

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

AIR FORCE INSTRUCTION 11-2B-52V2



4 JUNE 2009

Incorporating Through Change 2, 16 AUGUST

Certified Current, 4 JUNE 2011

Flying Operations

B-52--AIRCREW EVALUATION CRITERIA

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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

RELEASABILITY: There are no releasability restrictions on this publication.

OPR: HQ AFGSC/A3TV

Certified by: HQ USAF/A3O-A
(Col Steven A. Ruehl)

Supersedes: AFI11-2B-52V2,
4 February 2005

Pages: 52

This volume implements AFD 11-2, *Aircraft Rules and Procedures*; AFD 11-4, *Aviation Service*; and AFI 11-202V2, *Aircrew Standardization/Evaluation Program*. It provides guidance and procedures for administering Air Force (AF) and Air Force Reserve Command (AFRC) B-52 aircrew evaluations, and establishes separate qualification, instrument, mission, and instructor evaluation grading criteria for B-52 aircrew positions. This instruction applies to AFRC. This instruction does not apply to the Air National Guard (ANG). MAJCOMs/DRUs/FOAs are to forward proposed MAJCOM/DRU/FOA-level supplements to this volume to HQ USAF/ A3O-AT, through HQ AFGSC/A3TV, for approval prior to publication IAW AFD 11-2. Copies of MAJCOM/DRU/FOA-level supplements, after approved and published, will be provided by the issuing MAJCOM to HQ USAF/ A3O-AT, HQ AFGSC/A3TV, and the user MAJCOM/DRU/FOA office of primary responsibility. Field units below MAJCOM/DRU/FOA level will forward copies of their supplements to this publication to their parent MAJCOM/DRU/FOA office of primary responsibility for post publication review. **NOTE:** The terms Direct Reporting Unit (DRU) and Field Operating Agency (FOA) as used in this paragraph refer only to those DRUs/FOAs that report directly to HQ USAF. Keep supplements current by complying with AFI 33-360, *Publications and Forms Management*. This publication requires the collection and or maintenance of information protected by the Privacy Act (PA) of 1974. The authorities to collect and or maintain the records prescribed in this publication are Title 10, *United States Code*, Chapter 857 and Executive Order 9397, *Numbering System for Federal Accounts Relating to Individual Persons*, November 22, 1943. Forms affected by the PA have an appropriate PA statement. System of records notice **F011 AF XO A**, *Aviation Resource Management System (ARMS)* (December 26, 2002, 67 FR 78777) applies. Paperwork Reduction Act of 1974 as

amended in 1996 affects this instruction. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located on the AF Portal <https://www.my.af.mil/gcss-af61a/afirms/afirms>.

Recommendations for improvements to this volume will be submitted on AF Form 847, *Recommendation for Change of Publication*, through channels, to the parent MAJCOM Stan/Eval. Parent MAJCOM Stan/Eval will forward approved recommendations to lead command OPR (HQ AFGSC/A3TV 245 Davis Ave, Barksdale AFB LA 71110). HQ USAF/A3/5 is the approval authority for interim changes to this instruction.

SUMMARY OF CHANGES

This change removes references to Combat Mission Pilot (CMP) and eliminates CMP evaluation criteria, in recognition of the fact that CMP is a course syllabus and not a qualification. Emergency traffic patterns and VFR Pattern/Approach are now required for all copilot INSTM/QUAL evaluations, and copilot air refueling qualification is added as an optional special qualification. Clarified guidance is added for dual seat pilot and navigator evaluations. Chapter 4 EPE guidance is reorganized and clarified, including revised grading criteria for pilot emergency procedures evaluations, including “Q-” criteria for non-boldface procedures, as well as defined evaluation areas for weapons jettison and weapons malfunctions. A margin bar (|) indicates revision from the previous version.

| | |
|--|----------|
| Chapter 1—GENERAL INFORMATION | 4 |
| 1.1. General. | 4 |
| 1.2. Waivers. | 4 |
| 1.3. Procedures. | 4 |
| 1.4. Grading Instructions. | 4 |
| Table 1.1. General Criteria. | 5 |
| 1.5. Written Examinations: | 6 |
| 1.6. Instructor Evaluations: | 6 |
| 1.7. Stan/Eval Sortie Requirements. | 7 |
| Chapter 2—EVALUATION REQUIREMENTS | 8 |
| 2.1. General. | 8 |
| 2.2. Instrument/Qualification or Qualification Evaluation: | 10 |
| 2.3. Mission Evaluation: | 11 |
| 2.4. Formal Course Evaluation. | 13 |
| 2.5. Instructor Evaluation: | 13 |

| | | |
|---|--|-----------|
| 2.6. | Reporting Deviations/Discrepancies by Unlike Specialty. | 14 |
| 2.7. | Crew Compartment Spot Evaluations. | 14 |
| Table 2.1. | Pilot Evaluations. | 14 |
| Table 2.2. | Navigator Evaluations. | 17 |
| Table 2.3. | Electronic Warfare Evaluations. | 18 |
| Chapter 3—EVALUATION CRITERIA | | 21 |
| 3.1. | General Grading Standards: | 21 |
| 3.2. | General: | 21 |
| 3.3. | Instrument: | 36 |
| 3.4. | Tactical Employment: | 38 |
| Chapter 4—EMERGENCY PROCEDURES EVALUATIONS | | 46 |
| 4.1. | General: | 46 |
| 4.2. | General Grading Standards: | 46 |
| 4.3. | Grading. | 46 |
| 4.4. | Information Collection, Records, and Forms. | 48 |
| 4.4.3. | | 48 |
| Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION | | 49 |

Chapter 1

GENERAL INFORMATION

1.1. General. All evaluations will be conducted IAW the provisions of AFI 11-202V2, Aircrew Standardization/Evaluation Program, and this instruction. Information gathering documents will be established as forms in accordance with AFI 33-360, Publications and Forms Management.

1.2. Waivers. Waiver authority for this instruction is the MAJCOM A3. Waivers will be requested from the parent MAJCOM A3 through appropriate Stan/Eval channels.

1.3. Procedures.

1.3.1. Flight Examiners (FEs) will use the evaluation criteria contained in **Chapter 3** and **Chapter 4** to conduct all flight, Aircrew Training Device (ATD), and Emergency Procedure Evaluations (EPE). To ensure standard and objective evaluations, flight examiners will be thoroughly familiar with the prescribed evaluation criteria.

1.3.2. -(N/A FTU) In order to validate the ability of the aircrews to fulfill nuclear mission requirements and ensure emphasis on proper training in the nuclear mission, all units with a nuclear mission in their unit DOC tasking will accomplish at least 20% of mission evaluations using a dedicated nuclear profile.

1.3.3. Avionics Mid-life Improvement (AMI) Block upgrade allows for data capture which can be used to reconstruct/evaluate the mission.

1.3.4. The FE should not occupy a primary crew position during evaluations to ensure the most comprehensive and objective evaluation. However, if conditions warrant, the flight examiner may occupy a primary crew position during an evaluation. While occupying a primary crew position, the FE will execute the duties of that position.

1.3.5. The FE will explain the purpose of the evaluation and how it will be conducted prior to flight. The examinee will accomplish all required mission planning in accordance with their crew position during the evaluation. FEs may assist in mission planning/briefing as tasked and will be furnished a copy of necessary charts, flight logs, target folders, and any additional items they deem necessary.

1.3.6. The FE will thoroughly debrief all aspects of the flight. This debrief will include the examinee's overall rating, specific deviations, area grades assigned (if other than qualified) and any required additional training.

1.4. Grading Instructions. Standards and performance parameters are contained in AFI 11-202, Volume 2 and this instruction.

1.4.1. Evaluation criteria shall be based upon crewmember qualification as follows:

1.4.1.1. (P) is used to denote Pilots and Instructor Pilots.

1.4.1.2. (CP) is used to denote Copilots.

1.4.1.3. DELETED.

1.4.1.4. (RN) is used to denote non-dual seat qualified Radar Navigators.

1.4.1.5. (N) is used to denote Instructor Navigators and non-dual seat qualified Navigators.

1.4.1.6. (DSN) is used to denote non-instructor Dual Seat Navigators.

1.4.1.7. (E) is used to denote Electronic Warfare Officers.

1.4.2. The FE will base tolerances for in-flight parameters on conditions of smooth air. Do not consider momentary deviations from tolerances provided the examinee applies prompt corrective action and such deviations do not jeopardize flying safety. The FE will consider cumulative deviations when determining the overall grade.

1.4.2.1. When grading criteria specify that airspeed will be evaluated and the flight manual lists only a minimum/maximum/recommended airspeed for that area, the examinee will brief the desired airspeed.

1.4.3. The FE will compare examinee performance for each area accomplished during the evaluation with the standards provided in this volume and assign an appropriate grade for the area. Derive the overall flight evaluation grade from the area grades based on a composite of the observed events and tasks IAW AFI 11-202, Volume 2, evaluator judgment, and this instruction.

1.4.3.1. FEs will use the grading criteria in this volume to determine individual area grades. Judgment must be exercised when the wording of areas is subjective and when specific situations are not covered.

1.4.3.2. If the examinee receives an unqualified area grade in any of the critical areas identified by this volume, an overall qualification level of “Q-3” will be assigned.

1.4.3.3. FE judgment will be the determining factor in arriving at the overall grade.

1.4.3.4. The following general criteria apply during all phases of flight except as noted for specific events and instrument final approaches:

Table 1.1. General Criteria.

| | | |
|-----------|----------------------------|--------------------|
| Q | Altitude | +/- 150 feet |
| | Airspeed | +/- 10 kts |
| | MACH | +/- .03 |
| | Course | +/- 5 degrees/3 NM |
| | TACAN Arc | +/- 2 NM |
| | %MAC for T/O | +/- 1.0% |
| | Takeoff /Stopping Distance | +/- 500 feet |
| | Takeoff Trim | + /- .4 units |
| | EPR Settings | +/- .02 |
| | Thrust Gate Setting | + /- 5 degree |
| | S1 Time | + /- 1 sec |
| | All Computed Speeds | +/- 3 kts |
| Q- | Altitude | +/- 200 feet |
| | Airspeed | +/- 15 kts |
| | MACH | + /- .04 |

| | | |
|----------|----------------------------|---------------------|
| | Course | +/- 10 degrees/5 NM |
| | TACAN Arc | +/- 3 NM |
| | %MAC for T/O | +/- 1.5% |
| | Takeoff /Stopping Distance | +/- 700 feet |
| | Takeoff Trim | + /- .6 units |
| | EPR Settings | +/- .03 |
| | Thrust Gate Setting | + /- 10 degrees |
| | S1 Time | + /- 1.5 sec |
| | All Computed Speeds | +/- 4 kts |
| U | Exceeded Q- Limits | |

1.5. Written Examinations:

1.5.1. Closed Book:

1.5.1.1. General Knowledge. This exam consists of a minimum of 20 questions and includes information applicable to the individual's crew position and the unit's mission.

1.5.1.2. Boldface/Critical Action Procedures (CAPs). This exam must consist of one question concerning each critical action emergency procedure applicable to the individual's specialty. The answer must contain all critical action items in proper sequence. Verbatim responses are not required; however, answers must clearly state the intended course of action.

1.5.2. Open Book:

1.5.2.1. Qualification Examination. This examination will be derived from all flight manuals and governing command directives. The examination will consist of at least 50 questions. Units may increase the number of questions to provide an in-depth evaluation of the examinee's knowledge.

1.5.2.2. Weapons Examination (Weapons Qualified Crewmembers). This exam consists of a minimum of 30 questions derived from all applicable missile or weapon directives specific to the individual's weapon qualification. The Weapons exam may be included in the Qualification Examination.

1.5.3. Instrument Examination. This examination will be derived from the secure questions database provided by the AF Flight Standards Agency. The examination will consist of at least 50 questions.

1.6. Instructor Evaluations:

1.6.1. An instructor receiving an area grade of U or Q- with additional training in any instructor area will receive an overall Q-3 for the instructor evaluation.

1.6.2. An instructor receiving an area grade of U or Q- with additional training in any grading area must not perform instructor duties until additional training is complete. This restriction is placed in the comments and the YES block is marked in restrictions.

1.6.3. Complete all upgrade training requirements prior to this evaluation.

1.6.4. Recurring FTU instructor evaluations may be conducted with an FTU student in the pilot, copilot, radar navigator, navigator or electronic warfare officer positions. For FTU

Instructor Electronic Warfare Officers (IE), this can fulfill the instructor portion of the checkride only.

1.7. Stan/Eval Sortie Requirements. (N/A AFRC, FTU) Sorties developed for stan/eval crews must be pure stan/eval sorties to the maximum extent possible. This ensures required stan/eval proficiency is maintained.

Chapter 2

EVALUATION REQUIREMENTS

2.1. General.

2.1.1. All evaluations will follow the guidelines set in AFI 11-202, Volume 2.

2.1.2. Flight phase requisites for all evaluations are shown in [Tables 2.1-2.3](#). When conditions such as equipment malfunction, operational requirements, or weather preclude evaluation of a particular event in-flight, it may be evaluated by an alternate method (i.e., ATD, CPT, or verbal evaluation) in order to complete the evaluation. Document the reason and type of alternate method used in the Comments portion of the AF Form 8, *Certificate of Aircrew Qualification*. If the FE determines the required item cannot be adequately evaluated by an alternate method, the examinee will require an additional flight to complete the evaluation. ATDs will only be used for areas that are certified in AFI 11-2B-52V1, *B-52 Aircrew Training*, or the Ready Aircrew Program Tasking Memorandum. Progress check sortie items may be used at the discretion of the evaluator to finish incomplete student Formal Training Unit (FTU) evaluations when an ATD or verbal completion is not appropriate. Specific procedures will be included in the unit supplement to AFI 11-202V2.

2.1.3. For Combat Mission Ready aircrew to complete an evaluation, all areas annotated with an “R” must be accomplished. Basic Mission Capable (BMC) aircrew will be evaluated in only those areas in which they maintain proficiency. Strive to complete all evaluation requirements on one flight for efficiency.

2.1.4. **Weapons Qualification.** (N/A AFMC). For purposes of this instruction, weapons qualified crewmembers include all pilots, copilots, radar navigators, navigators, and weapons school graduates. All weapons qualified crewmembers will take the Weapons Open Book Examination. All weapons qualified crewmembers will be required to accomplish a Nuclear Weapons preflight in conjunction with their MSN evaluation. Weapons test will reflect knowledge used in each crew position to employ weapons (i.e. pilots on jettison and weight and balance, navigators on OAS faults and jettison procedures).

