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C/KC-135 AIRCREW EVALUATION CRITERIA

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This volume implements AFPD 11-2, *Aircraft Rules and Procedures*. It establishes evaluation criteria for the operation of KC-135 (including 6ARW, EC-135N and 15 ABW, C-135) 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 Air Force Reserve Command (AFRC) associate and unit equipped reserve and Air National Guard (ANG) 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.

The Privacy Act of 1974 applies to certain information gathered pursuant to this instruction. The Privacy Act System Number F011 AF XO A, Air Force Operations Resource Management Systems (AFORMS) covers required information. The Paperwork Reduction Act of 1974 as amended in 1996 affects this instruction. Maintain and dispose of records created as a result of processes prescribed in this publication according to AFMAN 37-139, *Records Disposition Schedule*.

This document is new and must be completely reviewed.

(MACDILL) AFI 11-2KC-135, Volume 2, *C/KC-135 Aircrew Evaluation Criteria*, 1 July 2000, is supplemented as follows. It implements AFPD 11-2, *Aircraft Rules and Procedures*, and establishes the evaluation criteria for the operation of the 6th Air Mobility Wing (6 AMW) assigned KC-135R aircraft supporting Air Force objectives. 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. Specific responsibilities are defined herein for the 6th Operations Group Standardization and Evaluation (6 OG/OGV) flight examiners and 91st Air Refueling Squadron Standardization and Evaluation (91 ARS/DOV) flight examiners. 91 ARS/DOV will submit recommended changes to 6 OG/OGV on an AF Form 847,

Recommendation for Change of Publication. To ensure compliance with these directives, the Chief of 6 OG/OGV will review this chapter annually or whenever a change is published to AFI 11-2KC-135V2.

The Privacy Act of 1974 affects this instruction. The Privacy Act System Number F011 AF XO A, Aviation Resource Management System (ARMS) covers required information. The authority for maintenance of ARMS is Title 37 U.S.C. 301a (Incentive Pay), Public Law 92-204, Section 715 (Appropriations Act for 1973), Public Laws 93-570 (Appropriations Act for 1974), 93-294 (Aviation Career Incentive Act of 1974), and Executive Order 9397. Records disposition: Ensure that all records created by this supplement are maintained and disposed of in accordance with AFMAN 37-139, *Records Disposition Schedul*e.

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Chapter 1

GENERAL INFORMATION

1.1. General. This AFI provides flight examiners and aircrews with procedures and evaluation criteria/ tolerances to be used during flight evaluations as specified in 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 when conducting aircrew evaluations. Instructors use this AFI when preparing aircrews for qualification.

1.2. Applicability. This AFI is applicable to all individuals operating C/KC-135 aircraft. Copies should 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.

1.4. 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, who in turn, delegates MAJCOM/DO as waiver authority according to AFI 11-202V2, and the appropriate MAJCOM supplement.

1.4.2. MAJCOM/DOs 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 AFPD 11-2, *Aircraft Rules and Procedures.* Limit the supplements' information to unique requirements only. MAJCOMs may specify unique evaluation items in their appropriate supplement (units use **Chapter 5**). 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/XOO for approval (according to AFPD 11-2, *Aircraft Rules and Procedures)*. Use the following OPR's address: HQ AMC/ DOV, 402 Scott Dr., Unit 3A1, Scott AFB IL, 62225-5302. When supplements are published, provide 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 5** 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 may provide copies for all 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.

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-135 and KC-135 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/KC-135 pilots and navigators will successfully complete initial and periodic instrument evaluation including the requisite instrument refresher course (IRC) and open-book, written instrument examination according to AFMAN 11-210, *Instrument Refresher Course Program*. All C/KC-135 pilots will successfully complete an instrument flight evaluation.

1.9.2. Qualification (QUAL) Evaluation. All C/KC-135 crewmembers will successfully complete a periodic qualification evaluation including the requisite open-book, closed-book, Boldface written examinations, emergency procedures evaluation (EPE), publications check, and a flight evaluation.

1.9.3. Mission (MSN) Evaluations. All C/KC-135 crewmembers will complete a mission evaluation. Except as noted in the following crew position chapters, all crewmembers will be evaluated in designated areas/subareas required in the performance of a single (normal) operational or training sortie to successfully complete the MSN evaluation.

1.9.4. Instructor (INSTR) Evaluations. To initially qualify as an instructor in the C/KC-135, crewmembers will successfully complete an initial instructor qualification course and evaluation. Subsequently, aircrew members designated as instructors will be evaluated on their ability to instruct during all periodic evaluations. Crewmembers may use the initial instructor evaluation to satisfy the requirements of the periodic QUAL/MSN evaluation. Refer to the specific aircrew chapter for requirements.

1.9.5. SPOT Evaluations. A SPOT evaluation is an 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 this AFI or MAJCOM supplement. See AFI 11-202V2 for options to convert a SPOT evaluation to meet requirements of a periodic evaluation.

1.9.6. 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 qualification evaluations. Refer to the specific aircrew chapter for requirements and the following:

1.9.6.1. Units will develop and periodically maintain a list of EPE program requirements (topics, special interests, etc.) in **Chapter 5**. The EPE will include areas commensurate with the examinee's graduated training (e.g. initial, line, instructor, evaluator) or as specified in AFI 11-202V2 and MAJCOM Supplement.

1.9.6.2. 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 actions of selected emergency procedures that would not allow time for reference.

1.9.6.3. 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 according to AFI 11-202V2.

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

1.9.7.1. Distinguish unique QUAL/MSN evaluations (e.g., Cargo, Receiver A/R, PC-Qualified, etc.) on AF Form 8, as the first entry of the Examiner's Remarks, A. Mission Description.

1.9.7.2. Conversion/Difference Evaluations. Conversion qualification is normally associated with training between MDS (e.g. KC-135 and C-17). The KC-135 community uses the phrase "difference" to describe training/evaluation of one or more areas to meet qualification requirements in the same series aircraft in the same MDS. 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 an expiration date established because the evaluation does not satisfy the requirements for the "full" periodic evaluation. Pacer CRAG training/evaluation is classified as difference qualification according to AFI 11-202V1, *Aircrew Training*. See each crewmember's chapter for difference evaluation requirements.

1.9.7.2.1. Annotate AF Form 8, flight phase as a SPOT evaluation (according to AFI 11-202V2 and Paragraph **1.9.5.** above).

1.9.7.2.2. See difference training requirements in AFI 11-2KC-135V1, C/*KC-135 Aircrew Training,* and the appropriate crewmember's chapter.

1.9.8. Manual Gear Extension and Manual Flap Lowering. Mandatory on all initial navigator and boom operator initial qualification and initial instructor evaluations. Flap lowering may be accomplished in-flight or on the ground). Optional item for all other evaluations. Verbal evaluation required when aircraft differences dictate e.g., KC-135E vs KC-135D, etc.

1.10. Grading Policies.

1.10.1. The overall qualification level awarded on 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 the evaluation.

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

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

1.10.3.2. The flight examiner may grade any area/subarea accomplished during an evaluation if performance in that area/subarea 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 verbally evaluated or evaluated in an ATD or OFT. Flight examiners will make every effort to evaluate all required areas/subareas in-flight, simulator or static training tools before resorting to this provision, to include scheduling an evaluation completion sortie. When used, the evaluator will identify the area or items within the area that were verbally evaluated on AF Form 8 as an examiner remark (following the mission description).

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

1.10.5.1. For pilots only, 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.

1.10.5.2. Flight examiners will use sound judgement in the application of the grading criteria in this instruction to determine the final grade.

1.11. Grading System. ***NOTE:*** This paragraph 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. 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 more 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 more areas/subareas.

1.11.1.4. The flight examiner will indicate all appropriate restriction(s) and additional training on the AF Form 8, **Certificate of Aircrew Qualification**.

1.11.2. Area/Subarea Grades. Areas/subareas 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. Boldface. Grade Boldface either "Q" or "U."

1.11.4. 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 area title and shading of Q- block on AF Form 3862, **Aircrew Evaluation Worksheet** (see examples at **Attachment 2**, **Attachment 3**, or **Attachment 4**).

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/sub area 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 will normally 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 which 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, 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 and restrictions, whether critical or non-critical. Normally, additional training should not be accomplished on the same flight.

EXCEPTION: Additional training on the same flight is allowed when, in the evaluator's judgement, unique situations presenting valuable training opportunities (e.g., thunderstorm avoidance, crosswind landings) exist. This option requires 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).

1.13.4. A SIM/ATD or OFT may be used to accomplish additional training and re-checks. Limit areas for additional training and re-checks to those that can be realistically accomplished in the OFT/BOT.

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**, or **Attachment 4**, to use as an evaluation worksheet. Copy each title, area number and text (in the 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 Forms 8 is added to the FEF, then discard.

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

1.15.1. Open Book Exam (Open Book). The open book examination should normally be administered before the initial flight evaluation and as a requisite to periodic flight evaluations. The open book examination will consist of 60-100 questions. The examination questions will come from a Secure Question Bank (SQB) created and managed by each OGV. A portion of the open book examination administered to flight instructors will include instructor (scenario-based) questions. A separate (unique) instructor open book examination is not required for periodic evaluations.

1.15.2. Initial Instructor Open Book (INIT INSTR Open Book). Administer an initial instructor open book one time before the initial instructor flight evaluation. The instructor open book examination is requisite for INIT and RQ INSTR flight evaluations only. The examination will have a minimum of 20 questions from directives including AFMAN 36-2236, *Guidebook for Air Force Instructors,* AFI 11-2KC-135V1, V2, and V3 (including MAJCOM supplements) and other common flight or instructor related sources. Exams will include scenario-driven instructor related questions.

1.15.3. Closed Book (Closed Book). The closed book examinations should normally be administered before the initial flight evaluation and as a requisite to periodic flight evaluations. The closed book exam will consist of a minimum 20 questions derived from the Master Question File (MQF). Pilots will complete a Boldface exam in conjunction with the closed book examination.

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

1.15.5. Difference Exam. See the appropriate crewmember chapters.

1.16. Typical KC-135 Evaluation Profile.

1.16.1. Units determine a flight evaluation profile to maximize successful completion of all evaluation requirements on a single mission. A typical profile may include takeoff, cruise, rendezvous, Air Refueling (A/R), navigation leg (if required), concluding local transition. A formation profile is encouraged.

1.17. Senior Officer Requirements. See AFI 11-202V1, *Aircrew Training,* and the appropriate aircrew chapter.

Chapter 2

PILOT EVALUATIONS

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

2.2. Instrument Evaluation. Conduct C/KC-135 instrument evaluations in-flight in conjunction with a qualification evaluation. Include all items under INSTRUMENT. Evaluate circling approach, holding, and PAR approach (if available) in-flight. The evaluator may elect to verbally evaluate each area after consideration of the individual's proficiency.

2.3. Qualification/Mission Evaluations (initial, periodic and re-qualification). Include all areas under GENERAL, QUALIFICATION/MISSION, and INSTRUMENT.

2.3.1. Initial qualification or re-qualification in Pacer CRAG aircraft, include all areas under GENERAL, QUALIFICATION/MISSION, and INSTRUMENT. Annotate AF Form 8 restriction to PC-Only aircraft. See dual-qualification requirement, if necessary.

NOTE: Evaluate dual-seat qualified aircraft commanders on at least one instrument approach and landing in both left and right seats (only one precision approach is required). Evaluate copilots only on copilot duties.

2.3.2. Tanker Air Refueling (A/R). Rendezvous is required. Evaluate ACs in either seat (if right and left seat qualified) and copilots in the right seat. Evaluate instructors in either seat. Offload to a receiver is not required.

2.3.3. Senior Staff Evaluations. Senior Staff Officer initial, periodic and re-qualification evaluations include the areas under GENERAL, QUALIFICATION/MISSION, and INSTRUMENT. The following areas are not required: 16D, Right Seat Landing; 23, Tanker A/R (unless requested); and 24, Receiver A/R.

