>INSTRUCTOR</b>	■	■	■	X	
12. Preflight						40. Instructor Ability		■			
13. Fuel Planning						41. Instructor Demonstration		■			
14. Departure						42. Student Briefing/Critique		■			
15. Radar Ops/Wx Avoidance/Windshear						<b>UNIT</b>	■	■	■	X	
16. General Navigation											
16A. Plotting/Fixing/Pacing											
16B. Course Adherence											
17. Radio Navigation											
18. Equipment Operation(Knowledge/Use)											
18A. INS/FSAS/GPS/FMS--C Model											
18B. Compass Systems											
18C. Comm Systems (Secure Comm)											
19. Def Systems/Tactics/Threat Avoidance											
20. Descent/Approach Monitor											
21. Air Refueling Procedures											
22. Emergency Equipment											
23. Emergency Procedures											
24. Boldface Emergency Procedures		■									
<b>AIRDROP</b>	■	■	■	X							
25. Tactical/Airdrop Mission Planning											
25A. Route/Objective/Threat Analysis											
25B. Briefings											
25C. Flight Plan/Airdrop Data/Charts											
26. Low Level Departure (VFR & SKE)											
27. Low Level Navigation											
27A. ETAs											
27B. Nav Procedures/Course Tolerance											
27C. Pacing											
27D. In-flight Advisories											
27E. SKE Procedures											
27F. Radar Operations											
28. Slowdown											



Attachment 4

FLIGHT ENGINEER AIRCREW EVALUATION WORKSHEET EXAMPLE

Figure A4.1. C-141 Flight Engineer Aircrew Evaluation Worksheet.

AREA/SUBAREAS	O	D	U	T	REMARKS	AREA/SUBAREAS	O	D	U	T	REMARKS
<b>GENERAL</b>	■	■	■	X		44. Pressurization					
1. Directives and Publications						45. Anti/De-icing					
2. Use of Checklists						46. Hydraulics					
3. Safety Consciousness		■				47. Flight Controls					
4. Judgment/Compliance		■				48. Landing Gear/Brakes					
5. Crew Coordination/CRM						49. Avionics					
6. Communication Procedures						50. Lighting					
7. Life Support Systems/Egress						51. Doors/Ramps/Hatches					
8. Knowledge/Completion of Forms						52. Oxygen					
9. Situational Awareness						53. Warning Systems					
10. Professional Equipment						54. Tactical Mission Planning					
<b>QUALIFICATION/MISSION</b>	■	■	■	X		55. Combat Entry/Exit Checklist					
11. Mission Preparation/Planning						56. Air Drop					
12. Aircraft Preflight						<b>SOLL II</b>	■	■	■	X	
13. Takeoff Data						57. SOLL Procedures					
14. Departure Procedures/Checklists						<b>INSTRUCTOR</b>	■	■	■	X	
15. Departure Monitoring						58. Instructor Ability		■			
16. Cruise Procedures/Checklists						59. Technical Knowledge		■			
17. Air Refueling						60. Student Briefing/Critique		■			
18. Arrival Procedures/Checklists						<b>UNIT</b>	■	■	■	X	
19. Landing Data											
20. Postflight											
21. Boldface Emergency Procedures		■									
22. APU/Fuselage Fire-Crew Not In Place											
23. Fire on the Ground											
24. Abort/Brake Limits											
25. Smoke and Fumes Elimination											
26. Wing Fire											
27. Bleed Air Smoke											
28. Bleed Duct Overheat											
29. Electrical Fire											
30. Rapid Decompression											
31. Fuel Jettison											
32. Cargo Jettison/Bailout											
33. Wheels-up Landing/Ditching											
34. Battery Start											
35. Fire Handle Start											
36. Push Back/Tow											
37. Backing the Aircraft											
38. Three Engine/Zero Flap Takeoff											
39. Engines/APU											
40. Fuel/Air Refueling											
41. Electrical											
42. Bleed Air											
43. Air Conditioning											



Attachment 5

LOADMASTER AIRCREW EVALUATION WORKSHEET EXAMPLE

Figure A5.1. C-141 Loadmaster Aircrew Evaluation Worksheet.

AREA/SUBAREAS	D	Q	U	T	REMARKS	AREA/SUBAREAS	D	Q	U	T	REMARKS
<b>GENERAL</b>	■	■	■	X		<b>PNAF</b>	■	■	■	X	
1. Directives and Publications						35. Knowledge of PNAF Procedures					
2. Msn Preparation/Planning						36. Mission Planning/Preparation					
3. Use of Checklists						37. En Route Operations					
4. Safety Consciousness		■				38. Aircraft Security					
5. Judgment/Compliance		■				39. Loading/Offloading Operations					
6. Crew Coordination/CRM						<b>INSTRUCTOR</b>	■	■	■	X	
7. Communication Procedures						40. Instructor Ability		■			
8. Life Support Equipment/Egress						41. Technical Knowledge		■			
9. Knowledge/Completion of Forms						42. Student Briefing/Critique		■			
10. Airmanship/Situational Awareness						43. Knowledge of Training Forms					
<b>QUALIFICATION/MISSION</b>	■	■	■	X		<b>UNIT</b>	■	■	■	X	
11. Preflight/Aircraft Configuration											
12. Load Planning/Inspection											
13. On/Offloading Procedures											
14. Engine Running Onload/Offload											
15. Tie Down/Restraint											
16. Passenger Handling Procedures											
17. Weight and Balance											
18. Systems Knowledge/Operation											
18A. Cargo Doors and Ramp											
18B. Cargo Rails and Rollers											
18C. External Power Procedures											
18D. Interphone/Public Address/Radios											
18E. Oxygen Systems											
19. Winching Procedures											
20. Hazardous Material											
21. Aircraft Limitations											
22. Loading Aids											
23. Boldface Emergency Procedures		■									
24. Other Emergency Procedures											
<b>AIRDROP</b>	■	■	■	X							
25. Knowledge of Airdrop Procedures											
26. Briefings											
27. Pre-departure Requirements											
28. In-flight Procedures											
29. Emergency Procedures											
<b>SOLL II</b>	■	■	■	X							
30. Knowledge of SOLL II Procedures											
31. Briefings											
32. Predeparture Requirements											
33. In-flight Procedures											
34. Safety (Blacked-Out Environment)											