2.1.5. **Dual Seat Qualification.** The following guidance is provided to clarify how dual seat qualifications are earned and retained. Reference AFI 11-2B52V1 and V3 for operational limits and currency requirements with inexperienced and experienced single AFSC pilots and navigators. In addition, the units letter of X’s will be altered in such a way as to make clear each aviator’s qualifications based on the following paragraphs.

2.1.5.1. **Dual Seat Pilot and Navigator Qualification.** Copilots and Navigators current and qualified under the single seat training syllabi who are operating under unique AFSCs do not lose their right seat qualifications when they complete a left seat qualification program (PUP/NUP or PUP-A/NUP-A with local flying) and checkride. Radar navigators will complete the requirements of [paragraph 2.1.5.2](#) —Dual Seat Navigator Evaluations. Aircraft commanders will complete the requirements under [paragraph 2.1.5.4](#) —Pilot Dual Seat Evaluations.

2.1.5.2. **Dual Seat Navigator Evaluations.** Dual Seat Navigators will demonstrate duties applicable to the RN and N positions including guided weapons employment,

unguided weapons employment, radar tuning, system management, OAS operation, navigation, and time control. The examinee may be evaluated in the opposite seat in the ATD if these duties were not demonstrated in flight. Most evaluation areas can be evaluated in either seat. However, as a minimum, DSNs will be evaluated in both seats in the following areas:

2.1.5.2.1. Area 7. CRUISE/NAVIGATION.

2.1.5.2.2. Area 10. EQUIPMENT OPERATIONS.

2.1.5.2.3. Area 12. CREW COORDINATION.

2.1.5.2.4. Area 13. AIR REFUELING.

2.1.5.2.5. Area 21. KNOWLEDGE.

2.1.5.2.6. Area 48. WEAPON EMPLOYMENT (GUIDED & UNGUIDED).

2.1.5.3. DELETED.

2.1.5.4. **Initial Dual Seat Pilot Evaluations.** Non-instructor pilots, who are current and qualified in the right seat, may become dual seat qualified on their initial left seat checkride if they demonstrate an instrument approach (area 33 or 34) to a touch and go in the right seat. If the evaluation is completed without meeting this requirement, the examinee will only be qualified in the left seat until an instrument approach to a touch and go is successfully evaluated in the right seat. If an examinee gains dual seat qualification during a SPOT evaluation, that qualification will only be valid until the end of the eligibility window for the examinee's next INSTM/QUAL evaluation, regardless of when the SPOT evaluation was administered.

2.1.5.4.1. **Recurring Dual Seat Pilot Evaluations.** During recurring dual seat pilot evaluations, the examinee may fly the evaluation in either seat and perform an instrument approach to a touch and go in the opposite seat. However, the examinee should be evaluated primarily in the left seat. If mission requirements drive the examinee to perform the evaluation in right seat, an instrument approach to a touch and go in the left seat is required to complete the evaluation. If an examinee gains or regains dual seat qualification during a SPOT evaluation, that evaluation will only be valid until the end of the eligibility window for the examinee's next INSTM/QUAL evaluation, regardless of when the SPOT evaluation was administered.

2.1.5.5. **Copilot Air Refueling.** At the discretion of the assigned/attached flying squadron commander, copilots may qualify in air refueling procedures during any in-flight (initial, recurring, or SPOT) evaluation by meeting the provisions of paragraph **2.3.2** and successfully completing the following:

2.1.5.5.1. Five minutes of contact time must be completed within 15 minutes after initial pre-contact position.

2.1.6. **Crew Compartment/Crew Resource Management (CRM).** In accordance with AFI 11-290, *Cockpit/Crew Resource Management*, CRM skills will be evaluated during all evaluations. CRM skills are integral to all phases of flight and are embedded within specific grading criteria. As all the CRM skills listed on the AF Form 4031, *CRM Skills Criteria Training/Evaluation Form*, are included/embedded, use of the Form 4031 is unnecessary for

evaluations in the B-52. The Stan/Eval trend program can be used to measure the effectiveness of CRM training.

2.1.7. Crew Compartment Responsibility. For grading areas where crewmembers occupying either the pilot/copilot or the radar navigator/navigator crew positions are responsible, but not necessarily both (designated by P/CP or RN/N), determine individual responsibility by the flight manual and sound crew procedures.

2.1.8. Preplanned Mission Data. When using a staff agency derived flight plan, fuel log, etc., do not grade the individual for those portions computed by the staff. An individual using a certified computer product is responsible for the initial data input. The individual is responsible to ensure the data used in the aircraft is accurate and effective for mission accomplishment.

2.1.9. Currency of Flight Publications. On all flight evaluations, all technical orders, checklists, and publications required for the flight will be checked for currency and accuracy. When unit-maintained publications are used in-flight, the examinee will ensure currency and suitability for flight. The unit addendum to AFI 11-202V2 may specify additional publications to be checked.

2.2. Instrument/Qualification or Qualification Evaluation: A mission flown according to instrument flight rules (to the maximum extent practical) best fulfills the objective of the INSTM/QUAL evaluation. This evaluation may be administered on any compatible training mission.

2.2.1. Minimum ground phase requisites are:

2.2.1.1. Closed and open book qualification examinations.

2.2.1.2. Boldface/Critical Action Procedures (CAPs) examination.

2.2.1.3. EPE/ATD (see [Chapter 4](#)).

2.2.1.4. Instrument Examination. (N/A for Electronic Warfare Officers).

2.2.2. EP Patterns. (P/CP): Emergency/abnormal procedures will normally be accomplished in conjunction with instrument approaches. Actions taken in response to actual or simulated emergencies that occur during the flight evaluation will be evaluated until the evaluator declares the evaluation terminated. For six-engine approaches, the simulated loss of engines must be accomplished during level flight with sufficient time provided to allow completion of the emergency procedures checklist prior to final approach. The use of all engines may be returned after the go-around has been completed and a safe altitude and airspeed have been attained. On recurring qualification evaluations, a minimum of two of the following EP patterns will be accomplished at the discretion of the evaluator. On initial qualification evaluations, all EP patterns will be accomplished

2.2.2.1. Six-engine approach and missed approach. (Simulated six-engine approach and missed approach will be accomplished from an instrument approach demonstrating technique for asymmetric thrust conditions.). On initial IP evaluations, the IP will also accomplish a six-engine approach to a landing or touch and go. On recurring IP evaluations, the IP may accomplish the six-engine landing in lieu of a six-engine approach and missed approach.

2.2.2.2. Simulated Loss of Engine on Takeoff.

2.2.2.3. Flaps up approach and go-around.

2.3. Mission Evaluation: MSN evaluation will be flown IAW current tactics, unit tasking and theater Area of Responsibility scenarios and will incorporate all appropriate evaluation requirements from **Table 2.1 - 2.3**. Scenarios that represent unit Designed Operational Capability (DOC) tasking or current AEF requirements satisfy the requirements of this evaluation. Provide the employment scenario IAW AFI 11-415, *Weapons and Tactics Program*, Attachment 3, and include (as a minimum): intelligence scenario, orders of battle (electronic and air), commander's intent, strike mission objectives and Special Instructions (SPINS). The scenario portion of the flight need not encompass the entire sortie but must include at least one weapon event. On missions when SPINS are not available or used, use command guidance from appropriate instructions. Evaluations during exercises or deployments are not prohibited; however units should apply operational risk management principles to the scheduling of the evaluation. Real world contingencies may provide a unique opportunity to conduct evaluations; however factors beyond the control of the examinee and FE may preclude its successful completion.

2.3.1. Minimum ground phase requisites are:

2.3.1.1. EPE (if MSN evaluation is stand-alone evaluation. See **Chapter 4**).

2.3.1.2. Open Book weapons examination (Weapons Qualified Crewmembers).

2.3.1.3. Weapons Preflight (Weapons Qualified Crewmembers).

2.3.1.4. (N/A **AFRC**) All weapons qualified crewmembers who are nuclear CMR (CMR-N) or are in training to become CMR-N will perform a preflight of an inert or WR resources for those already PRP certified. Document on the ground phase of the AF Form 8 as "Nuclear Weapons Preflight." The overall grade for nuclear weapons preflight will be 1 or 3.

2.3.1.5. ATD Exercise. (E) The ATD exercise must be accomplished for all mission evaluations and annotated within the ground phase on the AF Form 8. Enter ATD Exercise date and grade (1, 2, or 3). An examinee receiving a grade of 3 (unqualified) will be placed on supervised status IAW AFI11-202v2 paragraph 5.7.

2.3.1.5.1. The ATD exercise will start with sufficient time prior to expected activity to provide realism. This exercise will evaluate all areas listed as "R" under the ATD column in **Table 2.3**. The exercise must include, but is not limited to, analyzing one system malfunction, a fighter attack (forward and/or rear hemisphere), and the penetration of high and/or low altitude threat areas according to the mission scenario. The exercise should have appropriate types and density of threats, which accurately reflect a typical unit OPLAN. The examinee's EPE may be accomplished concurrently in this ATD mission. Each unit will have a minimum of two different check missions. Unit stan/eval will ensure that all threats and threat modes presented in check missions are represented in continuation training ATD missions.

2.3.2. **Air Refueling.** The evaluation will include the following areas applicable to the examinee's crew position: air refueling communication, air refueling rendezvous (any type) with a tanker aircraft, aircraft control, descent, contact, fuel management and transfer, visual

signals (may be done orally if necessary), post refueling, and breakaway. Air refueling tracks will allow at least 30 minutes of air refueling per examinee. Deviations from this requirement are permissible only when tanker/bomber formation ratio or length of the published air refueling track prohibits compliance. However, each examinee must have sufficient time to meet requirements in **paragraphs 2.3.2.1** and **2.3.2.2** below. Air refueling practice emergency separation procedures must be initiated with the receiver in contact or in the refueling envelope. Grade buddy rendezvous procedures using the formation criteria.

2.3.2.1. **(P)**. Ten minutes of contact time (20 for initial qualification evaluations) must be completed within 30 minutes after initial pre-contact position.

2.3.2.2. DELETED.

2.3.3. **Terrain Avoidance (TA). (If applicable) (P/CP/RN/N)** Requirements include a TA operational check, at least 10 minutes terrain avoidance with an operational TA system, and at least 10 minutes terrain avoidance utilizing integrated Electro-Optical Viewing System (EVS)/visual contour procedures. Conduct TA in mountainous routes when possible.

2.3.4. **Weapon Employment Requirements:**

2.3.4.1. Weapon employment classes are defined as: unguided (e.g. GP, B-61, or B-83 etc.), and guided (e.g., JDAM, WCMD, LGB, ALCM, CALCM, and JASSM). Units will design written mission evaluation profiles using current tactics, unit tasking and theater AOR scenarios and will incorporate all appropriate evaluation requirements from **Tables 2.1 - 2.3**. Scenarios that represent unit DOC tasking satisfy the requirements of this evaluation. The profiles will be designed to evaluate training, flight position, special qualifications, and basic airmanship. Initial mission evaluations should be given in the primary DOC of the unit.

2.3.4.2. Aircrew should demonstrate proficiency in both guided and unguided weapons employment; however, only one is required to complete an evaluation.

2.3.4.2.1. Guided conventional or nuclear weapon employment consists of direct engagement scenarios using weapons such as JDAM, WCMD, or LGB and indirect engagement scenarios using weapons such as CALCM, JASSM, or ALCM. Direct engagement scenarios typically involve man-in-the-loop decisions and limited standoff range. Indirect engagement scenarios typically involve autonomous systems and increased standoff range. Either direct or indirect guided weapons employment is acceptable.

2.3.4.2.2. Unguided weapons employment consists of conventional or nuclear scenarios using weapons such as GP, B-61, or B-83.

2.3.4.3. Use EMCON procedures and techniques to the maximum extent possible, conditions permitting, and use threat avoidance/evasive action techniques as directed by the employment scenario.

2.3.4.4. Grade each release of a multiple unguided gravity weapon separately. Any type of scoring is acceptable, however, for live weapons deliveries, range scoring is preferred.

2.3.4.5. **(ACC)** For TA qualified crewmembers, an unguided gravity release should be accomplished at TA altitudes.

2.3.4.5.1. (RN/N). When weather or equipment malfunctions preclude bombing at TA altitude, configure the radar scope in TA sector, except when optimum presentation requires another setting, use TA procedures, and accomplish the run at minimum safe altitude/instrument flight rules altitude. If equipment malfunctions preclude synchronous capability, alternate bombing meets the requirements of the evaluation.

2.3.5. **Electronic Countermeasures Requirements.** The examinee will accomplish at least one electronic attack (EA) run. To the maximum extent possible, the run should be scheduled against a Multiple Threat Emissions Systems (MUTES) capable site. The flight examiner will, during mission planning for mission evaluations, select a strategic, tactical, or naval MUTES scenario. For no-notice evaluations, scheduled scenario(s) may be changed by the examinee to a Sierra, Tango, or November scenario.

2.3.5.1. Flight examiners will not consider EW performance as less than qualified based solely on unreliable/substandard scores.

2.4. Formal Course Evaluation. Aircrew evaluations conducted as part of a formal FTU training syllabus will be flown IAW syllabus mission profile guidelines if stated, or on a mission profile developed from syllabus training objectives. Use applicable grading criteria in **Chapter 3** and **Chapter 4**.

2.5. Instructor Evaluation:

2.5.1. All flying personnel selected for instructor duty must be evaluated to determine their judgment, technical knowledge, instructor ability (including error analysis of student activity), and use of grading documents as well as proficiency in their aircrew specialty. All evaluation areas will be evaluated during all instructor evaluations. Initial instructor evaluations may be accomplished in conjunction with INSTM/QUAL/MSN evaluations.

2.5.2. Instructors must demonstrate proficiency by instructing a student or qualified individual acting as a student. The evaluator may require the examinee to present verbal explanations of equipment operations, procedures, and techniques pertinent to crew specialty duties and responsibilities.

2.5.3. Initial Flight evaluation. To initially qualify as an instructor, flying personnel selected for instructor duty must successfully complete an initial instructor evaluation. This is a one-time evaluation in which the examinee must demonstrate ability to instruct in some phase of the unit's mission. Except for requirements delineated under Area 25, Instructor Performance, in **Chapter 3**, specific profiles and/or events will be determined by the flight examiner.

2.5.4. Subsequent aircrew evaluations (i.e. INSTM/QUAL/MSN) will include instructor portions during the evaluations.

2.5.5. **Instructor Pilot Requirements.** Instructor Pilots will occupy the right seat during their initial instructor evaluation for takeoff, air refueling, initial buffet, and all traffic pattern activity. Instructor pilots must demonstrate the ability to instruct in mission accomplishment as well as flying the aircraft as described below.

2.5.5.1. Initial buffet and recovery demonstration in-flight (on recurring evaluations this event may be accomplished as part of the EPE).