2.3.3.1. Conduct an EPE to Senior Staff Officers in a random selection of Boldface procedures.

2.3.3.2. Annotate AF Form 8 crew position as "FP" (MP if Tanker A/R), type of evaluation is QUAL (QUAL/MSN if tanker A/R) and include an expiration date. Add the appropriate restriction in the remarks.

NOTE: This evaluation permits operating the aircraft from a primary crew position with passengers aboard without direct supervision of an instructor.

2.3.3.3. Senior Officer Basic (BASIC) Qualification. Senior officers receiving a basic qualification following the Senior Officer Course (SOC) will, as a minimum, consist of all areas under GENERAL and the following:

2.3.3.3.1. Takeoff.

2.3.3.3.2. Simulated three-engine instrument approach and missed approach.

2.3.3.3.3. Simulated three-engine instrument approach and landing.

2.3.3.3.4. Touch-and-go landing.

2.3.3.3.5. Reverse thrust landing (if equipped).

2.3.3.3.6. EFTOC.

2.3.3.3.7. Emergency Procedures exam.

2.3.3.3.8. Annotate AF Form 8 crew position as "FP", type of evaluation "QUAL" and include an expiration date for reference only. Add the appropriate restriction "IP supervision required" in the remarks.

NOTE: This evaluation permits operating the aircraft from a primary crew position under direct supervision of an instructor pilot with passengers aboard.

2.4. Additional Mission Evaluations. The mission evaluation is normally accomplished in conjunction with initial, periodic, and requalification evaluation (INSTM/QUAL/MSN). For additional qualification in unique aircraft use the following:

2.4.1. Receiver A/R. For initial/re-qualification evaluations, rendezvous or closure from a minimum of 1 NM is required. Initial and re-qualification pilots will demonstrate 15 minutes of contact time within a 30-minute period of arriving in the pre-contact position. Evaluate ACs in left seat. Evaluate instructors in either seat. During periodic evaluations, pilots will perform 10 minutes of contact time within a 20-minute period of arriving in the pre-contact position. Evaluate limits demonstrations for instructor pilots, inadvertent disconnect tolerances and breakaway procedures. Conduct a portion of the evaluation with tanker autopilot off.

NOTE: Evaluate copilots only on copilot duties.

2.4.2. Pacer CRAG (PC).

2.4.2.1. Initial: Initial KC-135 use requirements in Paragraph **2.2.** and Paragraph **2.3.**. KC-135R/E qualified pilots will complete an initial PC evaluation for PC 3-person (primary) operations. Complete the evaluation in a PC aircraft with a 3-person crew. Annotate AF Form 8 as SPOT evaluation (do not include expiration date). Annotate remarks, "PC, Block XX-Qualified" or "PC-Qualified" as appropriate. Each pilot will complete the following areas/subareas:

NOTE: A PC qualified crew must also be capable of operating with a 4-person crew.

2.4.2.1.1. All areas under "GENERAL".

2.4.2.1.2. "QUALIFICATION/MISSION" areas 11, 12, 13, 16 (one landing), 20, 21, 22 (special interest) and 23A. Schedule all rendezvous for a point parallel, if not accomplished, demonstrate an orbit exercise during the mission. Include INSTRUMENT areas 27, 28, 29, 30, 31, 32 or 33. For area 27 and 31, include a departure and arrival for each pilot.

2.4.2.1.3. All areas under "INSTRUCTOR" (if required).

2.4.2.1.4. Complete a 20-question closed book examination.

2.4.2.2. Periodic evaluation. After initial Pacer CRAG qualification, recurring evaluations will be conducted in KC-135 Pacer CRAG aircraft. Use requirements in Paragraph **2.2.**, Paragraph **2.3.**, and Paragraph **2.5.**, if appropriate.

2.4.2.3. Dual Qualification (Dual Qual). KC-135R/E qualified pilots may complete their initial PC evaluation and update qualification in the KC-135R or KC-135E. Establish and maintain a 17-month expiration cycle based upon the most recent comprehensive QUAL/MSN eval.

Approval authority for dual qualification is OG/CC (AFRC pilots NAF/DO, AETC pilots SQ/CC). Commanders should consider the individual's flying ability and availability of unit aircraft to meet continuation training requirements, according to AFI 11-2KC-135V1. Qualification in the KC-135 expires at the end of 17-month expiration date. Each Dual Qual pilot will complete all areas under GENERAL, QUALIFICATION/MISSION, INSTRUMENT, INSTRUCTOR" (if required).

2.4.2.3.1. All requisites.

2.4.3. Difference Evaluations**.** Pilots may qualify by in-flight evaluation in the C/KC-135 MDS model aircraft with different thrust producing engines or reverse thrust according to AFI 11-202V1, (e.g., KC-135R/T versus KC-135E/D). Use Dual Qualification approval-level in Paragraph **2.4.2.3.** and the following:

2.4.3.1. Initial. Annotate AF Form 8 as SPOT evaluation (do not include expiration date) and annotate remarks, "KC-135X-Qualified" (X= appropriate model aircraft). Include the following:

2.4.3.1.1. All areas under GENERAL.

2.4.3.1.2. QUALIFICATION/MISSION areas 11 through 23.

2.4.3.1.3. Boldface and minimum 20-question closed book examination emphasizing differences.

2.4.3.2. Periodic. Conduct recurring evaluations in either model aircraft. Verbally evaluate all differences. Include representative questions from the respective flight manuals for open and close book examinations. Annotate remarks, "KC-135X/X-Qualified" (list each model aircraft as appropriate).

NOTE: A pilot difference evaluation is not required for R-model/T-model or E-model/D-model aircraft.

2.5. Instructor Evaluation. 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.

NOTES: Pilots, who desire to realign their INSTM/QUAL/MSN evaluation during the initial instructor evaluation will complete (demonstrate) all required areas/subareas in GENERAL, QUALIFICATION/MISSION (except areas 25 and 26) and INSTRUCTOR, and complete all required requisite written examinations.

For Receiver A/R by an instructor pilot, limited inadvertent disconnects are permissible during a boom limits demonstration and will not be counted against the instructor pilot examinee at the examiner's discretion.

2.5.1. Conduct initial or requalification instructor evaluations with a qualified pilot occupying the other seat. On initial instructor evaluations, the examinee will occupy the right seat. Initial instructor evaluations at Combat Crew Training School (CCTS)/Central Flight Instructor Course (CFIC) may be completed in the traffic pattern-only. Include all areas GENERAL, QUALIFICATION/MISSION (except areas 25 and 26) and INSTRUCTOR.

2.5.2. Administer periodic instructor evaluations in conjunction with INSTM/QUAL/MSN evaluation. Include all areas under GENERAL, QUALIFICATION/MISSION, INSTRUMENT, and INSTRUCTOR.

2.6. Emergency Procedures Evaluation (EPE). Unit determines EPE requirements. Conduct the EPE normally as a ground evaluation before the in-flight evaluation portion of evaluation. Use one-on-one discussions, an ATD (MAJCOM specified), or on-aircraft evaluation methods to conduct the EPE. The EPE should cover a cross section of aircraft systems. Examinees should be able to demonstrate an understanding of aircraft systems in emergency scenarios. Include situations during takeoff/climb-out, cruise, and approach to landing phases. The EPE may also include emergency egress, life support equipment, and FCIF and/or special interest identified EPE topics.

2.7. Additional Information.

2.7.1. As a last resort, evaluator pilots may conduct evaluations when scheduled as primary aircrew members.

2.7.2. An instructor or instructor designated as a flight examiner pilot may receive all periodic evaluations in either seat, but are not required to be evaluated in both.

2.8. Pilot Grading Criteria.

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. High level of knowledge of performance capabilities and operating data. Evaluated data intended for use during takeoff/landing after final adjustments and corrections were made:
S1, Vrotate, Vclimbout, flap retract: +/-3 KIAS
Power Setting: .03 EPR (E) or 1.5% N1 (R)
Critical Field Length (CFL): +/-500 feet and suitable for takeoff
Landing speeds: +/-3 KIAS

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. Performance calculations exceeded Q limits but did not exceed:
S1, Vrotate, Vclimbout, flap retract: +/-5 KIAS
Power Setting: .05 EPR (E) or 2.0% N1 (R)
Critical Field Length (CFL): +/-800 feet and suitable for takeoff
Landing speeds: +/-5 KIAS

U Made major errors or omissions which 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 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 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 crewmembers' 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. Transmissions concise with proper terminology. Complied with and acknowledged all required instructions. Thoroughly familiar with and correctly operated, HAVE QUICK, IFF, and secure voice equipment, if required.

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. Displayed limited knowledge of HAVE QUICK, IFF, and secure voice equipment, if required.

U Incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Omitted numerous radio calls. Displayed inadequate knowledge of HAVE QUICK, IFF, and secure voice equipment, if required.

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, slide, rafts, and escape ropes, if used.

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, if used.

U Displayed unsatisfactory knowledge of location and use of life support systems and equipment. Unable to properly operate aircraft egress devices, if used.

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 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. Use the following criteria as general tolerances for airspeed, altitude, and heading/course.

Q *Airspeed: +10/-5 KIAS*
Altitude: +/-100 feet
Heading/Course: +/-5 degrees

Q- *Exceeds Q criteria but does not exceed:*
Airspeed: +15/-5 KIAS
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), 2 degrees, and +5 fast/-0 slow KIAS to "all engines operating" criteria for "operations with an engine out" criteria.

Area 11, Ground Operations/Taxi.

Q Established and adhered to start engine, taxi, and take-off time to ensure 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 flight manuals, AFI 11-218, *Aircraft Operation 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 IAW 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. Exceeded aircraft/systems limitations. Failed to establish proper climb attitude. Excessive deviation from intended flight path. Violated flight manual procedures. Exceeded Q- criteria.

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, including minimum groundspeed (V_{MGS}). Used all available sources to determine if and/or to what degree severe weather conditions exist. Complied with all weather separation and windshear avoidance requirements.

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. Complied with all weather separation and windshear avoidance requirements.

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 requirements.

Area 14, Fuel Conservation.

Q Possessed a high level of knowledge of all applicable aircraft publications and other governing directives and understood how to apply both to enhance fuel conservation. Successfully applied fuel conservation procedures during mission planning and through-out the mission.

Q- Possessed some knowledge of applicable aircraft publications and other governing directives and understood how to apply both to enhance fuel conservation. Successfully applied some fuel conservation procedures, but failed to apply fuel conservation procedures during mission planning or during several key phases 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 (Weather Permitting).

Q Performed traffic pattern and turn to final/final approach IAW published procedures. Aircraft control was smooth and positive. 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 IAW published procedures. Displayed erratic aircraft control. Did not clear area of intended flight.

Area 16, Landings. Includes Subareas: Normal Landing (40 or 50 flap), Partial Flap (30), Touch-and-Go Landing, and Right Seat).

NOTE 1: Specific items to evaluate include threshold altitude/airspeed, runway alignment, flare, touchdown, and landing in a crab. Evaluate landing up to area 17, landing roll/breaking.

NOTE 2: Airspeed tolerances apply to computed approach speed.

NOTE 3: Add 5 KIAS to all engines operating criteria for operations with an engine out criteria.

NOTE 4: N/A Copilots for partial flap, and touch and go.

Q Performed landings as published/directed IAW flight manual and met the following criteria:
Airspeed: +10/-5 KIAS
Touchdown zone: 1000 to 3000 feet
Centerline: +/-15 feet left or right
TCH: +25/-10 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: +15/-5 KIAS
Touchdown zone: Greater than 3000 feet, but less than 3500 feet
Centerline: +/-30 feet left or right
TCH: +40/-10 feet

U Landing not performed as published/directed. Exceeded Q- criteria.

Area 17, Landing/Roll, Braking (Reverse Thrust, if used). Not required for Copilots.

Q Performed as published/directed IAW flight manual. Braking action and reverse thrust actuation (if used) was prompt and smooth.

Q- Performed landings with minor deviation to procedures as published/directed. Braking action and reverse thrust actuation (if installed) unnecessarily delayed or not smooth.