2.5.5.2. Air refueling boom envelope limit demonstration. Contact time may be reduced to 5 minutes excluding the time required to demonstrate boom envelope limits. Inadvertent disconnect tolerances are not applicable during demonstration of boom envelope limits. On recurring evaluations, the boom limit demonstration is desired, but may be waived at the discretion of the evaluator.

2.5.5.3. Accomplish EP patterns as directed in [paragraph 2.2.2](#).

2.5.6. Instructor Navigator Requirements. Initial instructor evaluations should be conducted in the ATD. Subsequent instructor evaluations may be conducted in-flight or in the ATD. Evaluatees will thoroughly brief, conduct, and critique a profile representative of the unit’s DOC.

2.5.7. Instructor Electronic Warfare Officer Requirements. Use unit-specific missions to evaluate the instructor (except FTU instructors). Enter Instructor ATD, date, and grade (1 or 3) under the ground phase on the AF Form 8. On all instructor evaluations the student will not be evaluated, except for Safety of Flight.

2.5.7.1. Instructor evaluations will be accomplished in the ATD except as outlined in [paragraph 1.6.4](#).

2.6. Reporting Deviations/Discrepancies by Unlike Specialty. Evaluators must report deviations/discrepancies within their aircraft from established procedures/directives in any area, regardless of the individual’s crew specialty, to the OGV for evaluation and necessary action. If the deviation/discrepancy is found to warrant overall Qualification Level 3 AF Form 8 documentation, annotate SPOT in the Flight Phase block. The Chief of OGV will sign as the flight examiner.

2.6.1. For formation purposes, evaluators of like or unlike specialty in other aircraft within the formation who observe deviations/discrepancies affecting the overall safe conduct of the formation will report such deviation/discrepancy to OGV for evaluation and necessary action. If AF Form 8 documentation is warranted, use the procedures in [paragraph 2.6](#).

2.7. Crew Compartment Spot Evaluations. When an individual in a crew compartment is receiving an evaluation, the other compartment individual may receive a Spot evaluation. Only annotate SPOT when the evaluation does not update the individual’s expiration date. Individuals must declare their desire to update the expiration date on mission planning day. Annotate the type of evaluation given (i.e., INSTM/QUAL/MSN not SPOT) in the Flight Phase.

Table 2.1. Pilot Evaluations.

| AREA | NOTE | AREA TITLE | INSTM/QUAL | MISSION |
|----------------|--------|-------------------|------------|---------|
| GENERAL | | | | |
| 1 | | MISSION PLANNING | R | R |
| 2 | | BRIEFING | R | R |
| 3 | | PRETAKEOFF | R | R |
| 4 | 1,2,4 | TAKEOFF | R | |
| 5 | 1,2, 4 | DEPARTURE | R | |
| 6 | 1 | LEVEL OFF | R | |
| 7 | | CRUISE/NAVIGATION | R | |
| 8 | | FORMATION | | |

| | | | | |
|----------------------------|-----|---|---|---|
| 9 | | IN-FLIGHT CHECKS | R | R |
| 10 | | EQUIPMENT OPERATION | R | R |
| 11 | | COMM/IFF/SIF PROCEDURES | R | R |
| 12 | | CREW COORDINATION | R | R |
| 13 | 1,8 | AIR REFUELING | | R |
| 14 | 2,4 | DESCENT | R | |
| 15 | | GO-AROUND | R | |
| 16 | 6,7 | EMERGENCY TRAFFIC PATTERNS | R | |
| 17 | | VFR PATTERN/APPROACH | R | |
| 18 | 9 | LANDING | R | |
| 19 | | AFTER-LANDING | R | |
| 20 | | DEBRIEFING/CRITIQUE | R | R |
| 21 | * | KNOWLEDGE | R | R |
| 22 | * | AIRMANSHIP/SITUATIONAL AWARENESS | R | R |
| 23 | * | SAFETY | R | R |
| 24 | | AIRCREW DISCIPLINE | R | R |
| 25 | 4 | INSTRUCTOR PERFORMANCE | R | R |
| 26-30 | | NOT USED | | |
| INSTRUMENT | | | | |
| 31 | 5 | HOLDING | R | |
| 32 | 1,2 | INSTRUMENT PENETRATION/ENROUTE DESCENT | R | |
| 33 | 3 | PRECISION APPROACH | R | |
| 34 | | NON-PRECISION APPROACH | R | |
| 35 | | MISSED APPROACH/CLIMB OUT | R | |
| 36 | | CIRCLING/SIDESTEP APPROACH | | |
| 37 | | INSTRUMENT CROSS-CHECK | R | |
| 38-40 | | NOT USED | | |
| TACTICAL EMPLOYMENT | | | | |
| 41 | | TACTICAL PLAN | | R |
| 42 | | TACTICAL EXECUTION | | R |
| 43 | | COMPOSITE FORCE INTERFACE (if applicable) | | |
| 44 | | RADIO TRANSMISSION/ INTERPHONE-USAGE AND DISCIPLINE | | R |
| 45 | | INGRESS | | R |
| 46 | | LOW ALTITUDE NAVIGATION (if applicable) | | R |
| 47 | | TA-INTEGRATED EVS/VISUAL PROCEDURES (if applicable) | | R |
| 48 | | WEAPONS EMPLOYMENT | | R |
| 49 | | WEAPONS EMPLOYMENT C2 (if applicable) | | R |
| 50 | | NOT USED | | |
| 51 | | RANGE/ESS PROCEDURES | | R |
| 52 | | EGRESS | | R |
| 53 | | TRAINING RULES/ROE | | R |
| 54-59 | | NOT USED | | |
| 60 | | EMCON PROCEDURES | | R |
| 61-100 | | NOT USED | | |

| EMERGENCY PROCEDURES EVALUATIONS /BOLDFACE ACTION PROCEDURES | | | | |
|--|--|---------------------------------------|---|---|
| 201 | | ENGINE FIRE ON THE GROUND | R | |
| 202 | | WHEEL BRAKE SYSTEM FAILURE | R | |
| 203 | | ABORT | R | |
| 204 | | RUNAWAY OR UNSCHEDULED STAB TRIM | R | |
| 205 | | COMPLETE FAILURE OF ALL GENERATORS | R | |
| 206 | | PRESSURIZED COMPARTMENT FIRE | R | |
| 207 | | EMERGENCY ENGINE SHUTDOWN | R | |
| 208 | | UNSCHEDULED AUTOPILOT INPUTS | R | |
| 209 | | UPWARD / DOWNWARD EJECTION | R | R |
| NON-BOLDFACE ACTION PROCEDURES /GROUND EMERGENCIES/MALFUNCTIONS | | | | |
| 210 | | HOT START | | |
| 211 | | LOSS OF EXTERNAL POWER | | |
| 212 | | HUNG START | | |
| 213 | | GENERATOR CIRCUIT BREAKER OPEN | | |
| 214 | | ANT-ICE INOPERATIVE | | |
| 215 | | GROUND TEST PUMPS INOP | | |
| 216 | | RUDDER ELEVATOR - NO COOLING | | |
| 217 | | NO START | | |
| 218 | | OTHER - GROUND | | |
| TAKEOFF / IN-FLIGHT EMERGENCIES/MALFUNCTIONS | | | | |
| 220 | | YAW CHANNEL FAILURE | | |
| 221 | | FLAP MALFUNCTION | | |
| 222 | | GEAR FAILURE TO RETRACT | | |
| 223 | | CABIN PRESSURIZATION FAILURE | | |
| 224 | | SLIPWAY DOOR MALFUNCTION | | |
| 225 | | FUEL MALFUNCTION | | |
| 226 | | OIL MALFUNCTION | | |
| 227 | | AIRSPPEED INDICATOR FAILURE | | |
| 228 | | ENGINE AIR STARTING | | |
| 229 | | AIR REFUELING MALFUNCTION | | |
| 230 | | COMPRESSOR STALLS | | |
| 231 | | HYDRAULIC MALFUNCTIONS | | |
| 232 | | ELECTRICAL MALFUNCTION | | |
| 233 | | OTHER – TAKEOFF/INFLIGHT | | |
| LANDING EMERGENCIES/MALFUNCTIONS | | | | |
| 240 | | GEAR FAILURE TO EXTEND (P/CP) | | |
| 241 | | LANDING WITH PARTIAL GEAR (P/CP) | | |
| 242 | | LANDING WITH HYDRAULIC FAILURE (P/CP) | | |
| 243 | | SPOILER CONTROL FAILURE (P/CP) | | |
| 244 | | FLAP MALFUNCTION (P/CP) | | |
| 245 | | LANDING WITH STAB TRIM OUT | | |
| 246 | | RUDDER ELEVATOR OUT LANDING | | |
| 247 | | FUEL IMBALANCE | | |
| 248 | | 1 OR 2 ENGINE OUT LANDING | | |

| | | | | |
|-----------------------------------|--|----------------------------------|---|---|
| 249 | | 3 OR 4 ENGINE OUT LANDING | | |
| 250 | | OTHER – LANDING | | |
| INSTRUMENT / QUALIFICATION | | | | |
| 260-263 | | NOT USED | | |
| 264 | | INITIAL BUFFET | | |
| 265 | | OTHER - INSTRUMENT/QUALIFICATION | | |
| 266 | | UNUSUAL ATTITUDES | R | |
| 301 | | WEAPON JETTISON | | R |

Notes:***Indicates a critical area.**

1. Copilots do not require a grade unless they are actually flying the aircraft; grade them in checklist procedures and fuel panel operations.
2. Accomplish either a Takeoff/Departure or an Instrument Penetration/Enroute Descent. Published letdown and departures for low altitude routes may also be used. During initial aircraft commander pilot evaluations, a takeoff/departure are desired.
3. One precision approach (ILS or PAR) must be flown. If PAR facilities are available, the examinee has the option of accomplishing a PAR approach in-lieu of an ILS approach.
4. On initial IP evaluations, all —Rl items are required except as specified in note 2 above.
5. Holding may be accomplished in the ATD.
6. On recurring qualification evaluations, a minimum of two EP patterns outlined in **paragraph 2.2.3.** will be accomplished at the discretion of the evaluator. On initial qualification evaluations, all EP patterns will be accomplished.
7. On initial IP evaluations, IPs will also accomplish a six-engine landing. On recurring IP evaluations, IPs may accomplish the six-engine landing in lieu of a six-engine approach and missed approach.
8. On recurring IP evaluations, boom limit demonstration is desired, but may be waived at the discretion of the evaluator.
9. All pilots must perform at least one touch and go for checkride completion. Dual seat pilots will perform one in each seat.

Table 2.2. Navigator Evaluations.

| AREA | AREA TITLE | QUAL | MISSION |
|----------------|-----------------------------------|------|---------|
| GENERAL | | | |
| 1 | MISSION PLANNING | R | R |
| 2 | BRIEFING | R | R |
| 3 | PRETAKEOFF | R | R |
| 4 | TAKEOFF | R | |
| 5 | DEPARTURE | R | |
| 6 | LEVEL OFF | | |
| 7 | CRUISE/NAVIGATION | R | |
| 8 | FORMATION | | |
| 9 | IN-FLIGHT CHECKS | R | R |
| 10 | EQUIPMENT OPERATION | R | R |
| 11 | COMM/IFF/SIF PROCEDURES | R | R |
| 12 | CREW COORDINATION | R | R |
| 13 | AIR REFUELING | | R |
| 14 | DESCENT | R | |
| 15-18 | NOT USED | | |
| 19 | AFTER-LANDING | R | |
| 20 | DEBRIEFING/CRITIQUE | R | R |
| 21 | KNOWLEDGE | R | R |
| 22 | *AIRMANSHIP/SITUATIONAL AWARENESS | R | R |
| 23 | *SAFETY | R | R |
| 24 | *AIRCREW DISCIPLINE | R | R |

| | | | |
|---|---|---|---|
| 25 | INSTRUCTOR PERFORMANCE | R | R |
| 26-30 | NOT USED | | |
| INSTRUMENT | | | |
| 31-40 | NOT USED | | |
| TACTICAL EMPLOYMENT | | | |
| 41 | TACTICAL PLAN | | R |
| 42 | TACTICAL EXECUTION | | R |
| 43 | COMPOSITE FORCE INTERFACE | | |
| 44 | RADIO TRANSMISSION/ INTERPHONE-USAGE AND DISCIPLINE | | R |
| 45 | INGRESS | | R |
| 46 | LOW ALTITUDE NAVIGATION (if applicable) | | R |
| 47 | TA-INTEGRATED EVS/VISUAL PROCEDURES (if applicable) | | R |
| 48 | WEAPONS EMPLOYMENT | | R |
| 49 | WEAPONS EMPLOYMENT C2 | | R |
| 50 | TARGETING POD OPERATION (if applicable) | | |
| 51 | RANGE/ESS PROCEDURES | | R |
| 52 | EGRESS | | R |
| 53 | TRAINING RULES/ROE | | R |
| 54-59 | NOT USED | | |
| 60 | EMCON PROCEDURES | | R |
| 61-100 | NOT USED | | |
| EMERGENCY PROCEDURES EVALUATIONS /BOLDFACE ACTION PROCEDURES | | | |
| 201-205 | NOT USED | | |
| 206 | PRESSURIZED COMPARTMENT FIRE | R | R |
| 207-208 | NOT USED | | |
| 209 | UPWARD / DOWNWARD EJECTION | R | R |
| NON-BOLDFACE ACTION PROCEDURES/MALFUNCTIONS | | | |
| 210-300 | NOT USED | | |
| 301 | WEAPON JETTISON | R | R |
| 302 | WEAPON MALFUNCTION | R | R |
| *Indicates a critical area | | | |

Table 2.3. Electronic Warfare Evaluations.