U Landing not performed as published/directed. Braking and reverse thrust (if installed) actuated before touchdown. Exceeded Q- criteria

Area 18, All Engine Go Around (GA), Copilots Only.

Q Initiated and performed go-around promptly and IAW flight manual and directives. Applied smooth control inputs. Acquired 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. Major deviations or misapplication of procedures could have led to an unsafe condition.

Area 19, Simulated Engine Out Operations (N/A Copilots).

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 allowed the aircraft to occasionally fly 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.

Subarea 19A, Engine Failure Takeoff Continued (EFTOC).

Q Performed all required procedures IAW the flight manual and directives. Applied smooth, positive, and coordinated control inputs. Rudder and aileron inputs were in correct direction and proper thrust inputs were made.

Q- Procedural errors were made 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. Thrust inputs detracted from aircraft performance or control.

U Thrust, rudder and/or aileron inputs were incorrect. Exceeded Q- criteria.

Subarea 19B, Engine Out Approach. ***NOTE:*** Use approach criteria for the type of approach being flown and the following:

Q Performed all required procedures IAW the flight manual and directives. Applied proper configuration for the approach, smooth aircraft control, and thrust management.

Q- Procedural errors were made which did not affect safety. Aircraft control was not consistently smooth and positive. Thrust inputs detracted from aircraft performance or control.

U Configuration for the approach, thrust, rudder and/or aileron inputs were incorrect. Exceeded Q- criteria.

Subarea 19C, Engine Out GA.

Q Initiated and performed go-around promptly and IAW flight manual and directives. Applied smooth control inputs. Acquired 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.

Subarea 19D, Engine Out Landing (use area 16).

Area 20, 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 21, 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.

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 Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

Area 22, Systems Operations/ Knowledge/Limitations.

Q Demonstrated/explained a complete knowledge of aircraft systems operations/limitations and proper procedural use of systems including aircraft model differences (if qualified).

Q- Marginal knowledge of aircraft systems operations and limitations in some areas. Used individual technique instead of established procedure.

U Unsatisfactory systems knowledge. Unable to demonstrate/explain the procedures for aircraft system operations.

Area 23, Tanker A/R. Includes subareas: Rendezvous, Platform Control, Breakaway, Overrun Procedures, and Tanker A/R formation (see notes 1, 2, and 3).

Q Aircraft control was smooth and positive. Performed all checklists and complied with procedures outlined in the flight manual and other governing directives. Met the following criteria:
Airspeed: +10/-5 KIAS
Altitude: +/-200 feet
Heading/Course: +/-5 degrees

Q- Aircraft control was not always smooth and positive, but was adequate. Accomplished procedures required by the flight manual, checklists, and other governing directives with deviation/omissions which did not affect safety of flight. Exceeded Q criteria but does not exceed:
Airspeed: +15/-5 KIAS
Altitude: +/-300 feet
Heading/Course: +/-10 degrees

U Had deviations/omissions that affected flight safety and/or the successful completion of A/R. Exceeded Q- limits.

NOTE 1: When refueling with autopilot off, add 100 feet, 5 KIAS, and 5 degrees to all tolerances.

NOTE 2: Evaluate A/R Formation, if observed.

NOTE 3: Tanker Overrun; if not observed, verbal.

Area 24, Receiver A/R (if qualified). Includes subareas: Rendezvous, Closure, A/R position/control, Overrun procedures, Breakaway, and IP right seat A/R limit demonstration (see notes 1 and 2).

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. Met the following criteria:
Airspeed: +10/-5 KIAS
Altitude: +/-200 feet
Inadvertent Disconnects: 3 or less for initial qualification, 2 or less otherwise (N/A IP Limit Demo)

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 and/or missions which did not affect safety of flight or the successful completion of A/R. Performed all procedures in accordance with applicable checklists and other governing directives with only minor omissions or deviations. Exceeded Q criteria but did not exceed:
Airspeed: +15/-5 KIAS
Altitude: +/-300 feet
Inadvertent Disconnects: 4 or less initial QUAL or 3 or less otherwise (N/A IP Limit Demo)

U Erratic or dangerous in the pre-contact/refueling position. Had deviations/omissions that affected safety of flight and/or successful completion of A/R. Did not perform all procedures in accordance with applicable checklists and other governing directives or omitted major items. Exceeded Q- limits.

NOTE 1: Receiver Overrun; if not observed, verbal.

NOTE 2: Right Seat A/R / Limit Demo (IP only).

Area 25, Formation (if observed). Includes subareas: 25A--Lead, 25B--Departure, 25C--Join-up, 25D--En route, 25E--Breakup, and 25F--Position changes.

Q Established and maintained proper position. Aircraft control was positive and smooth. Demonstrated a complete knowledge of 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 position. Aircraft control was not always positive and smooth, but was adequate. Performed all procedures in accordance with applicable checklists and other governing directives with only minor omissions or deviations.

U Erratic or dangerous. Had deviations/omissions that affected safety of flight. Did not perform all procedures in accordance with applicable checklists and other governing directives or omitted major items.

Area 26, Tactical Maneuvers (e.g. TAA/D, if observed).

Q Performed maneuver IAW published procedures. Aircraft control was smooth and positive. Constantly cleared area of intended flight.

Q- Performed maneuvers 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 IAW 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- *Exceeded Q criteria but does not exceed:*
Airspeed: +15/-5 KIAS
Level-off Altitude: +/-200 feet
Heading/Course: +/-10 degrees

U Exceeded 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.

Area 27, 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 28, En Route Navigation.

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.
Fix-to-Fix: +/-3 NM
TACAN/VOR-DME Arc: +/-2 NM

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. Exceeded Q criteria but not:
Fix-to-Fix: +/-5 NM
TACAN/VOR-DME Arc: +/-4 NM

U Major errors in procedures/use of navigation equipment. Could not establish position. Failed to recognize checkpoints or adjust for deviations in time and course. Did not remain with the confines of assigned airspace. Exceeded Q- criteria.

Area 29, Holding. (If available, else verbally evaluate.)

Q Performed entry and holding IAW published procedures and directives.
Timing: +/-15 seconds
DME: +/-2 DME
EFC: +/- 2 minutes (if assigned)

Q- Performed entry and holding procedures with minor deviations. Exceeded Q criteria but not:
Timing: +/-20 seconds
DME: +/-3 DME

U Holding was not IAW flight manual, directives, or published procedures. Exceeded Q- criteria.

Area 30, 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 31, 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 deviations. Did not accomplish required checks. Erratic corrections. Exceeded flight manual limitations.

Area 32, 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- *Exceeded Q criteria but does not exceed:*
Airspeed: +15/-5 KIAS
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 32A, PAR, If Available, Else Verbally Evaluate.

Q Approach was IAW published procedures. Smooth and timely response to controller's instructions. Established initial glide path and maintained with only minor deviations. Complied with decision height. Position would have permitted a safe landing. Elevation did not consistently 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. Position would have permitted a safe landing. Elevation did not exceed well above or well below glide path.

U Approach not IAW 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 32B, ILS.

Q Approach was IAW 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 IAW 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.

Area 33, Non Precision Approaches. Includes Subareas: TACAN, Localizer (LOC)/VOR, ASR, and GPS/NDB (if installed). 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: Computed/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/-0 feet
Course: +/-10 degrees at MAP (NDB, VOR, TACAN), more than one dot, but less than two dot deflection (LOC, GPS)
Timing: Computed/adjusted timing to determine MAP within 30 seconds (when required).
Distance: Determined MAP within +1/-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.

NOTE 3: One non precision approach must be flown.

Area 34, Circling Approach, If Available, Else Verbally Evaluate.

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- Properly identified 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.

Area 35, Missed Approach.

Q Executed missed approach IAW 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 IAW 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.

2.12. Instructor.

Area 36, 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. 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 36A, Demonstration of Maneuvers (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.

Subarea 36B, Student Briefing/Critique (Critical). (See **Table 4.1.** and **Table 4.2.**)

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.

2.13. Unit. Units will include MAJCOM-specific and local evaluation areas in **Chapter 5**. Include the unit evaluation areas on AF Form 3862 (see Paragraph**1.14.**).

Chapter 3

NAVIGATOR EVALUATIONS

3.1. General. This chapter standardizes initial, periodic, and requalification evaluations, including the requirements for qualification, mission, and instructor navigator evaluations.

3.2. Qualification/Mission Evaluations (initial, periodic and re-qualification). Include all areas under GENERAL and QUALIFICATION/MISSION. Conduct a mission evaluation in conjunction with initial, periodic, and requalification evaluations (QUAL/MSN).

3.2.1. Initial. Conduct Manual Gear Extension and Manual Flap Lowering (see Paragraph **1.9.8.**).

NOTE: Effective 1 July 2000, Area 19, Celestial Navigation requirements are terminated unless specified in MAJCOM supplement or unit-level in **Chapter 5**. For C/KC-135R/T/E and PC qualification delete Area 18, Mission Navigation Leg requirements in this AFI and AFI 11-2KC-135V3, *C/KC-135 Operations Procedures*, Chapter 11.

3.3. Additional Mission Evaluations. For additional qualifications conduct a mission evaluation as appropriate and include the following:

3.3.1. Receiver A/R:

3.3.1.1. Initial: All areas under "GENERAL" and area 26, Receiver A/R. Annotate AF Form 8, Flight Phase as a SPOT evaluation (do not include an expiration date). Annotate remarks, "Receiver A/R". Requisites: None.

3.3.1.2. Periodic: Complete in conjunction with QUAL/MSN evaluation. May be verbally evaluated when the navigator demonstrates a Tanker A/R (including the rendezvous). Requisites: Add receiver-specific questions (e.g., T.O. 1-1C-14, etc.) to open and close book examinations.

3.3.2. Pacer CRAG (PC).

3.3.2.1. Initial: For initial KC-135 navigator qualifications use requirements in Paragraph **3.2.** and Paragraph **3.3.**. KC-135X (KC-135R or KC-135E) qualified navigators will complete an initial PC evaluation for 4-person operations as a SPOT evaluation. Complete the evaluation in a PC modified aircraft. Annotate AF Form 8 as SPOT evaluation (do not include expiration date). Annotate remarks, "PC-Qualified". Complete the following areas/subareas:

3.3.2.1.1. All areas under "GENERAL".

3.3.2.1.2. "QUALIFICATION/MISSION" areas 12-14, 16, 17, 18, 21, 22, and 25, (26, if appropriate). Schedule all rendezvous for a point parallel, if not accomplished, demonstrate an orbit exercise during the mission.

3.3.2.1.3. All areas under "INSTRUCTOR" (if required).

3.3.2.1.4. Complete a 10-question close book examination.

3.3.2.2. Periodic evaluation. Use requirements in Paragraph **3.2.** and Paragraph **3.3.**, if appropriate.

3.3.2.3. Dual Qualification (Dual Qual). KC-135R/E qualified navigators may complete their initial PC evaluation and continue qualification in the KC-135R or KC-135E (Dual Qual). Establish and maintain a 17-month expiration cycle based upon the most recent comprehensive QUAL/MSN evaluation. Approval authority for dual qualification is OG/CC (AFRC navigators use NAF/DO, AETC navigators SQ/CC). Commanders should consider the individual's flying ability and availability of unit aircraft to meet continuation training requirements, according to AFI 11-2KC-135V1. Recurring evaluations may be performed in either KC-135R/E or Pacer CRAG aircraft. Include all areas under GENERAL, QUALIFICATION/MISSION and INSTRUCTOR" (if required).

3.3.3. Difference Evaluations. For navigators, a difference evaluation is not required for R-model/T-model or E-model/D-model aircraft. See AFI 11-2KC-135V1, for difference qualification training requirements.

3.3.3.1. Complete a minimum 10-question closed book examination. On AF Form 8, annotate the evaluation as SPOT evaluation with date as "N/A". Do not include an expiration date. Annotate remarks, "KC-135X/X-Qualified" (X=MDS model), e.g., KC-135E/D, PC KC-135R/T, etc.