| AREA | AREA TITLE | QUAL | MISSION | ATD |
|----------------|---------------------|------|---------|-----|
| GENERAL | | | | |
| 1 | MISSION PLANNING | R | R | |
| 2 | BRIEFING | R | R | |
| 3 | PRETAKEOFF | R | R | |
| 4 | TAKEOFF | | | |
| 5 | DEPARTURE | R | | |
| 6 | LEVEL OFF | | | |
| 7 | CRUISE/NAVIGATION | R | | |
| 8 | FORMATION | | | |
| 9 | IN-FLIGHT CHECKS | R | R | |
| 10 | EQUIPMENT OPERATION | R | R | R |

| AREA | AREA TITLE | QUAL | MISSION | ATD |
|----------------------------|---|------|---------|-----|
| 11 | COMM/IFF/SIF PROCEDURES | R | R | |
| 12 | CREW COORDINATION | R | R | |
| 13 | AIR REFUELING | | | |
| 14 | DESCENT | R | | |
| 15-18 | NOT USED | | | |
| 19 | AFTER-LANDING | R | | |
| 20 | DEBRIEFING/CRITIQUE | R | R | |
| 21 | KNOWLEDGE | R | R | |
| 22 | *AIRMANSHIP/SITUATIONAL AWARENESS | R | R | |
| 23 | *SAFETY | R | R | |
| 24 | *AIRCREW DISCIPLINE | R | R | |
| 25 | INSTRUCTOR PERFORMANCE | R | R | |
| 26-30 | NOT USED | | | |
| INSTRUMENT | | | | |
| 31-40 | NOT USED | | | |
| TACTICAL EMPLOYMENT | | | | |
| 41 | TACTICAL PLAN | | R | |
| 42 | TACTICAL EXECUTION | | R | R |
| 43 | COMPOSITE FORCE INTERFACE (if applicable) | | | |
| 44 | RADIO TRANSMISSION/ INTERPHONE-USAGE AND DISCIPLINE | | R | R |
| 45 | INGRESS | | R | R |
| 46 | LOW ALTITUDE NAVIGATION (if applicable) | | | |
| 47 | NOT USED | | | |
| 48 | WEAPONS EMPLOYMENT | | | |
| 49 | WEAPONS EMPLOYMENT C2 (if applicable) | | R | |
| 50 | NOT USED | | | |
| 51 | RANGE/ESS PROCEDURES | | R | |
| 52 | EGRESS | | R | R |
| 53 | TRAINING RULES/ROE | | R | |
| 54 | THREAT IDENTIFICATION | | R | R |
| 55 | PENETRATION PROCEDURES | | R | R |
| 56 | EXPENDABLE PROCEDURES | | R | R |

| AREA | AREA TITLE | QUAL | MISSION | ATD |
|---|--|------|---------|-----|
| 57 | THREAT COUNTER-MEASURES | | R | R |
| 58 | ACQUISITION/COMMUNICATION COUNTERMEASURES | | R | R |
| 59 | WITHDRAWAL PROCEDURES | | R | R |
| 60 | EMCON PROCEDURES | | R | R |
| 61-100 | NOT USED | | | |
| EMERGENCY PROCEDURES EVALUATIONS | | | | |
| AREA | AREA TITLE | QUAL | MISSION | |
| | BOLDFACE ACTION PROCEDURES | | | |
| 206 | PRESSURIZED COMPARTMENT FIRE | R | R | |
| 209 | UPWARD / DOWNWARD EJECTION | R | R | |

***Indicates a critical area.**

Chapter 3

EVALUATION CRITERIA

3.1. General Grading Standards:

3.1.1. The grading criteria in this chapter is divided into three sections: General, Instrument, and Tactical Employment. Use all sections for criteria applicable to the events performed on the evaluation.

3.1.2. Evaluation areas designated by (P) apply to pilots, (CP) applies to copilots, (RN) applies to non-dual seat qualified Radar Navigators, (N) applies to non-dual seat qualified navigators, and (E) applies to Electronic Warfare Officers. All other areas are common to all crewmembers.

3.1.3. Where major areas are divided into sub areas, only one grade will be assigned to the major areas. Discrepancies on the back of the AF Form 8 will be annotated by sub area.

3.2. General:

3.2.1. Area 1--Mission Planning:

3.2.1.1. Mission Preparation:

3.2.1.1.1. **Q.** Clearly defined the mission overview and goals. Developed a sound plan to accomplish the mission. Provided specific information on what needed to be done. Solicited feedback from other crewmembers to ensure understanding of mission requirements. Thoroughly critiqued plans to identify potential problem areas and ensured all crew/flight members understood possible contingencies. Checked all factors applicable to mission in accordance with applicable directives. When required, extracted necessary information from air tasking order. Read and signed-off all required FCIFs, read files, and Go/No Go items. Prepared at briefing time.

3.2.1.1.2. **Q-** Did not adequately define the mission overview and goals. Did not adequately address potential problem areas. Did not adequately solicit feedback or critique the plans to ensure understanding of possible contingencies. Minor error(s) or omission(s) detracted from mission effectiveness, but did not affect overall mission accomplishment. Demonstrated limited knowledge of performance capabilities or approved operating procedures/rules in some areas.

3.2.1.1.3. **U.** Did not define the mission overview and goals. Lack of specific information on required items. Did not solicit feedback from other crewmembers to ensure understanding. Did not critique plans to identify potential problem areas. Major error(s) or omission(s) would have prevented a safe or effective mission. Displayed unsatisfactory knowledge of operating data or procedures. Did not review or sign off required Go/No Go items. Not prepared at briefing time.

3.2.1.2. Publications:

3.2.1.2.1. **Q.** Flight manual publications were current and usable for any of the unit's combat taskings. Contained only minor deviations, omissions, and/or errors.

3.2.1.2.2. Q-. Flight manual publications contained deviations, omissions, and/or errors; however, they contained everything necessary to effectively accomplish the mission, and safety of flight was not compromised.

3.2.1.2.3. U. Not up to “Q-” standards. Contained major deviations, omissions, and/or errors.

3.2.2. Area 2--Briefing:

3.2.2.1. Organization:

3.2.2.1.1. Q. Well organized: included all applicable information which was presented in a logical sequence. Briefed crew/flight member responsibilities and mission priorities. Concluded briefing in time to allow for formation briefing (if applicable) and preflight of personal equipment, aircraft and ordnance.

3.2.2.1.2. Q-. Events out of sequence, hard to follow, some redundancy. Not fully prepared for briefing.

3.2.2.1.3. U. Confusing presentation, poorly organized and not presented in a logical sequence. Did not allow time for formation briefing (if applicable) and preflight of personal equipment, aircraft and ordnance. Failed to brief required areas.

3.2.2.2. Presentation:

3.2.2.2.1. Q. Presented briefing in a professional manner covering all pertinent items. Effectively used available briefing aids. Crew/flight members clearly understood mission requirements.

3.2.2.2.2. Q-. Some difficulty communicating clearly. Did not make effective use of available briefing aids. Dwelt on nonessential mission items.

3.2.2.2.3. U. Failed to conduct/attend required briefings. Failed to use available briefing aids. Redundant with lack of continuity. Lost interest of crewmembers. Demonstrated lack of knowledge of subject. Presentation created doubts or confusion.

3.2.2.3. Mission Objectives:

3.2.2.3.1. Q. Established objectives for the mission. Presented all training events and special interest items. Included effective tactics, techniques and procedures (TTP) discussion for accomplishing the mission.

3.2.2.3.2. Q-. Omitted items pertinent, but not critical, to the mission. Limited discussion of training events or special interest items. Dwelt on non-essential items. Limited discussion of valid TTP.

3.2.2.3.3. U. Did not establish relevant objectives for the mission. Omitted essential items. Failed to discuss training events or special interest items. Presented erroneous information and/or did not correct erroneous information that would affect safe/effective mission accomplishment. Omitted major training events. Did not discuss valid TTP.

3.2.2.4. Crew/Flight Member Consideration:

3.2.2.4.1. **Q.** Properly assessed the abilities of all crew/flight members. Briefed corrective action from previous mission and probable problem areas when appropriate.

3.2.2.4.2. **Q-.** Did not correctly assess all flight/crew member's abilities. Did not identify probable problem areas.

3.2.2.4.3. **U.** Ignored crew/flight members' abilities and past problem areas.

3.2.3. Area 3--Pre-Takeoff (Includes all activity up to crossing the hold line):

3.2.3.1. Procedures:

3.2.3.1.1. **Q.** Established and adhered to station, start engine, taxi times to assure thorough preflight, check of personal equipment, crew briefing, weapons preflight (if carried) etc. Performed all checks and procedures prior to takeoff in accordance with approved checklists and applicable directives. Unplanned deviations were out of the examinee's control. Nuclear weapons preflight, no deviations.

3.2.3.1.2. **Q-.** Minor deviations, omissions, and/or errors occurred which did not detract from mission effectiveness, performance, and/or knowledge was the minimum acceptable and indicated a definite need for assigned study and/or additional training.

3.2.3.1.3. **U.** Omitted major item(s) of the appropriate checklist. Major deviations in procedure, which would preclude safe mission accomplishment. Failed to accurately determine readiness of aircraft for flight. Crew errors directly contributed to a late takeoff, which degraded the mission or made it non-effective. Nuclear weapons preflight. Committed any checklist deviation, omission, and/or error.

3.2.3.2. (Weapons Qualified Crewmembers) Weapons: Weapon preflight may be evaluated on all actual weapon release and tactical ferry sorties. Weapon preflight on an actual weapon release sortie can satisfy the Conventional Weapons Preflight or Nuclear Weapons Preflight (as applicable) on the ground phase requisite of the MSN evaluation if not previously accomplished. Although navigators have primary responsibility for weapons preflight IAW current technical order procedures, pilots and weapons qualified EWs are responsible for cross checking and ensuring proper weapons preflight procedures.

3.2.3.2.1. The intent of weapons preflight evaluation is to accurately reflect each crewmembers responsibilities in employing weapons. It is expected that pilots will emphasize proper aircraft loading and navigators proper weapons configuration but both will be verbally evaluated to ensure a sufficient level of knowledge to provide for safe and effective weapons employment.

3.2.3.2.2. In the event that a grade less than 1 for weapons preflight is awarded to any crewmember, the flight examiner will use judgment and discretion in determining how that affects the overall grade for the MSN evaluation.

3.2.3.2.3. **Q.** Accomplished all checklist items without any deviations. For nuclear weapons preflights, two crewmembers form a two person team and complete the checklist using challenge and response on all items.

3.2.3.2.4. **Q-** (Conventional weapon preflight only) Accomplished checklist items with only minor deviations, omissions, and/or errors which would not preclude effective weapons delivery or cause the examinee to takeoff with an improper weapons load.

3.2.3.2.5. **U.** Not up to “Q-” standards. Major checklist deviations, omissions, and/or errors which could preclude effective weapons delivery or cause the examinee to takeoff with an improper weapons load.

3.2.3.2.5.1. Nuclear weapons preflight. Committed any checklist deviation, omission, and/or error. **NOTE:** The flight examiner may also grade the examinee unqualified in AIRMANSHIP if the aircraft would have taken off with an improper weapon load or examinee would not be able to deliver an effective weapon due to improper weapon preflight.

3.2.4. Area 4--(P/CP/RN/N/DSN) Takeoff (Crossing hold line through flap retraction):

3.2.4.1. **Q.** Accomplished prescribed procedures and checklists in accordance with the flight manual and governing directives.

3.2.4.1.1. **(P/CP).** Smooth aircraft control throughout takeoff. Performed takeoff in accordance with flight manual procedures. Airspeeds were within tech order tolerances.

3.2.4.1.2. **(RN/N/DSN).** Called expiration of S1 time within 1 second.

3.2.4.2. **Q-** Minor flight manual procedural or technique deviations.

3.2.4.2.1. **(P/CP).** Some under or over control at liftoff.

3.2.4.2.2. **(RN/N/DSN).** Called expiration of S1 time within 2 seconds.

3.2.4.3. **U:**

3.2.4.3.1. **(P/CP).** Takeoff potentially dangerous. Exceeded aircraft/systems limitations. Failed to establish proper climb attitude. Over-controlled aircraft resulting in excessive deviations from intended flight path.

3.2.4.3.2. **(RN/N/DSN).** Not up to “Q-” standards.

3.2.5. Area 5--Departure (Includes all activity from flap retraction up to and including initial level-off):

3.2.5.1. **Q.** Performed departure as published/directed and complied with all restrictions. Accomplished procedures and checklists required by the flight manual and governing directives accurately and efficiently.

3.2.5.2. **Q-** Minor deviations in airspeed and navigation occurred during completion of departure. Minor omissions, deviations, and/or errors in procedures detracted from overall mission efficiency.

3.2.5.3. **U.** Failed to comply with published/directed departure instructions. Major omissions, deviations, and/or errors in procedures.

3.2.6. Area 6--(P/CP) Level-Off:

3.2.6.1. **Q.** Leveled off smoothly. Promptly established proper cruise airspeed.

3.2.6.2. **Q-**. Level-off was erratic. Exceeded Q limits (**Table 1.1**). Slow in establishing proper cruise airspeed.

3.2.6.3. **U**. Level-off was extremely erratic. Exceeded Q- limits (**Table 1.1**). Excessive delay or failed to establish proper cruise airspeed.

3.2.7. Area 7--Cruise/Navigation (Includes all high altitude navigation):

3.2.7.1. **Q**. Demonstrated 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. Altitude deviations did not exceed +/-150 feet from published or briefed altitude. Made all control times within published or briefed tolerances. At no time allowed the aircraft to deviate more than five nautical miles from planned course.

3.2.7.1.1. (**RN/N/DSN**). Annotation of in-flight mission paperwork made mission reconstruction possible. Advised pilot of altitude deviations prior to exceeding +/-150 feet of deviation.

3.2.7.1.2. (**E**). Procedures were accomplished according to the flight manual and governing directives with only minor deviations, omissions, or errors.

3.2.7.2. **Q-**. Minor errors in procedures or use of navigation equipment. Slow to comply with clearance instructions. Had some difficulty in establishing exact position and course. Performance demonstrated a lack of knowledge or ability that could have affected mission accomplishment.

3.2.7.2.1. (**RN/N/DSN**). Advised the pilots of altitude deviations prior to exceeding +/-200 feet of deviation.

3.2.7.2.2. (**E**). Procedures were accomplished with deviations, omissions, or errors demonstrating the minimum acceptable knowledge or performance.

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

3.2.7.3.1. (**E**). Procedures were accomplished with deviations, omissions, or errors demonstrating unacceptable knowledge or performance.

3.2.8. Area 8--Formation (Includes formation join-up, en route procedures, and position changes, if accomplished):

3.2.8.1. Flight Lead:

3.2.8.1.1. **Q**. Established and maintained appropriate formations utilizing published and briefed procedures. Maintained positive control of flight. Planned ahead and made timely decisions. Ensured wingman position and adherence to formation standards and deconfliction contracts. Effectively coordinated with other flight members throughout the mission. Ensured smooth and efficient flight operation.

3.2.8.1.1.1. (**P/CP**). Made smooth and immediate position corrections and considered the wingman appropriately.

3.2.8.1.2. **Q-**. Made minor deviations from published and/or briefed procedures. Demonstrated limited flight management. Did not always plan ahead and/or hesitant in making decisions. Flight coordination was adequate to accomplish the mission. Deficiencies in communication or interaction resulted in degraded flight or mission efficiency.

3.2.8.1.2.1. **(P/CP)**. Maneuvered excessively, making it difficult for wingman to maintain position.