3.3.3.2. Periodic. Conduct one evaluation in either model(s) aircraft (PC, if available) and verbally evaluate all differences. Include representative questions from the respective flight manuals for open and closed book examinations. Annotate remarks, "KC-135X/X-Qualified". (X=MDS model, e.g., KC-135E/D, PC KC-135R/T).

3.4. Instructor Evaluations. The flight examiner will place particular emphasis on the examinee's ability to recognize student difficulties and provide timely, effective, corrective action.

3.4.1. Initial instructor evaluations. Will be conducted with the examinee instructing a navigator (AETC administered instructor evaluations may be conducted with an unqualified navigator or the evaluator acting as the student). Initial instructor evaluations will include (as a minimum) all items under GENERAL, QUALIFICATION/MISSION and INSTRUCTOR.

NOTE: Navigators, who desire to realign the QUAL/MSN evaluation during the initial instructor evaluation will complete (demonstrate) all required areas/subareas in QUALIFICATION/MISSION and INSTRUCTOR, and complete requisite written examinations.

3.4.2. Administer periodic instructor evaluations in conjunction with QUAL/MSN evaluation.

3.4.3. Initial instructor evaluations will accomplish landing gear alternate extension and main flap manual operation procedures (see paragraph **1.9.8.**). For initial instructor evaluations, this requirement may be demonstrated to a student or evaluator navigator.

3.5. Emergency Procedures Evaluation (EPE). Unit determines EPE requirements. Conduct the EPE normally as a ground evaluation before the in-flight evaluation portion of evaluation. Use one-on-one discussions, an ATD (MAJCOM specified), or on-aircraft evaluation methods to conduct the EPE. The EPE should cover a cross section of aircraft systems. Examinees should be able to demonstrate an understanding of aircraft systems in emergency scenarios. Include situations during takeoff/climb-out, cruise, and approach to landing phases. The EPE may also include emergency egress, life support equipment, and FCIF and/or special interest identified EPE topics.

3.6. Navigator Grading Criteria.

3.7. 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. Includes subareas: 2A, General and 2B, Flight Planning (Computer generated for PC only).

Area 2A, General.

Q Checked all navigation factors applicable to flight including weather, NOTAMs, alternate airfields, airfield suitability, and charts. Chart Preparation error free. PC-Accomplish/review mission flight plan without error.

Q- Missed an essential navigation factor with only minor mission effect. Chart Preparation - one or more action points plotted in error greater than 5 NM but less than 15NM. Flight Planning – computed and used (ATC-filed or FMS-loaded for PC) one or more action points where no one error is greater than 10NM, but less than 15NM. Did not comply with mission planning requirements, but did not detract from safety or mission effectiveness.

U Did not check navigation factors with direct effect on mission effectiveness. Exceeded Chart Preparation and Flight Planning Q- tolerances. Did not comply with requirements that had a direct effect on mission effectiveness.

Area 2B, Flight Planning.

Q Manually completed a flight plan in its entirety, time errors did not exceed 5 minutes of total time to destination. Demonstrated manual flight planning procedures if a computer flight plan was not used. Selected current navigation charts of a proper scale for the type of the mission profile.

Q- Minor errors or omissions that would not have adversely affected mission accomplishment. Time errors did not exceed 10 minutes.

U Flight plan was incomplete, could not demonstrate manual procedures, or computer flight plan was not reviewed. Navigator manual flight plan contained major errors/omissions. Selected an improper or obsolete chart. Exceeded Q- criteria.

NOTE 1. Pacer CRAG only personnel (N/A Dual Qualified) do not require demonstration of manual flight planning capability.

NOTE 2. Manual flight planning procedures may be demonstrated on the ground.

Area 3, Use of Checklists. ***NOTE.*** Deviations from checklist order are approved for CRM, equipment malfunctions, or equipment limitations as long as it is understood why each step is performed and why it occurs in a certain sequence. Coordination with the evaluator is required.

Q Consistently ensured all appropriate checklists were used while completing items in a timely manner without omissions.

Q- Completed in an untimely manner (delayed crew) or completed the checklist 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 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/CRM. See AFI 11-290, *Cockpit/Crew Resources 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 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, Communication Procedures.

Q Complete knowledge of and compliance with correct communication procedures. Transmissions were concise with proper terminology. Accomplished required calls and acknowledgments with standard terminology. Consistently backed up crew for all ATC calls. Thoroughly familiar with and correctly operated IFF, secure voice, and SATCOM (if available) equipment.

Q- Occasional deviation or omissions from required procedures, calls or acknowledgments that required re-transmissions or resetting codes. Occasional backup for ATC calls. Displayed a limited knowledge of communication equipment.

U Incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Failed to back up the crew for ATC calls or correct a known deviation. Displayed a lack of or poor operational knowledge of 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/pulleys, if used.

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, if used.

U Displayed unsatisfactory knowledge of location and use of life support systems and equipment. Unable to properly operate aircraft egress devices, if used.

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, Radar Operations/Weather Avoidance/Windshear.

Q Effectively demonstrated procedures for operating APN-59 radar (weather radar for PC). Monitored and updated weather radar/analysis throughout the mission. Knowledgeable of windshear detection procedures including minimum groundspeed (V_{MGS}). Used all available sources to determine if and/or to what degree severe weather conditions exist. Complied with all weather separation and windshear avoidance requirements.

Q- Minor deviations observed when operating on-board radar. Did not update radar/weather analysis during worsening weather conditions. Failed to alter course to meet weather separation and windshear avoidance requirements but did not violate established limits. Pacer CRAG only - limited knowledge of windshear detection and avoidance equipment.

U Unable to demonstrate proper use of on-board radar. Failed to update radar/weather analysis during the mission. Failed to comply with weather separation or windshear avoidance requirements that could have or jeopardized safety or mission success. Pacer CRAG only - displayed unsatisfactory knowledge of windshear detection and avoidance equipment.

3.8. Qualification/Mission.

Area 12, Preflight.

Q Timely completion of all pre-flight checks and procedures without omission. Proper coordination with maintenance and crew when required. Ensured readiness of navigation equipment for flight.

Q- Minor omissions or deviations which did not detract from safety or directly contribute to a late takeoff.

U Failed to pre-flight a critical component or system. Errors, omissions or deviations directly contributed to a late takeoff or detracted from safety or mission effectiveness.

Area 13, Departure.

Q Monitored headings, airspeeds, altitudes and aircraft position throughout departure. Used a SID and/or appropriate scale departure area chart. Provided headings, ETAs, 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.

Q- Monitored aircraft position, but slow to provide headings, ETAs, 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. Allowed major deviations that degraded mission accomplishment or compromised safety.

Area 14, General Navigation and Enroute.

Q Thorough knowledge of enroute time status in relation to objective area. Complied with all altitude restrictions. Adhered to all airspace restrictions.

Q- Uncertain of exact aircraft position due to marginal navigational procedures. Better awareness of required timing events or enroute time status could have avoided excessive, or unplanned maneuvering.

U 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.

Subarea 14A, Plotting /Fixing /Pacing.

Q Fixing and Plotting Accuracy – No more than one fix/MPP (Radar and/or NAVAID) error greater than 5NM but less than 10 NM. Pacing-- navigation system crosscheck w/Radar/NAVAID error greater than 30 minutes, but less than 40 minutes. PC-monitored navigation systems for accuracy less than 40 minutes.

Q- Fixing and Plotting Accuracy - More than one fix/MPP (Radar and/or NAVAID) greater than 5NM but less than 10NM. Pacing-- navigation system crosscheck w/Radar/NAVAID greater than 40 minutes, but less than 60 minutes.

U Exceeded Q- tolerances.

Subarea 14B, Course Adherence. Includes general navigation in controlled airspace, e.g., MNPS, RNP-10, etc.

Q Remained within 3 NMs of course centerline (***EXCEPTIONS***: Threat avoidance, weather deviation, ATC assigned heading) or less than or equal to ATC course tolerances.

Q- Flew 3 to 5 NMs from course without the above exceptions. Momentary exceeded ATC course tolerances with correction to return to centerline.

U Exceeded 5 NMs during en route navigation without the above exceptions. Exceeded ATC course tolerances (4NM airways and 10NM general navigation).

Area 15, Radar Navigation (N/A Pacer CRAG).

Q Demonstrated thorough knowledge and understanding of radar equipment. Used correct procedures for radar operation. Radar position error did not exceed 5 NMs.

Q- Demonstrated adequate knowledge of equipment, but occasionally used improper operating procedures. Had difficulty identifying radar returns. Radar position error did not exceed 10 NMs.

U Displayed unsatisfactory knowledge of radar equipment. Used improper operating procedures that were potentially harmful to system components. Failed to correctly interpret scope returns. Radar position error greater than 10 NMs.

Area 16, Navigation Systems. All references to navigation systems refer to actual systems onboard unit aircraft (i.e., INS, DNS, handheld GPS, or FMS (PC)).

Q Thorough knowledge of onboard navigation system operating procedures. Effectively used navigation systems to direct the aircraft and update system as required. PC--monitored system including investigating “Check STATUS”, “Check NAV ERR”, etc.

Q- INS/INS or INS/DNS - System error greater than 5NM but less than 10 NM from actual or determined position. Demonstrated only a basic knowledge of onboard navigation systems operation. Made minor errors in operation/interpretation of navigation system data. Error operating the FMS with no mission impact.

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

Area 17, Dead Reckoning (DR)/Rating of Navigation Systems.

Q Effective use of a manual DR and/or rating of navigational systems to determine aircraft in-flight position. Computed and plotted a manual DR positions within 5NM.

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

U Unable to compute and use manual DR or rate navigational computers effectively. Computed or plotted a manual DR position exceeded 10NM.

Area 18, Mission Navigation Leg (Pacer CRAG-only). For dual-qualified (PC and KC-135X) navigators, receiving their qualification evaluation in a PC aircraft. Complete a minimum 30-minute Mission Navigation Leg or Category I/Overwater in a PC aircraft consisting of one celestial position, NAVAID fix, and TACAN manual update. Use the following tolerances:

Q DR Error – each fix/MPP DR (automatic or manual) less than 10 NM. Celestial LOP Error – each fix/MPP LOP error less than 10 NM. Terminal Fix (TF) or Circular Error (CE) – did not exceed value for type leg (Mission Navigation Leg (10NM) or Category I/Overwater (15NM)) being flown.

Q- DR Error - each fix/MPP DR (automatic or manual) greater than 10NM but less than 15NM. Celestial LOP Error - each fix/MPP LOP error more than 10NM but less than 15NM. TF or CE – Mission Navigation Leg (greater than 10 NM but less than 15 NM); or Category I/Overwater (greater than 15NM, but less than 20NM).

U Exceeded Q- or "gross navigation (MNPS)" tolerances.

Area 19, Celestial Navigation. Not required for Pacer CRAG only qualified except as necessary for Dual-Qualified in KC-135X and PC or as specified by unit in **Chapter 5**.

Q Correctly obtained, evaluated and implemented celestial data. Accomplished computations without significant errors or omissions. Plotted (observe/use sextant in coordination with boom operator) celestial LOP and resolved a position with less than 10 NM error of known aircraft position. Sufficient knowledge of sextant use when obtaining a celestial LOP.

Q- Excessive time devoted to celestial computations and with errors. Less than proficient knowledge of celestial procedures and use of the sextant (if used). Plotted a celestial LOP exceeded 10 NM error, but less than 15 NM.

U Inadequate knowledge of celestial procedures and use of the sextant (if used). Computation, plotting errors resulted in celestial LOP or position exceeding 15 NM.

Area 20, GRID Navigation. If required by unit (not required for Pacer CRAG only).

Q Thorough knowledge of GRID concepts and procedures. Complied with all published procedures unique to grid navigation.