3.2.8.1.3. **U**. Formation flight not accomplished in accordance with published and/or briefed procedures. Did not establish appropriate formations. Provided little consideration for wingman. Indecisive. Failed to ensure wingman maintained proper position. Failed to maintain deconfliction contracts. Poor flight coordination seriously degraded mission accomplishment or safety of flight.

3.2.8.2. **Wingman:**

3.2.8.2.1. **Q**. Maintained position in accordance with published and briefed procedures with only momentary deviations. Maintained appropriate separation and complied with leader's instructions. Rejoin was smooth and timely. Contributed to the smooth and efficient operation of the flight. Maintained mutual support during the entire sortie.

3.2.8.2.1.1. **(P/CP)**. Demonstrated smooth and immediate position corrections.

3.2.8.2.1.2. **(RN/N/DSN)**. When encountering IMC, advised the pilot of the position of the other aircraft in the formation in a timely manner. Advised the pilot of position errors within 150 feet of altitude and/or one-half mile.

3.2.8.2.2. **Q-**. Minor deviations to published procedures. Slow to comply with leader's instructions. Varied position considerably. Minor Errors in performing assigned flight tasks.

3.2.8.2.2.1. **(P/CP)**. Over-controlled. Slow to join-up.

3.2.8.2.2.2. **(RN/N/DSN)**. When encountering IMC, advised the pilot of position errors within 200 feet and/or three-quarters of a mile.

3.2.8.2.3. **U**. Formation flight not accomplished in accordance with published and/or briefed procedures. Did not comply with leader's instructions. Unable to maintain a formation position. Failed to maintain deconfliction contracts. Rejoin was unsafe. Poor flight coordination seriously degraded mission accomplishment or safety of flight.

3.2.8.2.3.1. **(P/CP)**. Abrupt position corrections. Did not maintain safe separation.

3.2.8.2.3.2. **(RN/N/DSN)**. Exceeded Q- standards.

3.2.9. **Area 9--In-flight Checks:**

3.2.9.1. **Q**. Performed all in-flight checks as required.

3.2.9.2. **Q-**. Minor deviations, errors, or omissions during checks. Did not detract from mission accomplishment. Performance and/or knowledge was the minimum acceptable.

3.2.9.3. **U.** Did not perform in-flight checks or monitor systems to the degree that an emergency condition would have developed if allowed to continue uncorrected or would have severely degraded mission accomplishment.

3.2.10. Area 10--Equipment Operation:

3.2.10.1. **Q.** Operated equipment according to procedures and checklists contained in the flight manuals and governing directives. Accurately and efficiently analyzed equipment malfunctions with consistent reliable mission results. No damage or significant system degradation resulted from operator inputs or lack of knowledge.

3.2.10.2. **Q-.** Operated equipment with minor deviations, omissions, and/or errors from procedures required by the flight manual or governing directives. Equipment malfunctions were consistently ignored, analyzed in error, or caused by erroneous data insertion or faulty operator techniques. Deviations, omissions, and/or errors in malfunction analysis, prescribed procedures, or faulty techniques caused a degradation of equipment performance. The level of performance or knowledge consistently resulted in marginal reliability. Did not damage equipment.

3.2.10.3. **U.** Not up to "Q-" standards. Equipment damage resulted or would have resulted due to circumstances within operator's control. Failed to recognize a major equipment malfunction. Failed to obtain acceptable results due to poor operational techniques or procedures.

3.2.11. Area 11--Communication/IFF/SIF Procedures:

3.2.11.1. **Q.** Complete knowledge of and compliance with correct Comm/IFF/SIF procedures. Transmissions concise, accurate and utilized proper terminology. Complied with all required instructions and acknowledged all communications. Asked for/provided clarification when necessary. Stated opinions and ideas. Asked questions when uncertain. Advocated specific courses of action. Did not let rank differences affect mission effectiveness or safety. Thoroughly familiar with communications security requirements, HAVE QUICK and secure voice equipment (if applicable).

3.2.11.2. **Q-.** Occasional deviations from correct procedures required retransmissions or resetting codes. Slow in initiating or missed several required calls. Minor errors or omissions did not significantly detract from situational awareness, threat warning or mission accomplishment. Transmissions contained extraneous information, were not in proper sequence or used nonstandard terminology. Slow to acknowledge some communications. Slow to ask for/provide clarification when necessary. Uncertain when stating opinions and ideas. Slow to ask questions when uncertain. Slow to advocate specific courses of action. Let rank differences affect mission effectiveness. Demonstrated limited knowledge of communications security requirements, HAVE QUICK and secure voice equipment (if applicable).

3.2.11.3. **U.** Incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Omitted numerous required radio calls. Inaccurate or confusing terminology significantly detracted from situational awareness, threat warning or mission accomplishment. Failed to acknowledge all communications. Failed to ask for/provide clarification when necessary. Failed to state opinions and ideas. Failed to ask questions when uncertain. Failed to advocate specific courses of action. Let rank

differences compromise mission safety. Displayed inadequate knowledge of communications security requirements, HAVE QUICK and secure voice equipment (if applicable).

3.2.12. Area 12--Crew Coordination:

3.2.12.1. **Q.** Effectively coordinated with other crewmembers during all phases of the mission. Crewmember identified, planned, and executed alternate mission activity in response to in-flight contingencies in a timely manner. Actively sought other crewmember opinions and ideas. Recognized and requested assistance when task-saturated. Crewmember properly prioritized multiple tasks and effectively used available resources, ensuring smooth mission execution.

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

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

3.2.13. Area 13--Air Refueling--(P/CP/RN/N/DSN):

3.2.13.1. Air Refueling Rendezvous:

3.2.13.1.1. **Q.** Rendezvous effectively accomplished using proper procedures. Demonstrated effective use of radio communications. Used proper communication procedures for briefed Emission Control level.

3.2.13.1.1.1. **(RN/N/DSN).** Positively identified the tanker on Radar or in the EVS, and effectively positioned the aircraft behind the tanker in a timely manner.

3.2.13.1.2. **Q-.** Rendezvous delayed by improper techniques, procedures, or radio communications.

3.2.13.1.3. **U.** Displayed lack of knowledge or familiarity with procedures to the extent that air refueling was or could have been jeopardized. Failed rendezvous as a result of improper procedures. Gross overshoot, spent excessive time in trail or safety of flight jeopardized due to poor judgment. Made an actual or attempted rendezvous with the wrong aircraft, or the individual was unable to find the correct tanker in multi-aircraft refueling. Not up to Q- standards.

3.2.13.2. -(P/CP) Air Refueling Procedures (If applicable):

3.2.13.2.1. **Q.** Used proper procedures. Expeditious contact. Aircraft control was smooth and positive during tanker rendezvous and refueling. Refueled with no more than three (two for recurring checks) pilot-induced disconnects.

3.2.13.2.2. **Q-.** Used proper procedures. Slow to contact. Rough aircraft control during rendezvous and refueling. Refueled with no more than four (three for recurring checks) pilot-induced disconnects.

3.2.13.2.3. **U.** Used unacceptable procedures. Exceeded Q- limits. Excessive time to contact delayed mission accomplishment. Unable to maintain contact position. Unable to safely accomplish air refueling.

3.2.13.2.4. -(P/CP) Breakaway:

3.2.13.2.4.1. **Q.** Used proper procedures. Expeditious separation from tanker.

3.2.13.2.4.2. **Q-.** Minor procedural errors. Slight delay in attaining separation which did not compromise safety or damage equipment.

3.2.13.2.4.3. **U.** Unacceptable level of knowledge of and/or failure to use proper procedures. Did not attain separation from tanker expeditiously enough to avoid compromising safety or damaging equipment.

3.2.14. Area 14--Descent (From start descent for enroute descent or departure from the IAF for published penetrations through the final approach fix [P/CP] or landing [RN/N/DSN]):

3.2.14.1. **Q.** Performed descent as directed, complied with all restrictions. Accomplished procedures and checklists required by the flight manual and governing directives accurately and efficiently.

3.2.14.1.1. **(P/CP).** Computed and used an appropriate start-descent point.

3.2.14.1.2. **(RN/N/DSN).** Informed pilots of airspeed deviations of -5/+10 knots, altitude deviations prior to exceeding +/-150 feet of deviation, and assigned heading +/- 5 degrees.

3.2.14.2. **Q-.** Performed descent as directed with minor deviations. Accomplished procedures and checklists required by the flight manual and governing directives with minor omissions, deviations, or errors.

3.2.14.2.1. **(P/CP).** Did not compute or use an optimal start-descent point.

3.2.14.2.2. **(RN/N/DSN).** Informed pilots of airspeed deviations of -10/+15 knots, altitude deviations prior to exceeding +/-200 feet of deviation, and assigned heading +/-10 degrees.

3.2.14.3. **U.** Performed descent with major deviations. Exceeded Q- limits. Procedures were accomplished with major deviations, omissions, and/or errors demonstrating unacceptable knowledge/performance of the flight manual or governing directives.

3.2.14.3.1. **(RN/N/DSN).** Allowed the pilot to descend unannounced below MDA/DH in excess of 50 feet. Not up to "Q-" standards.

3.2.15. Area 15--(P/CP) Go-Around:

3.2.15.1. **Q.** Initiated and performed go-around promptly in accordance with manual and operational procedures and directives. Airspeed tolerances are:

3.2.15.1.1. **Flaps Down.** +/-10 KIAS.

3.2.15.1.2. **No-Flap.** +10/-0 KIAS.

3.2.15.2. **Q-.** Slow to initiate go-around or procedural steps. Airspeed tolerances are:

3.2.15.2.1. **Flaps Down.** +/-15 KIAS.

3.2.15.2.2. **No-Flap.** +15/-5 KIAS.

3.2.15.3. **U.** Exceeded Q- limits. Did not self-initiate go-around when appropriate or directed. Techniques unsafe or applied incorrect procedures. Erratic aircraft control. Large deviations in runway alignment.

3.2.16. Area 16--(P/CP) Emergency Traffic Patterns:

3.2.16.1. **Q.** Performed emergency procedures IAW applicable directives. Able to prioritize actions to safely recover the aircraft. Maintained aircraft control within appropriate standards. Airspeed tolerances are:

3.2.16.1.1. **Flaps Down.** +/-10 KIAS.

3.2.16.1.2. **No Flap Airspeed.** +10/-0 KIAS.

3.2.16.2. **Q-.** Performed emergency procedures with minor deviations, omissions, and/or errors from applicable directives, did not jeopardize the safe recovery of the aircraft. Airspeed tolerances are:

3.2.16.2.1. **Flaps Down.** +/-15 KIAS.

3.2.16.2.2. **No Flap Airspeed.** +15/-5 KIAS.

3.2.16.3. **U.** Exceeded "Q-" limits. Performed emergency procedures with major deviations, omissions, and/or errors. Unable to safely recover the aircraft.

3.2.17. Area 17--(P/CP) VFR Pattern/Approach:

3.2.17.1. **Q.** Performed patterns/approaches IAW procedures and techniques outlined in the flight manual, operational procedures, and local directives. Aircraft control was smooth and positive. Accurate runway alignment. Briefed and maintained proper airspeed (+10/-5 knots).

3.2.17.2. **Q-.** Performed patterns/approaches with minor deviations to procedures and techniques outlined in the flight manual, operational procedures and local directives. Aircraft control was not consistently smooth, but safe. Variations in runway alignment. Slow to correct to briefed/proper airspeed (+15/-10 knots).

3.2.17.3. **U.** Approaches not performed IAW procedures and techniques outlined in the flight manual, operations procedures, and local directives. Erratic aircraft control which exceeded Q- limits. Large deviations in runway alignment.

3.2.18. Area 18--(P/CP) Landing:

3.2.18.1. **Full Stop Landing:**

3.2.18.1.1. **Q.** Performed landings IAW procedures outlined in the flight manual, operational procedures, and local directives. Aircraft control was smooth and positive. Touched down in the desired touchdown zone with accurate runway alignment.

3.2.18.1.2. **Q-.** Performed landings IAW procedures outlined in the flight manual, operational procedures, and local directives with minor deviations, omissions, and/or errors, which did not jeopardize safety of flight. Aircraft control was rough however, runway alignment was accomplished and the aircraft touched down within the first 3000' of the runway.

3.2.18.1.3. **U.** Landing not performed IAW procedures outlined in the flight manual, operational procedures and local directives. Failed to touch down in the first 3000' of the runway. Excessive deviations in runway alignment. Not up to "Q-" standards.

3.2.18.2. Touch and Go:

3.2.18.2.1. **Q.** Performed touch and go IAW procedures outlined in the flight manual, operational procedures, and local directives. Aircraft control was smooth and positive. Touched down in the desired touchdown zone with accurate runway alignment.

3.2.18.2.2. **Q-.** Performed touch and go IAW procedures outlined in the flight manual, operational procedures, and local directives with minor deviations, omissions, and/or errors, which did not jeopardize safety of flight. Aircraft control was rough however, runway alignment was accomplished and the aircraft touched down within the first 3000' of the runway.

3.2.18.2.3. **U.** Landing not performed IAW procedures outlined in the flight manual, operational procedures and local directives. Failed to touchdown within the first 3000' of the runway. Excessive deviations in runway alignment. Not up to "Q-" standards.

3.2.19. Area 19--After Landing (Includes activities from final landing to crew debrief/critique):

3.2.19.1. **Q.** Appropriate after-landing checks and aircraft taxi procedures accomplished in accordance with the flight manual and applicable directives. All required forms completed accurately.

3.2.19.2. **Q-.** Minor deviations or omissions noted in performance of after-landing check and/or aircraft taxi procedures. Safety was not jeopardized. Required forms completed with minor deviations, omissions, and/or errors.

3.2.19.3. **U.** Major deviations, omissions, and/or errors were made in performance of after-landing check or aircraft taxi procedures, which could have jeopardized safety. Data recorded inaccurately or omitted. Not up to "Q-" standards.

3.2.20. Area 20--Debriefing/Critique:

3.2.20.1. **Q.** Thoroughly debriefed the mission (or applicable portions) in a timely manner. Correctly analyzed mission results with respect to established objectives. Provided specific, objective, non-threatening positive and negative feedback on team and

individual performance. Debriefed deviations and identified root causes. Offered corrective guidance as appropriate. Thoroughly debriefed any breakdowns in deconfliction contracts, roles and responsibilities. Asked for reactions/inputs from other mission participants. Re-capped key points and compared mission results with mission objectives. Provided specific ways to correct errors.

3.2.20.2. **Q-**. Limited debriefing. Did not thoroughly discuss performance relative to mission objectives. Minor time management problems. Debriefed mission without specific, non-threatening positive and negative feedback on individual and team performance. Did not debrief significant deviations to an acceptable level. Did not consistently seek input from other mission participants. Incomplete or inadequate re-cap of key points and comparison of mission results to mission objectives. Slow to provide specific ways to correct errors.

3.2.20.3. **U**. Did not correctly debrief mission deviations or offer corrective guidance. Used excessive time to debrief. Failed to debrief breakdowns in deconfliction contracts, roles and responsibilities. Did not provide non-threatening positive and negative feedback during debriefing. Did not seek input from other mission participants. Did not re-cap key mission points nor compare mission results to mission objectives. Failed to provide specific ways to correct errors.

3.2.21. **Area 21--Knowledge:** Evaluate all applicable sub areas.

3.2.21.1. Aircraft General:

3.2.21.1.1. **Q**. Demonstrated thorough knowledge of aircraft systems, limitations, and performance characteristics.

3.2.21.1.2. **Q-**. Knowledge of aircraft systems, limitations, and performance characteristics sufficient to perform the mission safely. Demonstrated deficiencies either in depth of knowledge or comprehension.

3.2.21.1.3. **U**. Demonstrated unsatisfactory knowledge of aircraft systems, limitations or performance characteristics.

3.2.21.2. **Emergency Procedures:**

3.2.21.2.1. **Q**. Correct, immediate response to Bold Face and non-Bold Face emergency situations. Effectively used checklist/flight manual.

3.2.21.2.2. **Q-**. Response to Bold Face emergencies 100% correct. Response to certain areas of non-Bold Face emergencies or follow-on steps to Bold Face procedures was slow/confused. Used the checklist/flight manual when appropriate, but slow to locate required data.

3.2.21.2.3. **U**. Incorrect response to Bold Face emergency situations. Unable to analyze problems or take corrective action. Did not use checklist/flight manual, or lacks acceptable familiarity with its arrangement or contents.

3.2.21.3. **Flight Rules/Procedures:**

3.2.21.3.1. **Q**. Thorough knowledge of flight rules and procedures.

3.2.21.3.2. **Q-**. Deficiencies in depth of knowledge.

3.2.21.3.3. **U.** Inadequate knowledge of flight rules and procedures.

3.2.21.4. Weapons/Tactics/Threats:

3.2.21.4.1. **Q.** Thorough knowledge of all aircraft weapons systems, weapons effects, tactics and threats applicable to the unit mission.

3.2.21.4.2. **Q-.** Deficiencies in depth of knowledge or comprehension of weapons systems, weapons effects, tactics and threat knowledge which would not preclude successful mission accomplishment.

3.2.21.4.3. **U.** Insufficient knowledge of weapons, tactics and threat contributed to ineffective mission accomplishment.

3.2.21.5. Local Area Procedures:

3.2.21.5.1. **Q.** Thorough knowledge of local procedures.

3.2.21.5.2. **Q-.** Limited knowledge of local procedures.

3.2.21.5.3. **U.** Inadequate knowledge of local procedures.

3.2.21.6. Nuclear Plans/Alert Procedures (if applicable):

3.2.21.6.1. **Q.** Adequate knowledge of plans applicable to the unit mission. Thoroughly familiar with alert procedures and contingencies.

3.2.21.6.2. **Q-.** Deficiencies in depth of knowledge or comprehension of plans or alert procedures applicable to the unit.

3.2.21.6.3. **U.** Knowledge of plans/alert procedures insufficient to ensure effective mission accomplishment.

3.2.22. Area 22--Airmanship/Situational Awareness (Critical):

3.2.22.1. **Q.** Executed the assigned mission in a timely, efficient manner. Conducted the flight with a sense of understanding and comprehension. Made appropriate decisions based on available information. Recognized the need for action. Aware of performance of self and other flight-/crew members. Aware of on-going mission status. Recognized, verbalized and correctly acted on unexpected events.

3.2.22.2. **U.** Decisions or lack thereof resulted in failure to accomplish the assigned mission. Mis-analyzed flight conditions and/or failed to recognize/understand mission developments, or demonstrated poor judgment to the extent that flight safety could have been compromised. Did not recognize the need for action. Not aware of performance of self and other flight-/crew members. Not aware of on-going mission status. Failed to recognize, verbalize and act on unexpected events.

3.2.23. Area 23--Safety (Critical):

3.2.23.1. **Q.** Aware of and complied with all safety factors required for safe aircraft operations and conduct of the mission.

3.2.23.2. **U.** Was not aware of or did not comply with all safety factors required for safe operations or conduct of the mission. Failed to correctly accomplish Boldface procedures. Operated the aircraft or equipment in a dangerous manner.

3.2.23.2.1. (P/CP) . Did not adequately clear.

3.2.24. Area 24--Aircrew Discipline (Critical):

3.2.24.1. **Q.** Provided required direction/information. Correctly adapted to meet new situational demands. Demonstrated strict professional flight and crew discipline throughout all phases of the mission.

3.2.24.2. **U.** Did not provide direction/information when needed. Did not correctly adapt to meet new situational demands. Failed to exhibit strict flight or crew discipline. Violated or ignored rules or regulations.

3.2.24.2.1. (E) . Jammed restricted frequencies (momentary or unintentional spillover jamming of restricted frequency will be condoned if the EWO took reasonable precautions to avoid it and immediately removed jamming).

3.2.25. Area 25--Instructor Performance:

3.2.25.1. Briefing/Debriefing:

3.2.25.1.1. **Q.** Presented a comprehensive, instructional briefing/debriefing which encompassed all mission events. Made excellent use of training aids and references. Excellent analysis of all events/maneuvers. Clearly defined objectives. Gave positive and negative performance feedback at appropriate times--feedback was specific, objective, based on observable behavior, and given constructively. Re-capped key points/compared mission's results with objectives. When appropriate, took the initiative and time to share operational knowledge and experience.

3.2.25.1.2. **Q-** Minor errors or omissions in briefing/debriefing or mission critique. Occasionally unclear in analysis of events or maneuvers. Some feedback given, but was not always given at appropriate times and not always a positive learning experience. Debrief covered the mission highlights but was not specific enough.

3.2.25.1.3. **U.** Major errors or omissions in briefing/debriefing. Analysis of events or maneuvers was incomplete, inaccurate, or confusing. Did not use available training aids/reference material effectively. Briefing/debriefing below the caliber of that expected of instructors. Failed to define mission objectives. Feedback not given or given poorly. Attempted to hide mistakes. Elected not to conduct debrief.

3.2.25.2. Demonstration of Maneuvers/Equipment Operation:

3.2.25.2.1. **Q.** Performed required maneuvers or procedures within prescribed parameters. Provided concise, meaningful in-flight commentary. Demonstrated sound instructor proficiency.

3.2.25.2.2. **Q-** Performed required maneuvers or procedures with minor deviations from prescribed parameters. In-flight commentary was sometimes unclear.

3.2.25.2.3. **U.** Was unable to properly perform required maneuvers or procedures. Made major procedural errors. Did not provide in-flight commentary. Demonstrated below-average instructor proficiency.

3.2.25.3. Instructor Knowledge:

3.2.25.3.1. **Q.** Demonstrated in-depth knowledge of procedures, requirements, aircraft systems and performance characteristics, mission, and tactics beyond that expected of non-instructors.

3.2.25.3.2. **Q-.** Deficiencies noted in the depth of knowledge, comprehension of procedures, requirements, aircraft systems/performance characteristics, mission or tactics.

3.2.25.3.3. **U.** Unfamiliar with procedures, requirements, aircraft systems/performance characteristics, mission, or tactics. Lack of knowledge in certain areas seriously detracted from instructor effectiveness.

3.2.25.4. Training/Evaluation Forms Preparation:

3.2.25.4.1. **Q.** Completed appropriate training/evaluation records accurately. Adequately assessed and recorded performance. Comments were clear and pertinent.

3.2.25.4.2. **Q-.** Minor errors or omissions in training/evaluation records. Comments were incomplete or slightly unclear.

3.2.25.4.3. **U.** Did not complete required forms or records. Comments were invalid, unclear, or did not accurately document performance.

3.2.25.5. Ability to Instruct:

3.2.25.5.1. **Q.** Demonstrated sound instructor/evaluator ability. Clearly defined all mission requirements and any required additional training/corrective action. Instruction/evaluation was accurate, effective, and timely. Was completely aware of aircraft/mission situation at all times.

3.2.25.5.2. **Q-.** Problems in communication or analysis degraded effectiveness of instruction/evaluation.

3.2.25.5.3. **U.** Demonstrated inadequate ability to instruct/evaluate. Unable to perform, teach, or assess techniques, procedures, systems use, or tactics. Did not remain aware of aircraft/mission situation at all times.

3.2.25.6. Initial Buffet--(IP):

3.2.25.6.1. **Q.** Thoroughly briefed restrictions and recovery procedures. Accomplished setup and recovery in a safe manner. Provided quality instruction during the maneuver.

3.2.25.6.2. **Q-.** Deficiencies in knowledge of initial buffet demonstration procedures. Did not thoroughly brief restrictions and recovery procedures. Performed the maneuver with minor omissions or errors that did not jeopardize safety. Provided minimal instruction during maneuver.

3.2.25.6.3. **U.** Maneuver not performed to Q- standards. Maneuver had the potential to jeopardize safety. **NOTE:** Initial Buffet will be graded in-flight on initial IP evaluations. Initial buffet may be graded during the EPE in the WST on recurring IP evaluations.

3.2.26. Areas 26-30--Not used.

3.3. Instrument:

3.3.1. Area 31--(P/CP) Holding:

3.3.1.1. **Q.** Performed entry and holding procedures IAW applicable directives. Holding pattern limit exceeded by not more than: leg timing +/-15 seconds, TACAN +/-2 NM.

3.3.1.2. **Q-.** Minor deviations to procedures or directives. Holding pattern limit exceeded by not more than leg timing +/-20 seconds, TACAN +/-3 NM.

3.3.1.3. **U.** Holding was not IAW published procedures and directives. Exceeded criteria for Q- or holding pattern limits.

3.3.2. Area 32--(P/CP) Instrument Penetration/Enroute Descent: (Initial Approach Fix to Final Approach Fix/Descent Point) or enroute descent (radar vectors to final approach).

3.3.2.1. **Q.** Performed the penetration/enroute descent and approach as published/directed and IAW applicable flight manuals. Complied with all restrictions. Made smooth and timely corrections.

3.3.2.1.1. **(P/CP).** TACAN arc: +/-2 NM.

3.3.2.2. **Q-.** Performed the penetration/enroute descent and approach with minor deviations. Complied with all restrictions. Slow to make corrections.

3.3.2.2.1. **(P/CP).** TACAN arc: +/-3 NM.

3.3.2.3. **U.** Performed the penetration/enroute descent and approach with major deviations. Erratic corrections.

3.3.3. Area 33--Precision Approach (Instrument Landing System [ILS]/Precision Approach Radar [PAR])—(P/CP) (See Note 5, [Table 2.1](#)):

3.3.3.1. **Q.** Performed procedures as directed and IAW applicable flight manual. Smooth and timely response to controller's instructions (PAR) and to azimuth and glide slope (ILS). Complied with decision height. Position would have permitted a safe landing. Maintained glide path with only minor deviations.

3.3.3.1.1. Airspeed +/-10 kts.

3.3.3.1.2. Heading within 5 degrees of controller's instructions (PAR).

3.3.3.1.3. Glide Slope/Azimuth within one dot (ILS).

3.3.3.1.4. Initiated missed approach (if applicable) at decision height.

3.3.3.2. **Q-.** Performed procedures with minor deviations. Slow to respond to controller's instructions. Position would have permitted a safe landing. Improper glide path control.

3.3.3.2.1. Airspeed +15/-10 kts.

3.3.3.2.2. Heading within 10 degrees of controller's instructions (PAR).

3.3.3.2.3. Glide Slope within one dot low/two dots high (ILS).

3.3.3.2.4. Azimuth within two dots (ILS).

3.3.3.2.5. Initiated missed approach (if applicable) at decision height, +50/-0 ft.

3.3.3.3. **U.** Performed procedures with major deviations. Did not respond to controller's instructions (PAR). Erratic corrections. Exceeded Q- limits. Did not comply with decision height and/or position would not have permitted a safe landing. Erratic glide path control.

3.3.4. Area 34--(P/CP) Non-Precision Approach:

3.3.4.1. **Q.** Adhered to all published/directed procedures and restrictions. Used appropriate descent rate to arrive at Minimum Descent Altitude (MDA) at or before Visual Descent Point (VDP)/Missed Approach Point (MAP). Position would have permitted a safe landing.

3.3.4.1.1. Airspeed +10/-5 kts.

3.3.4.1.2. Heading ± 5 degrees (ASR).

3.3.4.1.3. Course ± 5 degrees at MAP.

3.3.4.1.4. Localizer less than one dot deflection.

3.3.4.1.5. Minimum Descent Altitude +100/-0 feet.

3.3.4.1.6. Timing +/-10 secs.

3.3.4.2. **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 correct to proper/briefed parameters.

3.3.4.2.1. Airspeed +15/-10 kts.

3.3.4.2.2. Heading ± 10 degrees (ASR).

3.3.4.2.3. Course ± 10 degrees at MAP.

3.3.4.2.4. Localizer within two dot deflection.

3.3.4.2.5. Minimum Descent Altitude +150/-50 feet.

3.3.4.2.6. Timing +/- 20 secs.

3.3.4.3. **U.** Did not comply with published and directed procedures or restrictions. Exceeded Q- limits. Maintained steady-state flight below the MDA even though the 50 foot limit was not exceeded. Could not land safely from the approach. **NOTE:** The -50 foot tolerance applies only to momentary deviations.

3.3.5. Area 35--(P/CP) Missed Approach/Climb-Out:

3.3.5.1. **Q.** Executed missed-approach/climb-out as published/directed. Completed all procedures IAW applicable flight manual.

3.3.5.2. **Q-.** Executed missed approach/climb-out with minor deviations. Slow to comply with published procedures, controller's instructions, or flight manual procedures.

3.3.5.3. **U.** Executed missed-approach/climb-out with major deviations, or did not comply with applicable directives.

3.3.6. Area 36--(P/CP) Circling/Side-Step Approach:

3.3.6.1. **Q.** Performed circling/side-step approach in accordance with procedures outlined in the flight manual and AFMAN 11-217. Aircraft control was positive and smooth. Proper runway alignment. Airspeed: +10/-5 KIAS.

3.3.6.2. **Q-.** Performed circling/side-step approach with minor deviations to procedures outlined in the flight manual and AFMAN 11-217. Aircraft control was not consistently smooth, but safe. Variations in runway alignment, but go-around not required. Airspeed: +15/-10 KIAS.