Q- GRID Precession - computed and/or applied precession resulted in a DR error greater than 10NM but less than 15NM. GRID Procedures (include GRID Entry & Exit checklists) - minor checklist errors and/or GRID Entry checklist completion time exceeded 10 minutes, but less than 20 minutes. GRID Exit checklist completed greater than plus or minus 10 minutes, but less than plus or minus 20 minutes of termination fix/MPP, unless continuing in GRID during general navigation. Limited knowledge of GRID concepts and procedures without mission impact.

U Unsatisfactory knowledge of GRID concepts or procedures. Unable to configure navigation systems into GRID. Major deviations from GRID procedures with direct mission impact.

Area 21, Time Control (if required).

Q Compute/establish an Estimated Time of Arrival (ETA) or Revised Estimated Time of Arrival (RETA) within 2 minutes of the Actual Time of Arrival (ATA).

Q- Exceeded ATC protected airspace without mission/safety impact. Failed to direct a correction to return to centerline. ETAs/RETAs within 3 minutes of ATAs.

U Exceeded Q- criteria. The evaluator directed an alter aircraft heading to remain within course tolerance, clear special use airspace.

Area 22, Descent/Approach Monitor.

Q Monitored aircraft position, approach instructions and primary approach navigation aids. Thoroughly understood instrument approach and missed approach procedures. Ensured terrain clearance during approach or departure by radar (N/A PC), available navigation aids, and terminal/area charts (if required).

Q- Mis-identified/misunderstood essential approach and departure instructions. Monitored aircraft position, but did not fully understand approach instructions/procedures. Slow to provide headings, ETAs or other appropriate information at the request of the aircraft commander.

U Did not ensure terrain clearance during the approach. Exceeded Q- tolerances.

Area 23, Emergency Equipment.

Q Displayed thorough knowledge of location and use of emergency equipment.

Q- Limited knowledge of location and use of emergency equipment.

U Displayed unsatisfactory knowledge of emergency equipment.

Area 24, Emergency Procedures (If observed and not covered during EPE).

Q Understood and performed emergency procedures for the navigator according to the flight manual. Assists the crew at the direction of the aircraft commander.

Q- Correctly analyzed and understood aircraft emergencies. Difficulty performing required procedures to correct the emergency.

U Failed to analyze and did not understand aircraft emergencies. Could not perform required procedures to correct the emergency.

Area 25, Tanker Air Refueling. Commences 10 minutes prior to ARCT/RZ PT and terminates at end A/R point. Include subareas: 25C, Tanker Overrun Procedures; 25D, Tanker A/R Formation and 25E, A/R Track Adherence/Altitude.

Subarea 25A, Tanker Rendezvous. Conduct an in-flight evaluation of either point parallel or enroute rendezvous. Verbally evaluate the rendezvous not observed. Use this criteria for both Pacer CRAG and non-Pacer CRAG aircraft rendezvous.

Q Rendezvous – Point Parallel – Computed and used turn range and offset to within 2NM.
Rendezvous – En route – Arrived over RZ PT or ARCP within 1 minute of scheduled/adjusted Rendezvous Control Time. Advised the receiver of any required adjustments NLT 10 minutes prior to the control time.

Q- Rendezvous - Point Parallel - Computed and used turn range and offset greater than 2NM but less than 4NM.
Rendezvous - En route - Arrived over RZ PT or ARCP greater than 1 minute but less than 2 minutes of scheduled/adjusted Rendezvous Control Time or failed to advise receiver of control time adjustment.

U Rendezvous – Exceeded Q- tolerances. ALTITUDE Control - Failed to crosscheck, if applicable, A/R altitude (hot armament check, if required). Directed final turn toward receiver with unknown altitude separation.

Subarea 25B, Tanker Breakaway. Insure correct response according to T.O. 1-1C-3.

Area 26, Receiver Air Refueling. Commences 10-minutes prior to ARCT/RZ PT and terminates at end A/R point. Evaluate a Point Parallel or En route Rendezvous (one required); verbally evaluate the alternative rendezvous.

Subarea 26A, Receiver Rendezvous. Include subareas: 26C, A/R Track Adherence/Altitude and 26D, Receiver A/R Formation, if observed.

Q Rendezvous – Point Parallel –Maintained A/R track after ARIP not more than 3NM. Directed radar closure to in-trail position under IFR conditions not more than 1 NM (N/A Pacer CRAG).
Rendezvous – En route – Arrived over RZ PT or ARCP (as coordinated at 15 minutes prior Tanker/Receiver radio call) less than 1 minute. Directed radar closure to in-trail position under IFR conditions not more than 1 NM (N/A Pacer CRAG).

Q- Rendezvous - Point Parallel – A/R track after ARIP more than 3NM but less than 6NM. Directed radar closure to in-trail under IFR condition greater than 1 NM without mission degrade (pilot visual with tanker).
Rendezvous - En route - Arrived over RZ PT or ARCP greater than 1 minute but less than 2 minutes and failed to advise receiver of timing delay. Directed radar closure to in-trail under IFR condition greater than 1 NM without mission degrade (pilot visual with tanker).

U Exceed Q- tolerances. Unable to direct radar closure to tanker with mission degrade and missed rendezvous.

Subarea 26B, Receiver Breakaway Procedures. Insure correct response according to T.O. 1-1C-14.

Area 27, Manual Gear Extension. Initial Qualification and Initial Instructor Only (unless observed).

Q Actions required by the applicable flight manual were accomplished correctly and with no omissions.

Q- Procedures required by the flight manual/checklists were accomplished with no more than minor discrepancies that did not affect the missions or use of equipment.

U Incorrect actions or checklist steps not accomplished that resulted in corrective action to successfully extend the landing gear manually.

Area 28, Manual Flap Extension. Initial Qualification and Initial Instructor Only.

Q Actions required by the applicable flight manual were accomplished correctly and with no omissions.

Q- Procedures required by the flight manual, checklists were accomplished with no more than minor discrepancies that did not affect the missions or use of equipment.

U Incorrect actions or checklist steps not accomplished correctly, resulting in the need for corrective action to successfully extend the flaps manually.

Area 29, Formation/Station Keeping (If Observed).

Q Performed navigation duties within prescribed tolerances as lead or wing aircraft formation according to AFI 11-2KC-135V3, Chapter 11 (Pacer CRAG use Chapter 6)**.**

Q- Completed navigation duties with minor errors that did not affect the mission**.** Unable to maintain station keeping position or failed to notify lead when a known navigation error occurred.

U Unable to complete navigation duties and degraded mission effectiveness. Unable to assume lead navigator role. Allowed lead to commit a known navigation error that degraded mission effectiveness.

3.9. Instructor.

Area 30, Instructor Responsibility.

Subarea 30A, 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. 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 30B, Student Briefing/Critique (Critical). (see **Table 4.1.** and **Table 4.2.**)

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.

3.10. Unit. Units will include MAJCOM-specific and local evaluation areas in **Chapter 5**. Include the evaluation areas on AF Form 3862 (see Paragraph **1.14.**).

Chapter 4

BOOM OPERATOR EVALUATIONS

4.1. General. This chapter standardizes initial, periodic, re-qualification, qualification and instructor evaluations.

4.2. Qualification/Mission Evaluations.

4.2.1. Initial: Conduct initial at CCTS and include all areas under GENERAL and QUALIFICATION/MISSION. Upon successful completion, the AF Form 8 will indicate Crew Position as "MB". Use FB only when area 19, Cargo Loading was not evaluated and include the appropriate restriction on AF Form 8.

4.2.2. Periodic: Evaluate all areas under GENERAL and QUALIFICATION/MISSION. Use one AF Form 8, and separate line entry for each evaluation. Expiration date is based on the first in-flight evaluation.

4.2.3. Evaluator note. A minimum of one normal contact and a practice emergency separation must be evaluated in-flight. In addition a TMO contact should be evaluated in-flight but may be verbally evaluated except during an initial evaluation. Receiver aircraft must be equipped with a boom receptacle.

4.3. Additional Mission Evaluations.

4.3.1. Cargo Loading.

4.3.1.1. Conduct an initial mission evaluation to boom operators who do not have a current cargo evaluation or those who have a cargo certification only. Normally, the initial cargo evaluation is accomplished in conjunction with qualification evaluation. For initial qualification, include all areas in GENERAL and QUALIFICATION/MISSION area 19. Annotate the cargo evaluation on AF Form 8 as MSN evaluation, include an expiration date (for reference only), and add remark, "CARGO-Qualified".

4.3.1.2. Periodic. See Paragraph **4.2.2.**.

4.3.1.3. Cargo evaluations should normally be conducted under actual conditions (e.g., AMC channel, SAAM, etc.). If necessary, evaluate cargo loading locally under static conditions.

4.3.1.4. Crewmembers will base cargo loading qualification on their evaluation or certification expiration date (not to exceed 17-months). Attempt to realign cargo loading evaluation with QUAL evaluation when completing the periodic evaluation (see Paragraph **4.2.2.**).

4.3.1.5. When an evaluation (in-flight or under static load conditions) is not possible, the cargo evaluation must be verbally evaluated (see Paragraph **1.10.4.**). Use area 19, evaluation criteria. When used, the flight examiner must be able to determine the individual's cargo loading proficiency/capability to meet the unit's assigned cargo-carrying requirements while ensuring the crewmember can safely accomplish the cargo mission under actual conditions.

4.3.2. Difference Evaluations. For boom operators, a difference in-flight evaluation is not required for qualification in various models of the KC-135. See AFI 11-2KC-135V1, for difference qualification training requirements.

4.3.2.1. Complete a minimum 10-question close book examination emphasizing differences. On AF Form 8, annotate the evaluation as SPOT evaluation with date as "N/A". Do not include an expiration date. Annotate remarks, "KC-135X/X-Qualified". (X=MDS model), e.g., KC-135E/D, PC KC-135R/T, etc.

4.3.2.2. Periodic. Conduct one evaluation in either model(s) aircraft (PC, if available) and verbally evaluate (see Paragraph **1.10.4.**) each model's differences. Include representative questions from the respective flight manuals for open and closed book examinations. Annotate remarks, "KC-135X/X-Qualified". (X=MDS model, e.g., KC-135E/D, PC KC-135R/T).

4.4. Instructor Evaluations. The flight examiner will place particular emphasis on the examinee's ability to recognize student difficulties and provide timely, effective, corrective action. Flight examiners will exercise sound judgement to ensure the explanations/demonstrations do not distract the examinee's attention or disrupt mission objectives.

4.4.1. Initial instructor evaluations. Will be conducted with the examinee instructing a student boom operator IAW AFI 11-202V2, Paragraph **4.4.3.**. (AETC administered instructor evaluations may be conducted with an unqualified student boom operator or the evaluator acting as the student). Initial instructor evaluations will include (as a minimum) all items under GENERAL, QUALIFICATION/MISSION (except area 14 and area 15), and INSTRUCTOR.

NOTE: Boom Operators, who desire to realign the QUAL/MSN evaluation during the initial instructor evaluation will complete (demonstrate) all required areas/subareas in QUALIFICATION/MISSION and INSTRUCTOR, and complete requisite written examinations.

4.4.2. Administer periodic instructor evaluations in conjunction with QUAL/MSN evaluation. Instructor Boom Operators will perform all required areas/subareas (see Paragraph **4.6.3.**).

4.4.3. Instructors may receive periodic instructor evaluation credit while performing student training provided all minimum requirements identified in Paragraph **4.3.** are instructed and the evaluatee demonstrates an actual air refueling contact(s) to the student. KC-135 boom operator initial qualification and initial instructor evaluations require accomplishment of landing gear alternate extension and main flap manual operation procedures (see paragraph **1.9.8.**). For initial instructor evaluations, this requirement may be demonstrated to a student or evaluator boom operator.