3.3.6.3. **U.** Circling/side-step approach not performed in accordance with procedures outlined in the flight manual and AFMAN 11-217. Erratic aircraft control. Large deviations in runway alignment requiring go-around.

3.3.7. Area 37--(P/CP) Instrument Cross-Check:

3.3.7.1. **Q.** Effective instrument cross-check. Smooth and positive aircraft control throughout flight. Meets "Q" criteria listed in General Criteria, applicable special events or instrument final approaches.

3.3.7.2. **Q-.** Slow instrument cross-check. Aircraft control occasionally abrupt to compensate for recognition of errors. Meets "Q-" criteria listed in General Criteria, applicable special events or instrument final approaches.

3.3.7.3. **U.** Inadequate instrument cross-check. Erratic aircraft control. Exceeded Q-limits.

3.3.8. Area 38-40--Not used.

3.4. Tactical Employment:

3.4.1. Area 41--Tactical Plan:

3.4.1.1. **Q.** Realistic, well-developed plan that encompassed mission objectives, threats, and capabilities of all flight members. Addressed contingencies in development of plan.

3.4.1.2. **Q-.** Minor deviations, omissions, and/or errors in the plan resulted in less than optimum achievement of objectives and detracted from mission effectiveness. Planned tactics resulted in unnecessary difficulty.

3.4.1.3. **U.** Major errors in the plan precluded accomplishment of the stated objective.

3.4.2. Area 42--Tactical Execution:

3.4.2.1. **Q.** Applied tactics consistent with the threat, current directives, and good judgment. Executed the plan and achieved mission goals. Quickly adapted to changing environment. Maintained situational awareness. Threat reactions were timely and correct.

3.4.2.2. **Q-.** Applied tactics with only minor deviations, omissions, and/or errors which degraded the reliable release of weapons or mission effectiveness but did not prevent the successful accomplishment of the overall mission goal. Slow to react to a changing environment. Situational awareness and timely threat reactions were poor.

3.4.2.3. **U.** Unable to accomplish the mission due to major errors or omissions during execution of the tactical plan. Situational awareness lost. Numerous threat reactions

were omitted or incorrect. Failed to accomplish countermeasures or perform maneuvers to counter threat.

3.4.3. Area 43--GCI/AWACS/Composite Force (CF) Interface (if applicable):

3.4.3.1. **Q.** Effectively planned for and used CF assets to enhance mission and achieve objectives. No confusion between GCI/AWACS/CF and bombers.

3.4.3.2. **Q-.** Minor confusion between CF assets and threat aircraft. Less than optimum use of Composite Force Assets which did not affect the bomber's offensive advantage.

3.4.3.3. **U.** Inadequate or incorrect use of CF assets resulted in loss of offensive potential.

3.4.4. Area 44--Radio Transmission/Interphone-Usage and Discipline:

3.4.4.1. **Q.** Communications (both inter- and intra-cockpit) were concise, accurate, and effectively used to direct maneuvers or describe the tactical situation.

3.4.4.2. **Q-.** Minor terminology errors or omissions occurred, but did not significantly detract from situational awareness or mission accomplishment. Extraneous comments over radios/interphone presented minor distractions.

3.4.4.3. **U.** Communications over radios/interphone were inadequate or excessive. Inaccurate or confusing terminology significantly detracted from situational awareness or mission accomplishment.

3.4.5. Area 45--Ingress (Includes routing into threat area):

3.4.5.1. **Q.** Aware of all known/simulated threats and defenses. Employed effective use of route and altitude selection.

3.4.5.2. **Q-.** Ignored some of the known/simulated threats and defenses. Improper use of route and altitude selection resulted in unnecessary exposure.

3.4.5.3. **U.** Failed to honor known/simulated threats and defenses significantly reducing survivability. Failed to employ effective route or altitude threat deconfliction.

3.4.6. Area 46--Low Altitude Navigation (Includes activity from the start descent point for the low altitude route through the route exit fix) (If applicable):

3.4.6.1. **Q.** Procedures and checklists required by the flight manual and governing directives were accomplished accurately and efficiently. Altitude deviations did not exceed +/-150 feet from published or briefed altitude. FLIP AP/1B route width was not exceeded. Made all low level enroute points and control times within briefed tolerances.

3.4.6.1.1. **(RN/N/DSN).** Advised pilot of altitude deviations prior to exceeding +/-150 feet of published or briefed altitude.

3.4.6.2. **Q-.** Minor deviations, omissions and errors were noted. Altitude deviations exceeded +/-200 feet from published or briefed altitude.

3.4.6.2.1. **(RN/N/DSN).** Advised the pilots of altitude deviations prior to exceeding +/-200 feet of from published or briefed altitude.

3.4.6.3. **U.** Not up to "Q-" standards. FLIP AP/1B route width was exceeded. Low level enroute points and control times were outside briefed tolerances.

3.4.7. Area 47--TA-Integrated EVS/Visual Procedures (If applicable)--(P/CP/RN/N/DSN):

3.4.7.1. Pilots:

3.4.7.1.1. **Q.** Properly interpreted scope. No obstacles displayed above the horizontal reference line, or horizontal reference line was not maintained above the trace except for dropout techniques, for longer than two consecutive scans (prior to initiating necessary corrective action during TA operations). TA trace, radar altimeter, timing, or EVS/visual integration procedures (as applicable) were properly followed. During integrated EVS/visual operations, all turns were visually monitored.

3.4.7.1.1.1. Radar altitude +200/-150.

3.4.7.1.1.2. Airspeed +/-15 KIAS (Non-mountainous); +/-20 KIAS (mountainous).

3.4.7.1.2. **Q-.** Properly interpreted scope. No obstacles displayed above the horizontal reference line, or horizontal reference line was not maintained above the trace except for dropout techniques, for longer than three consecutive scans (prior to initiating necessary corrective action during TA operations). TA trace, radar altimeter, timing, or EVS/visual integration procedures (as applicable) were properly followed. During integrated EVS/visual operations all turns were visually monitored. Some difficulty interpreting scope.

3.4.7.1.2.1. Radar altitude +250/-200 ft.

3.4.7.1.2.2. Airspeed +/-20 KIAS (non-mountainous); +/-25 KIAS (mountainous).

3.4.7.1.3. **U.** Not up to "Q-" standards.

3.4.7.2. Offense:

3.4.7.2.1. **Q.** Accomplished procedures and checklists required by the flight manual and governing directives accurately and efficiently. Used correct clearance plane setting for the route segment flown. Compensated the TA system accurately for safe, efficient TA operations, and determined the TA compensation value within .2 degrees. Updated and maintained the FRL setting within .3 degrees when FRL mode was used. Coordination with the pilots provided accurate terrain assessment along the flight path of the aircraft. Advised the pilots of altitude deviations of +200/-150 ft from the planned clearance plane altitude. Chose and communicated the most effective use of terrain for masking purposes within the route boundaries.

3.4.7.2.2. **Q-.** Compensated the TA system accurately for safe, efficient TA operations, and determined the TA compensation value within .3 degrees. Updated and maintained the FRL setting within .5 degrees when FRL was used. Advised the pilots of altitude deviations of -200/+250 ft from the planned clearance plane altitude.

3.4.7.2.3. **U.** Not up to "Q-" standards.

3.4.8. Area 48--Weapons Employment:

3.4.8.1. General:

3.4.8.2. **Q.** Weapon employment must be accomplished within specified release parameters for the type of weapon being released or mission directives. Accomplished procedures and checklists prescribed by the flight manual, weapon manual, and governing directives to prearm, prepare for release, arm, and release all weapons accurately and efficiently or resulted in a properly aligned missile that would have struck within published reliability standards for that missile. Properly configured weapons for release, and correctly analyzed malfunctions. TOT within published or briefed tolerances. Correctly transferred or simulated transfer of required fuel for external weapons releases.

3.4.8.3. **Q-.** Only minor deviations, omissions, and/or errors in weapon employment, but all release parameters were met, safety was not compromised, and successful weapon employment objectives were not jeopardized. Failed to correctly transfer or simulate transfer of required fuel for external weapons releases; however, aircraft CG limits were not/would not have been exceeded.

3.4.8.4. **U.** Not up to "Q-" standards. The overall grade for bombing will be unqualified when any of the following occur:

3.4.8.4.1. Failure to release/launch a weapon (except for unavoidable system malfunctions).

3.4.8.4.2. Failure to release a weapon in the proper configuration.

3.4.8.4.3. Failure to recognize an obvious malfunction adversely affecting weapon employment capability.

3.4.8.4.4. Failure to transfer or simulate transfer of required fuel for external weapons releases; aircraft CG limits were/would have been exceeded.

3.4.8.4.5. Aborted, downgraded, or changed the planned weapon release without a valid reason.

3.4.8.4.6. Failure to achieve weapon minimum release and safe escape parameters for specific weapons planned, and track tolerances for conventional weapons.

3.4.8.4.7. Attempted or released weapons in contradiction with the mission directives/SPINS.

3.4.8.4.8. If, in the flight examiner's judgment, the operator could not successfully attack a target, the flight examiner may also give an unqualified grade in AIRMANSHIP.

3.4.8.5. Unguided Weapons Delivery Procedures--(P/CP/RN/N/DSN) (If applicable):

3.4.8.5.1. **Q.** Correctly released the weapon(s) at the planned delivery parameters. Airspeed, altitude and roll rate steady prior to release. Followed all current procedures and guidance during the weapon delivery. Correct target coordinates entered, and verified target data with the crew. System accuracy valid IAW theater ROE. Flight control indicator (FCI) within briefed tolerances.

3.4.8.5.1.1. **(N).** Crosshair placement for gravity releases was within the

reliability criteria. The navigator noted and advised the RN of apparent crosshair placement errors and/or equipment configurations adversely impacting reliability.

3.4.8.5.2. **Q-** Minor errors resulting in release outside the planned weapon delivery parameters degraded weapons effectiveness. Errors in airspeed, altitude or roll control degraded delivery accuracy. Minor errors in weapon delivery procedures degraded weapons effectiveness. FCI error would have resulted in minor degradation in weapons.

3.4.8.5.3. **U.** Improper release parameters resulted in the weapon being delivered outside weapon limits. Wrong target coordinates entered. Failed to verify target data with the crew. Used improper procedures which caused the desired weapon effects to miss the target. Major errors in execution of weapon delivery. FCI error would have resulted in weapon ineffectiveness.

3.4.8.6. Guided Weapons Delivery Procedures--(P/CP/RN/N/DSN) (If applicable):

3.4.8.6.1. **Q.** Correctly released the weapon within planned delivery parameters. Followed all current procedures and guidance during the weapon delivery.

3.4.8.6.1.1. **(RN/N/DSN).** Correctly ran the applicable checklists. The navigator noted and advised the RN of apparent equipment configurations adversely impacting reliability. Properly entered target data and weapons parameters in OAS, and verified target data with the crew.

3.4.8.6.2. **Q-** Minor errors resulting in release outside the planned weapon delivery parameters degraded weapons effectiveness. Mission planning errors resulted in degraded weapon effectiveness. Minor errors in weapon delivery procedures degraded weapons effectiveness.

3.4.8.6.2.1. **(RN/N/DSN).** Minor errors or deviations in checklist procedures. Errors in target data input or weapons configuration impacting reliability.

3.4.8.6.3. **U.** Major errors or deviations in checklist procedures and/or inputting target data and weapons parameters in OAS. Failed to verify target data with the crew. Improper release parameters resulted in the weapon being delivered outside weapon limits. Used improper procedures which caused the desired weapon effects to miss the target. Major errors in execution of weapon delivery procedures.

3.4.8.7. Laser Guided Bomb (LGB) Delivery Procedures (P/CP/RN/N/DSN) (If applicable):

3.4.8.8. **Q.** Correctly released the LGB within planned delivery parameters. Used proper lasing procedures to optimally guide the LGB (self lasing). Followed all current procedures and guidance during the LGB delivery and recovery.

3.4.8.9. **Q-** Minor errors resulting in release outside the planned LGB delivery parameters degraded weapons effectiveness. Lasing procedures degraded weapon effectiveness (self lasing). Minor errors in LGB delivery and recovery procedures degraded weapons effectiveness.

3.4.8.10. **U.** Improper release parameters resulted in the LGB being delivered outside weapon/seeker limits. Used improper lasing procedures which caused desired weapon

effects to miss the target (self lasing). Major errors in execution of LGB delivery and/or recovery procedures.

3.4.9. Area 49--Weapons Employment Command and Control (If applicable):

3.4.9.1. **Q.** Effective coordination with outside agencies and contract execution within the flight resulted in prompt employment IAW the ROE, given restrictions or tactical situation.

3.4.9.2. **Q-.** Minor errors during contract execution or slow/confused coordination with outside agencies resulted in delayed employment IAW the ROE, given restrictions or tactical situation.

3.4.9.3. **U.** Major errors during contract execution or ineffective coordination with outside agencies resulted in employment outside the ROE, given restrictions or tactical situation.

3.4.10. Area 50--Targeting Pod Operation (If applicable)--(RN/DSN):

3.4.10.1. **Q.** Correctly operated the sensor to acquire the target. Was able to properly operate the sensor controls to identify target and deliver weapons.

3.4.10.2. **Q-.** Poor sensor operation hindered target identification, degrading weapons delivery. Did not thoroughly understand system controls.

3.4.10.3. **U.** Improper search techniques resulted in late or no target acquisition. Improper sensor operation created an unusable picture and prevented target identification or weapons delivery.

3.4.11. Area 51--Range/Electronic Scoring Site (ESS) Procedures:

3.4.11.1. **Q.** Used proper procedures for entering and exiting the range/ESS. Range/ESS operations followed established procedures.

3.4.11.2. **Q-.** Minor deviations from established procedures for range/ESS entry, exit, or operations.

3.4.11.3. **U.** Major deviations from established procedures for range/ESS entry, exit, or operations.

3.4.12. Area 52--Egress:

3.4.12.1. **Q.** Effectively used evasive maneuvers, terrain masking and/or altitude selection to complete an expeditious egress from the target area. Formation join-up was accomplished as soon as possible without undue exposure to enemy defenses.

3.4.12.2. **Q-.** Egress contributed to unnecessary exposure to threats and delayed formation join-up and departure from target area.

3.4.12.3. **U.** Egress caused excessive exposure to threats. Formation join-up was not accomplished or resulted in excessive exposure to threats.

3.4.13. Area 53--Training Rules/ROE:

3.4.13.1. **Q.** Adhered to and knowledgeable of all training rules/ROE.

3.4.13.2. **Q-** Minor deviations, omissions, and/or errors. Made timely and positive corrections. Did not jeopardize safety of flight.