4.5. Emergency Procedures Evaluations (EPE). Unit determines EPE requirements. Conduct the EPE normally as a ground evaluation before the in-flight evaluation portion of evaluation. Use one-on-one discussions, an ATD (MAJCOM specified), or on-aircraft evaluation methods to conduct the EPE. The EPE should cover a cross section of aircraft systems. Examinees should be able to demonstrate an understanding of aircraft systems in emergency scenarios. The following operations/procedures may be evaluated; emergency ditching/egress, 20-man life raft, escape slide, manual gear/flap extension, manual boom hoist, A/R procedures, APU procedures, manual form F, locked ruddevators or any coordinated topic for instruction. Include situations during takeoff/climb-out, cruise, and approach to landing phases. The EPE may also include emergency egress, life support equipment, and FCIF and/or special interest identified EPE topics. This list is not all-inclusive and evaluators may modify them as required.

4.6. Additional Information.

4.6.1. Boom operator flight examiners will not conduct evaluations when scheduled as primary aircrew members.

4.6.2. The KC-135 BOPTT may be used for additional training and recheck in area(s) involving normal, abnormal, emergency, breakaway or tanker manual operation procedures. The BOPTT will not be used for rechecks of actual contacts or boom control.

4.6.3. Boom Operators dual-qualified in Pacer CRAG and non-Pacer CRAG aircraft should receive their periodic evaluation in the Pacer CRAG aircraft.

4.7. Boom Operator 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 this knowledge to enhance mission accomplishment. Publications were current, properly posted, and contained no discrepancies or only minor annotation or filing discrepancies.

Q- Unsure of some directives but could locate information in appropriate publications. Publications were current but improperly posted, or were missing current pages or supplements.

U Unaware of established procedures and/or could not locate them in the appropriate publication in a timely manner. Publications were not current and in such condition that they were unusable for effective accomplishment of any phase of aircraft operation.

Area 2, Mission Preparation/Planning. Includes aircraft weight and balance computations (tolerances will not exceed grading criteria for Area 18, Weight and Balance).

Q Planned Weight and Balance containing all information required by the flight manual, without omissions, discrepancies or contained only minor discrepancies, without omission in required information. Uncorrected Weight and Balance computation errors did not exceed criteria from Area 18. Read (initialed, if required) for all items in FCIF. Completed/obtained all applicable forms. Complied with all local directives. Attended all required briefings.

Q- Same as above except for minor deviations or omissions which did not impair mission effectiveness. Did not fully comply with local directives, but did not detract from safety.

U Planned Weight and Balance contained omissions and /or discrepancies in information required by the flight manual, which resulted in unusable weight and balance data. Computations exceeded the Q- tolerances from Area 18. FCIF was not reviewed (initialed, if required). Failed to attend required briefings. Failed to obtain/complete all applicable forms, or made major errors or omissions. Did not obtain adequate mission information. Failed to comply with local directives.

Area 3, Use of Checklist. This area includes completion of all formal checklist procedures performed to complete the mission.

Q Procedures and checklist items required by flight manual and applicable directives were accomplished in a thorough and proficient manner.

Q- Procedures and checklist items required by flight manuals and applicable directives were accomplished with omission, deviation, or error, 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 omission, deviation, or error 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 Not aware 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 Prepared and completed mission in compliance with existing regulations and directives. Demonstrated knowledge of operating procedures and restrictions. Decisions were logical and did not jeopardize or complicate the situation.

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 which could, or actually did jeopardize safety or successful mission completion. Consistently made poor decisions or made a major error in judgment. Flight objectives were not attained due to poor decision.

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

Q Effectively coordinated with other aircrew members throughout the assigned mission. Demonstrated 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 crewmembers' 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, which enhanced mission effectiveness.

Q- Displayed adequate communication procedures, but was 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 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, if used.

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, if used.

U Displayed unsatisfactory knowledge of location and use of life support systems and equipment. Unable to properly operate aircraft egress devices, if used.

Area 9, Knowledge/Completion of Forms.

Q All required forms were complete, accurate, readable, accomplished on time and IAW applicable directives. Related an accurate description of significant events to applicable agencies (Safety, Maintenance, etc.).

Q- Minor errors on forms that 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 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.

4.9. Qualification/Mission.

Area 11, Ground Operation. This area includes all activity up to initiation of STARTING ENGINES AND BEFORE TAXI checklist.

Q Complied with established preflight requirements. Accurately determined readiness of aircraft for flight. Completed all system pre-flight inspections IAW flight manual.

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

U Errors directly contributed to a late takeoff that degraded the mission. Failed to accurately determine readiness for flight. Failed to pre-flight a critical component or could not conduct a satisfactory pre-flight inspection.

Area 12, **Pre-takeoff, Climb, and Cruise.** Pre-takeoff procedures include all activity beginning with STARTING ENGINES and BEFORE TAXI checklist. Climb procedures include all activity of AFTER TAKEOFF – CLIMB checklist to cruise. Cruise procedures includes all duties not specifically covered in other areas.

Q Executed the assigned mission in a timely, efficient manner. Demonstrated strict professional flight and crew discipline. 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 accomplish mission objectives.

U Decisions resulted in failure to accomplish the assigned mission. Failed to exhibit strict flight and crew discipline.

Area 13, A/R (Boom). Includes all activity from PREPARATION FOR CONTACT to completion of the POST AIR REFUELING CHECKLIST. Coordinated air refueling breakaway procedures will be initiated with the receiver within the air refueling envelope. An actual breakaway satisfies this requirement regardless of receiver's position. Except for initial qualification evaluations and only as a last resort, tanker manual operation and breakaway procedure demonstrations may be verbally explained and accomplished without a receiver.

Q Demonstrated a satisfactory knowledge of procedures and equipment. Complied with directives. Coordinated with tanker and receiver pilots. Boom control was smooth and contacts were effective. Monitored receiver closely and gave corrections as necessary. Used proper procedures and techniques that would not jeopardize mission or safety.

Q- Same as above except for minor deviations which did not or would not jeopardize safety or mission effectiveness. Boom control was slightly erratic resulting in contacts being delayed.

U Failed to accomplish required checks. Boom control was erratic, and/or technique used in attempting contacts resulted in delays to such extent that fuel could not be offloaded within the time available. Inadequate knowledge, procedures, or techniques jeopardized safety of flight.

Area 14, A/R (Boom-to-Drogue Adapter (BDA)). Not required for periodic evaluation unless observed.

Q Demonstrated a satisfactory knowledge of procedures and equipment for the BDA. Complied with directives. Coordinated with tanker and receiver pilots. Monitored receiver closely and gave corrections as necessary. Used proper procedures and techniques that would not jeopardize mission or safety.

Q- Same as above except for minor deviations which did not or would not jeopardize safety or mission effectiveness.

U Failed to accomplish required checks. Inadequate knowledge, procedures, or techniques jeopardized safety of flight.

Area 15, A/R (Multi-point Refueling System (MPRS), Not required for periodic evaluation unless observed**.**

Q Demonstrated a satisfactory knowledge of MPRS procedures and equipment. Complied with directives. Coordinated with tanker and receiver pilots. Monitored receiver closely and gave corrections as necessary. Used proper procedures and techniques that would not jeopardize mission or safety.

Q- Same as above except for minor deviations which did not or would not jeopardize safety or mission effectiveness.

U Failed to accomplish required checks. Inadequate knowledge, procedures, or techniques jeopardized safety of flight.

Area 16, Systems Operations/ Knowledge/Limitations.

Q Demonstrated/explained a complete knowledge of aircraft systems operations/limitations and proper procedural use of systems with minimal reference to flight manual/available aids.

Q- Marginal knowledge of aircraft systems operations and limitations in some areas. Used individual technique instead of established procedure. Required moderate references to flight manual/available aids to differentiate between procedure and technique.

U Unsatisfactory systems knowledge. Unable to demonstrate/explain the proper procedures for aircraft system operations. Lack of systems knowledge that could have resulted in unsafe operation of or damage to equipment.

Area 17, Abnormal/Emergency Procedures. Boom operators will be graded on their initial response and actions taken to any actual emergency/abnormal conditions that occurs either in-flight or on the ground during the evaluation.

Q Operated within prescribed limits and correctly diagnosed problems. Performed/explained proper corrective action for each type of malfunction or abnormal condition. Effectively used available aids.

Q- Operated within prescribed limits but slow to analyze problems or apply proper corrective actions. Did not effectively use checklist and/or available aids.

U Exceeded limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

Area 18, Weight and Balance.

			R/T-model	**E/D-model**
Q	Weight:	Error not in excess of;	2,500 lbs	2,000 lbs
	CG:	Error not in excess of 1 percent MAC.		
Q-	Weight:	Error exceeded	2,500 lbs	2,000 lbs but less than
			3,500 lbs	3,000 lbs
	CG:	Error exceeded 1 percent MAC, but less than 1.5 percent MAC		
U	Weight:	Error of more than;	3,500 lbs	3,000 lbs
	CG:	Error of more than 1.5 percent MAC.		

NOTE: Consider total number of errors even if no tolerances were exceeded.

Area 19, Cargo Loading and Unloading (See Requirements at Paragraph **4.3.**)

Q Demonstrated a thorough knowledge of required procedures as outlined in the flight manual and applicable directives. Load planning was accomplished without errors or omissions. Required briefings were clear, concise and accurate. Coordinated with air terminal operation personnel (or equivalent) on cargo loading/unloading matters.

Q- Demonstrated a limited knowledge of required procedures as outlined in the flight manual and applicable directives. Procedures were accomplished with errors or deviations which did/would not detract from the cargo loading/unloading operation or mission. Load planning contained minor errors or omissions without exceeding established limits. Required briefings contained minor errors or omissions.

U Demonstrated an unsatisfactory knowledge of required procedures as outlined in the flight manuals and applicable manuals. Procedures were not complied with which jeopardized mission accomplishment or the safety of the cargo loading/unloading operation. Required briefings were unclear and/or ineffective causing confusion. Failed to coordinate with air terminal operation personnel (or equivalent) on cargo loading/unloading matters. Load planning contained major errors or omissions and/or exceeded limits.

Area 20, Passenger Handling (if observed, verbal).

Q Demonstrated a thorough knowledge of required passenger handling normal/emergency procedures and equipment as outlined in applicable guidance. Passengers briefing was clear, concise, and accurate.

Q- Demonstrated a limited knowledge of required passenger handling, and related emergency procedures and equipment as outlined in applicable guidance. Minor errors or omissions were made in procedures which did/could detract from the overall efficient conduct of the mission or the comfort and control of the passenger(s). Passenger briefing was accomplished with minor omission or errors.

U Demonstrated an unsatisfactory knowledge of required passenger handling or related emergency procedures and equipment as outlined in applicable guidance. Procedures were not complied with which jeopardized passenger safety or control. Passenger briefing was unclear and/or ineffective.

Area 21, Manual Gear Extension. Initial Qualification and Initial Instructor Only.

Q Actions required by the applicable flight manual were accomplished correctly and with no omissions.

Q- Procedures required by the flight manual/checklists were accomplished with no more than minor discrepancies that did not affect the missions ore use of equipment.

U Incorrect actions or checklist steps not accomplished that resulted in corrective action to successfully extend the landing gear manually.

Area 22, Manual Flap Extension. Initial Qualification and Initial Instructor Only.

Q Actions required by the applicable flight manual were accomplished correctly and with no omissions.

Q- Procedures required by the flight manual/checklists were accomplished with no more than minor discrepancies that did not affect the missions ore use of equipment.

U Incorrect actions or checklist steps not accomplished correctly, that resulted in the need for corrective action to successfully extend the flaps manually.

4.10. Instructor.

Area 23, 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. 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 little or no attempt to instruct.

Area 24, Demonstration of 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 25, Student Briefing/Critique (Critical). Use criteria in **Table 4.1.** and **Table 4.2.**.

Table 4.1. Student Briefing Factors.

GRADING FACTOR	QUALIFIED	UNQUALIFIED
Organization	Briefings were well organized, accurate, and thorough. Reviewed student's present level of training and defined mission events to be performed Covers mission sequence of events to assure the student understands what is expected.	Did not review the students past performance. Briefings were sketchy, out of sequence, incomplete. Failed to adequately critique student or analyze the mission. Training grade did not reflect actual performance of student. Overlooked or omitted major discrepancies. Student was confused and did not understand what was expected.
Mission Objective	Covered in general	Vague
How Objective Will Be Achieved	Sufficient detail	Vague
Description of Activity to be Accomplished	Sufficient for understanding	Incomplete, rambling
Purpose of Each Type Activity Scheduled	Adequately explained	Omitted
Explanation of Peculiar Aircraft Procedure or Local Operating Instructions	Adequate	Omitted
Use of Standard Terminology	Minor deviations	Rarely used
Cultivate Student Confidence	Sufficient effort	Ineffective
Arouse Student Interest	Effective	Ineffective

Table 4.2. Student Critique Factors.

GRADING FACTOR	QUALIFIED	UNQUALIFIED
Data Collection	Adequate for mission reconstruction	Incomplete or irrelevant
Analysis of Discrepancies	Correct and generally complete	Incorrect
Referencing Discrepancies	Correct	Incorrect and/or Not up to date
Organization: Chronologically or by Performance area	Logically developed	Given very little consideration
Annotations/Note Taking	Legible	Illegible
Publications	Available if required to support presentation	Not available to support presentation
Corrective Actions/Recommended Additional Training	Applied correct procedures and/or recommended correct/adequate additional training to correct deficiencies	No corrective actions, additional training or personal opinion given; unable to reference additional study areas from required flight manuals or instructions
Use of Grading Criteria	Correct grade was awarded IAW applicable Instructions, Master Training List (MTL), Evaluation Standards Document (ESD), or Formal School Syllabus	Awarded incorrect grade which affected overall status or performance rating not IAW established standards
Arouse Student Interest	Effective	Ineffective

4.11. Unit. Units will include MAJCOM-specific and local evaluation areas in **Chapter 5**. In addition, include the MAJCOM and unit required areas of evaluation on AF Form 3862 (see Paragraph **1.14.**).

Chapter 5

LOCAL PROCEDURES

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

Chapter 5 (MACDILL)

LOCAL PROCEDURES

5.1. (MACDILL) General. Local procedures.

5.2. (Added-MACDILL) Purpose. The purpose of this supplement is to standardize/define the 6 AMW aircrew evaluation profiles to include the Emergency Procedures Evaluations (EPE) for all applicable crew positions. The attachments to this chapter are intended to simplify the qualification and mission areas/sub-areas of AFI 11-2KC-135, Volume 2, in a quick reference chart format with 6 AMW objectives.

5.3. (Added-MACDILL) Applicability. This supplement is applicable to all 6 AMW personnel and supporting units. Copies should be available to all KC-135R aircrew members. This supplement is incomplete without AFI 11-2KC-135, Volume 2 and, when published, AMC1. Place this supplement behind AFI 11-2KC-135, Volume 2, and any applicable HHQ supplements .

5.4. (Added-MACDILL) Flight Evaluation Profiles and EPE Profiles. The 6 OG Commander (6 OG/CC) may alter any profile to rectify noted weak/trend areas.

5.4.1. (Added-MACDILL) Suggested flight evaluation profiles for all crew positions are listed in **Attachment 5 (Added)**, **Attachment 6 (Added)**, and **Attachment 7 (Added)**. For pilots, the specific transition profile is at the discretion of the flight examiner .

5.4.2. (Added-MACDILL) EPE profiles will be developed/maintained by 91 ARS/DOV and approved by 6 OG/OGV. As a minimum, EPE profiles will be reviewed/updated annually and as weak/trend areas are noted. 91 ARS/DOT should maintain an EPE study guide to assist crewmembers in preparation and understanding of all associated items related to the EPE.

5.4.2.1. (Added-MACDILL) EPE Topics. EPEs incorporate knowledge to include but are not limited to systems knowledge (including operations, limitations, emergency/abnormal procedure), crew resource management, associated directives, and airmanship/judgment. The following is a recommended list of EPE topics to be administered during the checkride process. The EPE should be scenario based to the maximum extent possible. ***NOTE:*** Evaluators are not limited to the lists below.

5.4.2.1.1. (Added-MACDILL) ALL crewmembers:

- Special Interest Items (Local/21AF/AMC)
- Trends
- Emergency Equipment
- Emergency Egress
- Crash Landing
- Ditching
- Smoke and Fumes
- Parachute Preflight

•Bailout

5.4.2.1.2. (Added-MACDILL) Pilot:

•Engine Start Malfunctions
•Engine Fire on the Ground
•Engine Fire/Failure During Flight
•Engine Failure Takeoff Continued
•Landing Without Left/Right Hydraulic System Pressure
•Pneumatics Problems
•Electrical Malfunctions
•Land Gear/Brake Malfunctions
•Abnormal Malfunctions

5.4.2.1.3. (Added-MACDILL) Navigator:

•Hazardous Weather Avoidance
•Alternate Gear/Flap Lowering
•Alternate Boom Hoist
•Hot Brakes
•Passenger Egress

5.4.2.1.4. (Added-MACDILL) Boom Operator:

•Pressure Air Refueling
•Manual Boom Latching
•Passenger Egress
•Aircraft Life Support Equipment
•Hazardous Cargo Jettison
•Alternate Gear/Flap Lowering

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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 11-2KC-135V1*,C/KC-135 Aircrew Training*

AFI 11-2KC-135V3*, C/KC-135 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 11-401, *Flight Management*

AFMAN 11-210, *Instrument Refresher Course Program*

AFMAN 36-2236, *Guidebook for Air Force Instructors*

AFMAN 37-139, *Records Disposition Schedule*

AFTTP 3-1, *Employment and Tactics*

Abbreviations and Acronyms

A/R—Air Refueling

ARIP—Air Refueling Initial Point

ARCT—Air Refueling Control Time

ATC—Air Traffic Control

ATD—Aircrew Training Device

BDA—Boom-to-Drogue Adapter

BOT—Boom Operator Trainer

BOPTT—Boom Operator Partial Task Trainer

CCTS—Combat Crew Training School

CG—Center of Gravity

CP—Copilot

EFTOC—Engine Failure Takeoff Continued

EPE—Emergency Procedures Evaluation

ETA—Estimated Time of Arrival

FCIF—Flight Crew Information File

FEF—Flight Evaluation File

FMS—Flight Management System

GA—Go Around

GPS—Global Positioning System

GSDI—Ground Speed Drift Indicator

KIAS—Knots Indicated Airspeed

LOP—Line of Position

MQF—Master Question File

MPRS—Multi-point Refueling System

OFT—Operational Flight Trainer

PAR—Precision Approach Radar

PC—Pacer CRAG

RQ—Requalification

RZ PT—Rendezvous Point

SOC—Senior Officer Course

Attachment 2

FLIGHT EVALUATION WORKSHEET EXAMPLE

Figure A2.1. KC-135 Pilot Flight Evaluation Worksheet.

AREA/SUBAREAS	Q	Q-	U	T	REMARKS
GENERAL	■	■	■	X	
1. Directives and Publications					
2. Mission Prep/Planning/Performance					
3. Use of Checklists					
4. Safety Consciousness		■			
5. Judgment/Compliance		■			
6. Crew Coordination/CRM					
7. Communication Procedures					
8. Life Support Systems/Egress					
9. Knowledge/Completion of Forms					
10. Airmanship/Situational Awareness					
QUALIFICATION/MISSION	■	■	■	X	
11. Ground Operations/Taxi					
12. Takeoff					
13. Radar Ops/WX Avoid/Windshear					
14. Fuel Conservation					
15. VFR Pattern (WX Permitting)					
16. Landings					
16A. Normal Landing (40 or 50 flap)					
16B. Partial Flap (30)					
16C. Touch-and-Go					
16D. Right Seat					
17. Ldg/Roll, Brkg (RT if used,N/A CP)					
18. All Engine Go Around (CP Only)					
19. Simulated Engine Out Ops (N/A CP)					
19A. EFTOC					
19B. Engine Out Approach					
19C. Engine Out GA					
19D. Engine Out Landing					
20. Boldface Emergency Procedures		■			
21. Other Emergency Procedures					
22. Systems Ops/Knowledge/Limitations					
23. Tanker A/R					
23A. Rendezvous					
23B. Platform Control					
23C. Breakaway					
23D. Overrun Procedures (If Observed)					
23E. A/R Formation (If Observed)					
24. Receiver A/R (If Qualified)					
24A. Rendezvous					
24B. Closure					
24C. A/R Position/Control					
24D. Overrun Procedures					
24E. Breakaway					
24F. IP Right Seat A/R Limit Demo					

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AREA/SUBAREAS	Q	Q-	U	T	REMARKS
25.Formation (see subreas,if observed)					
26. Tactical Maneuvers (if observed)					
INSTRUMENT	■	■	■	X	
27. Instrument Departure/SID					
28. En Route Naviagtion/FMS-PC					
29. Holding					
30. Use of NAVAIDS					
31. Descent/Arrival					
32. Precision Approaches					
32A. PAR (If Available, Else Verbal)					
32B. ILS					
33. Non Precision Approaches					
33A. TACAN					
33B. Localizer (LOC)/VOR					
33C. ASR					
33D. GPS/NDB (If Installed)					
34. Circling Appr (If Avail,Else Verb)					
35. Missed Approach					
INSTRUCTOR	■	■	■	X	
36. Instructor Ability		■			
36A. Demonstration of Maneuvers		■			
36B. Student Briefing/Critique		■			
UNIT	■	■	■	X	

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Figure A2.1. Continued.

AREA/SUBAREAS	Q	Q-	U	T	REMARKS

TREND ANALYSIS GUIDANCE *(Note: T column is for Trend Information)*
Grade each area using the following guidelines:

A = Q awarded and the evaluator makes a positive comment during the post mission critique.
B = Q awarded and no other comment is warranted.
C = Q or Q- awarded and the evaluator makes negative comment during the post mission critique.
D = U action taken.

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KC-135 PILOT FLIGHT EVALUATION

NAME *(Last, First, MI)*	GRADE	SSN	DATE COMPLETED
ORGANIZATION/LOCATION	ACFT/CREW POS	ELIGIBILITY PERIOD	

QUALIFICATION

GROUND PHASE			FLIGHT PHASE	
EXAM/CHECK	DATE	GRADE	MISSION/CHECK	DATE

QUALIFICATION LEVEL			ADDITIONAL TRAINING
QUALIFIED	UNQUALIFIED	RESTRICTION *(Explain in Comments)*	DUE DATE
		YES ☐	DATE ADDITIONAL TRAINING COMPLETED
EXPIRATION DATE OF QUALIFICATION		NO ☐	

COMMENTS

CERTIFICATION

PRINT NAME AND GRADE	ORGANIZATION
1. FLIGHT EXAMINER	
2. REVIEWING OFFICER	
3. FINAL APPROVING OFFICER	

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REPLACES AF FORM 3867, SEP 98 AND DMD MC FORMS 50, 51, 52, 53, AND 54, JAN 96 WHICH ARE OBSOLETE.

Attachment 3

NAVIGATOR FLIGHT EVALUATION WORKSHEET EXAMPLE

Figure A3.1. KC-135 Navigator Flight Evaluation Worksheet.