3.4.13.3. **U.** Significant deviations indicating a lack of knowledge of training rules/ROE.

3.4.14. Area 54--(E) Threat Identification:

3.4.14.1. **Q.** All direct threat/TAR signals were correctly identified in a timely manner. All indirect signals were identified as appropriate for the situation.

3.4.14.2. **Q-** All threat signals were correctly identified with only minor delays that did not affect the mission. Indirect signal(s) were initially identified as a threat/TAR but corrected in a timely manner.

3.4.14.3. **U.** Unable to identify threat signals correctly without adverse delay. Identified an indirect threat as a direct threat/TAR.

3.4.15. Area 55--(E) Penetration Procedures (Takeoff through last weapon release):

3.4.15.1. **Q.** Initial equipment settings were accomplished IAW applicable mission materials and verified using the Equipment Set checklist. Receiver monitoring and procedures were accomplished IAW governing directives.

3.4.15.2. **Q-** Procedures were accomplished with only minor deviations, omissions or errors demonstrating minimum acceptable knowledge/performance of the flight manual or governing directives.

3.4.15.3. **U.** Procedures were accomplished with major deviations, omissions, and/or errors demonstrating unacceptable knowledge/performance of the flight manual or governing directives.

3.4.16. Area 56--(E) Expendable Procedures:

3.4.16.1. **Q.** Procedures were accomplished in a timely manner and, according to the flight manual and governing directives, with only minor deviations, omissions, and/or errors.

3.4.16.2. **Q-** Countermeasures were applied in a timely manner with only minor deviations, omissions, and/or errors resulting in significantly less than optimum effectiveness or demonstrating minimal acceptable knowledge of the flight manual or governing directives.

3.4.16.3. **U.** Procedures were omitted or accomplished with deviations, omissions or errors demonstrating unacceptable knowledge of the flight manual or governing directives.

3.4.17. Area 57--(E) Threat Counter-Measures. This area is used to grade countermeasures against direct threat radars/TARs (Fighter, SAM, AAA and naval Threats).

3.4.17.1. **Q.** Countermeasures were correctly applied in a timely manner in accordance with governing directives.

3.4.17.2. **Q-** Countermeasures were applied in a timely manner with only minor deviations, omissions, and/or errors demonstrating minimal acceptable knowledge of the flight manual or governing directives.

3.4.17.3. **U.** Countermeasures were either late or inappropriate for the threat encountered demonstrating unacceptable knowledge and indicating a definite need for additional training. Did not give threat or maneuver calls or calls were unreadable. Failed to counter a direct threat.

3.4.18. **Area 58--(E) Acquisition/Communication Countermeasures.** This area consists of all actions taken against indirect threat radars and communications facilities.

3.4.18.1. **Q.** Countermeasures against acquisition/communication facilities were in accordance with the flight manual and governing directives. ECM was timely and correctly applied.

3.4.18.2. **Q-.** Required actions were accomplished, but with only minor deviations, omissions, and/or errors demonstrating minimal acceptable knowledge of the flight manual or governing directives.

3.4.18.3. **U.** Acquisition/communications countermeasures were not correctly employed.

3.4.19. **Area 59--(E) Withdrawal Procedures.** This phase includes all actions (except in response to a direct threat) after the last weapon release until the TCM point.

3.4.19.1. **Q.** All procedures required by the flight manual and governing directives were accomplished.

3.4.19.2. **Q-.** Required actions during the withdrawal phase were incomplete or were accomplished with only minor deviations, omissions, and/or errors demonstrating minimal acceptable knowledge of the flight manual or governing directives.

3.4.19.3. **U.** Required actions during the withdrawal were not accomplished or demonstrated an unacceptable knowledge of procedures.

3.4.20. **Area 60--EMCON Procedures (P/CP/RN/N/DSN):**

3.4.20.1. **Q.** Applied proper EMCON procedures as directed by the employment scenario to degrade enemy detection, identification, and acquisition ability.

3.4.20.2. **Q-.** Minor deviations and/or errors from EMCON procedures that may result in enemy detection, identification, or acquisition but not affected mission accomplishment.

3.4.20.3. **U.** Major deviations and/or errors in EMCON procedures that may prevent successful mission accomplishment.

3.4.21. **Areas 61-100--Not used.**

Chapter 4

EMERGENCY PROCEDURES EVALUATIONS

4.1. General:

4.1.1. **Emergency Procedures Evaluation.** Pilot and navigator EPEs will be conducted in the Weapons System Trainer (WST). Electronic Warfare Officers may conduct QUAL and MSN EPEs in an ATD or verbally to include all boldface procedures and a sampling of non-boldface procedures. Only flight examiners may conduct EPEs. Grading criteria for each required item are listed in [paragraph 4.3](#).

4.1.2. Units may include additional items in the unit supplement to AFI 11-202, Volume 2, as required.

4.1.3. Examinees receiving an overall unqualified grade will be placed in supervised status until recommended additional training is completed and/or a reevaluation is successfully accomplished. Examinees receiving an overall unqualified grade because of an unsatisfactory BOLDFACE accomplishment will not be permitted to fly until a successful reevaluation is accomplished. For EPEs in which the examinee is qualified, but requires additional training, the additional training will be accomplished before the next flight. Additional training and reevaluations will be accomplished IAW AFI 11-202V2.

4.1.4. QUAL EPE:

4.1.4.1. Pilots will accomplish QUAL EPEs in the WST/CPT to include all BOLDFACE procedures and a sampling of Non-BOLDFACE procedures.

4.1.4.2. Navigators should accomplish QUAL EPE in the WST in concurrently with the MSN EPE, to include, at a minimum, all BOLDFACE procedures. If the ATD is unavailable, the EPE may be accomplished verbally.

4.1.5. MSN EPE. Pilots will be evaluated on nuclear or conventional weapons jettison procedures. Navigators will be evaluated on nuclear or conventional weapons malfunction analysis and jettison procedures. As a minimum, weapons malfunction analysis will include a programmable weapon (e.g., JDAM, JASSM, ALCM). If the MSN EPE is administered separately from the QUAL EPE, it should be accomplished in the WST, but may be accomplished verbally if the WST is unavailable.

4.2. General Grading Standards: Use all sections for criteria applicable to the events performed on the evaluation.

4.3. Grading.

4.3.1. Area 201-209--BOLDFACE Procedures:

4.3.1.1. **Q.** Displayed correct, immediate response to applicable BOLDFACE.

4.3.1.2. **U.** Incorrect response for applicable BOLDFACE.

4.3.2. Area 210-273--Non-BOLDFACE Procedures:

4.3.2.1. **Q.** Recognized and analyzed malfunction in a timely manner. Displayed correct, immediate response to emergency situations. Effectively used checklist.

4.3.2.2. Q-. Slow to recognize and/or analyze malfunction. Response to certain required steps in emergency procedures was slow/confused. Used the checklist when appropriate, but slow to locate required data and implement guidance.

4.3.2.3. U. Unable to analyze problems or take corrective action. Did not use checklist and/or lacked acceptable familiarity with its arrangement or contents.

4.3.3. Area 266--Unusual Attitude Recoveries—(P/CP) (Simulator only):

4.3.3.1. Q. Smooth, positive recovery to level flight with correct recovery procedures.

4.3.3.1.1. DELETED.

4.3.3.1.2. DELETED.

4.3.3.1.3. DELETED.

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

4.3.3.2.1. DELETED.

4.3.3.2.2. DELETED.

4.3.3.2.3. DELETED.

4.3.3.2.3.1. DELETED.

4.3.3.3. U. Unable to determine attitude. Improper recovery procedures were used.

4.3.3.3.1. DELETED.

4.3.3.3.2. DELETED.

4.3.3.3.3. DELETED.

4.3.4. Area 301-302--Weapons Jettison and Malfunctions

4.3.4.1. Area 301--Weapon Jettison--(P/CP/RN/N/DSN):

4.3.4.1.1. Q. Accomplished all jettison procedures and/or checklist items without any deviations.

4.3.4.1.2. Q-. Accomplished jettison procedures and/or checklist items with only minor deviations, omissions, and/or errors (conventional weapon jettison only).

4.3.4.1.3. U. Not up to Q- standards. Major procedural and/or checklist deviations, omissions, and/or errors which could preclude effective weapons delivery or result in an improper weapons load.

4.3.4.1.3.1. Nuclear weapons jettison. Committed any checklist deviation, omission, and/or error.

4.3.4.2. Area 302--Weapon Malfunction--(RN/N/DSN):

4.3.4.2.1. Q. Recognized and analyzed malfunction in a timely manner. Effectively used technical order procedures.

4.3.4.2.2. Q-. Slow to recognize and/or analyze malfunction. Used the technical order when appropriate, but slow to locate required data and implement guidance.

4.3.4.2.3. U. Unable to analyze problems or take corrective action. Did not use checklist and/or lacked acceptable familiarity with its arrangement or contents.

4.3.4.3. DELETED.

4.4. Information Collection, Records, and Forms.

4.4.1. Information Collections. No information collections are created by this publication.

4.4.2. Records. The program records created as a result of the processes prescribed in this publication are maintained in accordance with AFMAN 33-363 and disposed of in accordance with the AFRIMS RDS located at <https://www.my.af.mil/gcss-af61a/afirms/afirms/>.

4.4.3. DELETED.

4.4.3.1. DELETED.

4.4.3.2. DELETED.

DANIEL J. DARNELL, Lt Gen, USAF
DCS, Operations, Plans and Requirements

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

AFI 11-2B-52 Volume 1, *B-52 Aircrew Training*, 21 Nov 2006
AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, 08 Dec 2006
AFI 11-415, *Weapons and Tactics Program*, 20 Mar 2007
AFPD 11-2, *Aircraft Rules and Procedures*, 14 Jan 2005
AFPD 11-4, *Aviation Service*, 01 Sep 2004
AFI 11-290, *Cockpit/Crew Resource Management Training Program*, 11 Apr 2001
AFI 33-360, *Publications and Forms Management*, 18 May 2006
AFMAN 33-363, *Management of Records*, 01 Mar 2008
AFMAN 11-217, *Instrument Flight Procedures*, 03 Jan 2005
AF FORM 4031, *CRM Skills/Training/Evaluation Form*

Adopted Forms

AF Form 4031, *CRM Skills Criteria Training/Evaluation Form*, 1 Mar 1998
AF Form 8, *Certificate of Aircrew Qualification*, 8 Dec 2006
AF Form 847, *Recommendation for Change of Publication*, 22 Sep 2009
AFTO Form 781, *ARMS Aircrew/Mission Flight Data Document*, 11 Sep 2008

Abbreviations and Acronyms

A3TV—Director of Air and Space Operations Training Standardization Evaluation
AAA—Anti Aircraft Artillery
ACC—Air Combat Command
AF—Air Force
AFGSC—Air Force Global Strike Command
AFI—Air Force Instruction
ARMS—Aviation Resource Management Systems
AFRC—Air Force Reserve Command
AGM—Air to Ground Missile
ANG—Air National Guard
ASR—Airport Surveillance Radar
ATD—Aircrew Training Device
AWACS—Airborne Warning and Control System

CC—Commander
CF—Composite Force
CP—Co-Pilot
CRM—Cockpit/Crew Compartment/Crew Resource Management
DEG—Degree
DH—Decision Height
EA—Electronic Attack
ECM—Electronic Counter Measure
ESS—Electronic Scoring Site
EP—Emergency Procedures
EPE—Emergency Procedures Evaluation
EVS—Electro-Optical Viewing System
EW—Electronic Warfare Officer
FRL—Fuselage Reference Line
FTU—Formal Training Unit
GCI—Ground Control Intercept
HHQ—Higher Headquarters
HQ—Headquarters
IAW—In Accordance With
IE—Instructor Electronic Warfare Officer
IFF—Identification Friend or Foe
ILS—Instrument Landing System
IP—Instructor Pilot
IN—Instructor Navigator
KIAS—Knots Indicated Airspeed
MAJCOM—Major Command
MDA—Minimum Descent Altitude
MPC—Mission Planning Cell
MOA—Military Operating Area
MSN—Mission
MTS—Mountainous
MUTES—Multiple Threat Emissions Systems

N—Navigator
N/A—Not Applicable
NAF—Numbered Air Force
N/N—No-Notice
OG—Operations Group
OGV—Operations Group Standardization/Evaluation
OPR—Office of Primary Responsibility
P—Pilot
PAR—Precision Approach Radar
QUAL—Qualification
Q—Qualified
R—Required
RAP—Ready Aircrew Program
RDS—Records Disposition Schedule
RN—Radar Navigator-Bombardier
ROE—Rules of Engagement
SAM—Surface to Air Missile
SIF—Selective Identification Feature
SIM—Simulator
SPINS—Special Instructions
SQ—Squadron
STAN/EVAL—Standardization/Evaluation
TA—Terrain Avoidance
TAR—Target Acquisition Radar
TCM—Terminate Counter Measures
U—Unqualified
VDP—Visual Descent Point
VFR—Visual Flight Rules
VOR—VHF Omni Range
WRM—War Reserve Munitions
WST—Weapons System Trainer

Terms

Crew Resource Management (CRM)—The effective use of all available resources--people, weapon systems, facilities, equipment, environment--by individuals or crews to safely and efficiently accomplish an assigned mission or task.

Deviation—Performing an action not in sequence with current procedures, directives, or regulations. Performing action(s) out of sequence due to unusual or extenuating circumstances is not considered a deviation. In some cases, momentary deviations may be acceptable; however, cumulative momentary deviations will be considered in determining the overall qualification level.

Major Deviation—Performing an action not in sequence with current procedures, directives, or regulations. Deviation detracted from mission accomplishment, adversely affected use of equipment, or violated safety. Performing action(s) out of sequence due to unusual or extenuating circumstances is not considered a deviation. In some cases, momentary deviations may be acceptable; however, cumulative momentary deviations will be considered in determining the overall qualification level.

Major Error—Departure from standard procedures. Performing incorrect actions or recording incorrect information. Error detracted from mission accomplishment, adversely affected use of equipment, or violated safety.

Major Omission—To leave out a required action or annotation. Omission detracted from mission accomplishment, adversely affected use of equipment, or violated safety.

Minor Deviation—Performing an action not in sequence with current procedures, directives, or regulations. Deviation did not detract from mission accomplishment, adversely affect use of equipment, or violate safety.

Minor Error—Departure from standard procedures. Performing incorrect actions or recording incorrect information. Error did not detract from mission accomplishment, adversely affect use of equipment, or violate safety.

Minor Omission—To leave out a required action or annotation. Omission did not detract from mission accomplishment, adversely affect use of equipment, or violate safety.

Omission—To leave out a required action or annotation.