AREA/SUBAREAS	Q	Q-	U	T	REMARKS
GENERAL	■	■	■	X	
1. Directives and Publications					
2. Mission Preparation/Planning					
2A. General					
2B. Flight Planning (Cmpr Only--PC)					
3. Use of Checklists					
4. Safety Consciousness (Critical)		■			
5. Judgment/Compliance (Critical)		■			
6. Crew Coordination/CRM					
7. Communication Procedures					
8. Life Support Systems/Egress					
9. Knowledge/Completion of Forms					
10. Airmanship/Situational Awareness					
11. Radar Ops/Wtr Avoid/Windshear					
QUALIFICATION/MISSION	■	■	■	X	
12. Preflight					
13. Departure					
14. General Navigation and Enroute					
14A. Plotting/Fixing/Pacing					
14B. Course Adherence					
15. Radar Navigation (N/A PC)					
16. Navigation Systems					
17. Dead Reckoning(DR)/Rate Nav Sys					
18. Mission Nav Leg (PC-Only)					
19. Celestial Navigation (N/A PC)					
20. GRID Navigation (If Required)					
21. Time Control (If Required)					
22. Descent/Approach Monitor					
23. Emergency Equipment					
24. Emergency Procedures (If Observed)					
25. Tanker A/R					
25A. Rendezvous (PP and Enroute)					
25B. Breakaway					
25C. Overrun Procedures					
25D. A/R Formation (If Observed)					
25E. A/R Track Adherence/Alt					
26. Receiver A/R (If Qualified)					
26A. Rendezvous (PP and Enourte)					
26B. Breakaway					
26C. A/R Track Adherence/Alt					
26D. A/R Formation (If Observed)					
27. Manual Gear Extension (If Req.)					
28. Manual Flap Extension (If Req.)					
29. Formation /Stn Kpng (If Observed)					

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AREA/SUBAREAS	Q	Q-	U	T	REMARKS
INSTRUCTOR	■	■	■	X	
30. Instructor Responsibility		■			
30A. Instructor Ability		■			
30B. Student Briefing/Critique		■			
UNIT	■	■	■	X	

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Figure A3.1. Continued.

AREA/SUBAREAS	Q	Q-	U	T	REMARKS

TREND ANALYSIS GUIDANCE *(Note: T column is for Trend Information)*
Grade each area using the following guidelines:

A – Q awarded and the evaluator makes a positive comment during the post mission critique.
B – Q awarded and no other comment is warranted.
C – Q or Q- awarded and the evaluator makes negative comment during the post mission critique.
D – U action taken.

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KC-135 NAVIGATOR FLIGHT EVALUATION

		DATE COMPLETED
NAME *(Last, First, MI)*	GRADE	SSN
ORGANIZATION/LOCATION	ACFT/CREW POS	ELIGIBILITY PERIOD

QUALIFICATION

GROUND PHASE			FLIGHT PHASE	
EXAM/CHECK	DATE	GRADE	MISSION/CHECK	DATE

QUALIFICATION LEVEL			ADDITIONAL TRAINING
QUALIFIED	UNQUALIFIED	RESTRICTION *(Explain in Comments)*	DUE DATE
		YES ☐	DATE ADDITIONAL TRAINING COMPLETED
EXPIRATION DATE OF QUALIFICATION		NO ☐	

COMMENTS

CERTIFICATION

PRINT NAME AND GRADE	ORGANIZATION
1. FLIGHT EXAMINER	
2. REVIEWING OFFICER	
3. FINAL APPROVING OFFICER	

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REPLACES AF FORM 3862, SEP 98 AND (AMC) MC FORMS 50, 51, 52, 53, AND 54, JAN 96 WHICH ARE OBSOLETE.

Attachment 4

BOOM OPERATOR FLIGHT EVALUATION WORKSHEET EXAMPLE

Figure A4.1. KC-135 Boom Operator Flight Evaluation Worksheet.

AREA/SUBAREAS	Q	Q-	U	T	REMARKS
GENERAL	■	■	■	X	
1. Directives and Publications					
2. Mission Preparation/Planning					
3. Use of Checklist					
4. Safety Consciousness		■			
5. Judgment/Compliance		■			
6. Crew Coordination/CRM					
7. Communication Procedures					
8. Life Support Systems/Egress					
9. Knowledge/Completion of Forms					
10. Airmanship/Situational Awareness					
QUALIFICATION/MISSION	■	■	■	X	
11. Ground Operation					
12. Pre-takeoff, Climb, and Cruise					
13. A/R (Boom)					
14. A/R (BDA) If Observed					
15. A/R (MPRS) If Observed					
16. System Ops/Knowledge/Limitations					
17. Abnormal/Emergency Procedures					
18. Weight and Balance					
19. Cargo Ldg/Unldg (If Observed)					
20. Pax Handling (If Observed, Verbal)					
21. Manual Gear Extension					
22. Manual Flap Extension					
INSTRUCTOR	■	■	■	X	
21. Instructor Ability		■			
22. Demonstration of Knowledge		■			
23. Student Briefing/Critique		■			
UNIT	■	■	■	X	

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AREA/SUBAREAS	Q	Q-	U	T	REMARKS

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Figure A4.1. Continued.

AREA/SUBAREAS	Q	Q-	U	T	REMARKS

TREND ANALYSIS GUIDANCE *(Note: T column is for Trend Information)*
Grade each area using the following guidelines:

A = Q awarded and the evaluator makes a positive comment during the post mission critique.
B = Q awarded and no other comment is warranted.
C = Q or Q- awarded and the evaluator makes negative comment during the post mission critique.
D = U action taken.

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KC135 BOOM OPERATOR FLIGHT EVALUATION

NAME *(Last, First, MI)*	GRADE	SSN
ORGANIZATION/LOCATION	ACFT/CREW POS	ELIGIBILITY PERIOD

DATE COMPLETED

QUALIFICATION

GROUND PHASE			FLIGHT PHASE	
EXAM/CHECK	DATE	GRADE	MISSION/CHECK	DATE

QUALIFICATION LEVEL			ADDITIONAL TRAINING
QUALIFIED	UNQUALIFIED	RESTRICTION *(Explain in Comments)*	DUE DATE
		YES ☐	DATE ADDITIONAL TRAINING COMPLETED
EXPIRATION DATE OF QUALIFICATION		NO ☐	

COMMENTS

CERTIFICATION

PRINT NAME AND GRADE	ORGANIZATION
1. FLIGHT EXAMINER	
2. REVIEWING OFFICER	
3. FINAL APPROVING OFFICER	

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REPLACES AF FORM 3862, SEP 98 AND (AMC) MC FORMS 50, 51, 52, 53, AND 54, JAN 96 WHICH ARE OBSOLETE.

Attachment 5 (Added-MACDILL)

PILOT EVALUATION PROFILES

6 AMW PILOT EVALUATION PROFILES

EVENT	Instructor Pilot	Aircraft Commander	Copilot
EPE*	XX	XX	XX
Mission Preparation/Planning/Performance	XX	XX	XX
Takeoff	XX	XX	XX
Instrument Departure/SID	XX	XX	XX
En Route Navigation	XX	XX	XX
Air Refueling (RZ IS REQUIRED)	XX	XX	XX Copilot Duties
Breakaway (Practice or Actual)	XX	XX	XX Copilot Duties
Holding (If available, else verbally evaluate)	XX	XX	XX
Descent/Arrival	XX	XX	XX
Precision Approach with Touch and Go	30 Flap	30 Flap	40/50 Flap
EFTOC	XX	XX	N/A
Non-Precision Approach with Missed Approach	3 Eng	3 Eng	4 Eng
PAR and Circling (If available, else verbally evaluate)	XX	XX	XX
VFR Pattern (wx permitting) / Full Stop Landing (If not, accomplish via any instrument approach)	3 Eng	3 Eng	4 Eng
Instructor Ability	XX	N/A	N/A
Demonstration of Maneuvers	XX	N/A	N/A
Student Briefing/Critique	XX	N/A	N/A

NOTE 1: Emergency Procedures Evaluation (EPE). Administered as part of the qualification examination. EPEs will consist of at least one boldface/CAPs (if applicable) and one non-boldface EP per phase of flight (i.e., start/taxi, takeoff, cruise, and landing), aircraft systems knowledge/ops limits, and general knowledge (related to the type of evaluation). EPEs may be conducted using a "crew concept," but with no more than two examinees at one time. All EPEs will be of sufficient length to ensure adequate coverage of applicable material. EPEs will be briefed, debriefed, and graded as a separate event. Do not accomplish the EPE in-flight when the examinee is a required crewmember. EPE scenarios may include safety-mishap related incidents.

NOTE 2: Dual seat pilots will perform an instrument approach and landing from each seat to maintain dual seat qualification (ref 11-2KC-135 V2, para 2.3.1. See Note). A sampling of emergency procedures will be evaluated from each seat, e.g., 3 engine approach per seat. If three pilots are not on the flight, a full stop taxi back is required to accomplish a dual seat checkride.

Attachment 6 (Added-MACDILL)

NAVIGATOR EVALUATION PROFILES

6 AMW NAVIGATOR EVALUATION PROFILES

EVENT	Instructor Navigator	Mission Navigator
EPE*	XX	XX
Mission Preparation/Planning	XX	XX
Air Refueling/Rendezvous**	XX	XX
Gear and Flap Lowering***	XX	N/A
Instructor Ability	XX	N/A
Demonstration of Maneuvers	XX	N/A
Student Briefing/Critique	XX	N/A

NOTE 1: Emergency Procedures Evaluation (EPE). Administered as part of the qualification examination. EPEs will consist of at least one boldface/CAPs (if applicable) and one non-boldface EP per phase of flight (i.e., start/taxi, takeoff, cruise, and landing), aircraft systems knowledge/ops limits, and general knowledge (related to the type of evaluation). EPEs may be conducted using a "crew concept," but with no more than two examinees at one time. All EPEs will be of sufficient length to ensure adequate coverage of applicable material. EPEs will be briefed, debriefed, and graded as a separate event. Do not accomplish the EPE in-flight when the examinee is a required crewmember. EPE scenarios may include safety-mishap related incidents.

****NOTE 2:*** Point parallel or an enroute rendezvous. Verbally evaluate the type of rendezvous not observed.

*****NOTE 3:*** Mandatory for initial instructor only.

Attachment 7 (Added-MACDILL)

BOOM OPERATOR EVALUATION PROFILES

6 AMW BOOM OPERATOR EVALUATION PROFILES

EVENT	Instructor Boom	Mission Boom
EPE*	XX	XX
Directives and Publications	XX	XX
Mission Preparation/Planning	XX	XX
Air Refueling (Normal Operations)	XX	XX
Air Refueling (Tanker Manual Operations)	XX	XX
Breakaway (Practice or Actual)	XX	XX
Manual Gear and Flap Extension	XX	XX
Passenger Briefing	XX	XX
Cargo (Planning/Inspection)	XX	XX
Cargo (On/Off Loading Procedures)	XX	XX
Cargo (Floor Loading or Roller System Loading)	XX	XX
Instructor Ability	XX	N/A
Demonstration of Maneuvers	XX	N/A
Student Briefing/Critique	XX	N/A

NOTE 1: Emergency Procedures Evaluation (EPE). Administered as part of the qualification examination. EPEs will consist of at least one boldface/CAPs (if applicable) and one non-boldface EP per phase of flight (i.e., start/taxi, takeoff, cruise, and landing), aircraft systems knowledge/ops limits, and general knowledge (related to the type of evaluation). EPEs may be conducted using a "crew concept," but with no more than two examinees at one time. All EPEs will be of sufficient length to ensure adequate coverage of applicable material. EPEs will be briefed, debriefed, and graded as a separate event. Do not accomplish the EPE in-flight when the examinee is a required crewmember. EPE scenarios may include safety-mishap related incidents.

NOTE 2: Initial and recurring evaluations must include Mission Planning and Crew Briefing, Preflight up through Takeoff, After T/O Climb, Cruise, Air Refueling, and Descent through Postflight Debrief. Air Refueling (A/R) consists of Preparation for Contact, a Normal Contact, Tanker Manual Contact, Emergency Separation and Post A/R procedures.

Instructor evaluations will follow the same profile as above with emphasis on instructing during ground and flight phases. Accomplishment of Manual Gear and Flap Extension are mandatory for Initial Qualification, Initial Instructor Qualification, or any Requalification requiring an initial evaluation profile.

Cargo evaluations may be administered during static loading operations or any real-world taskings on which sufficient cargo is loaded to demonstrate knowledge of cargo operations. The evaluations can be given on floor-loaded or palletize cargo missions. When a static or real-world cargo load evaluation is not possible a verbal evaluation will be given in accordance with AFI 11-2KC-135V2, para 4.3.1.5. For instructor cargo evaluations, instructors must demonstrate ability to teach cargo operations to include load planning, floor-loading, and/or pallet-loading procedures.