BY ORDER OF THE COMMANDER AIR EDUCATION AND TRAINING COMMAND

AETC INSTRUCTION 13-101

7 DECEMBER 2000



Space, Missile, Command, and Control

COMMAND AND CONTROL SYSTEMS EVALUATION CRITERIA

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

NOTICE: This publication is available digitally on the HQ AETC Publishing WWW site at: http://www.aetc.randolph.af.mil/im. If you lack access, contact your Base Publishing Manager.

OPR: HQ AETC/DOFV (Mr J. Land) Supersedes AETCI 13-101, 16 October 1998 Certified by: HQ AETC/DOF (Col M. Maffei) Pages: 46 Distribution: F

This AFPD 13-1, Theater Control defines instruction implements Air System. It standardization/evaluation (stan/eval) positional criteria for all AETC battle management groundtraining systems to include the Modular Control System (MCS), Primary Simulation Trainer (PST), AWACS Modeling and Simulation (AMS), and Region/Sector Air Operations Center (R/SAOC). It applies to all Air Force specialty code (AFSC) 13B, 1C5X1, 1C5X1D, and 1A4X1D personnel assigned or attached to AETC for battle management duties, regardless of whether duties are performed in a live or simulated environment. This instruction applies to Air National Guard (ANG) units gained by AETC and all AFSC 13B or 1C5X1 (D) ANG personnel assigned or attached to AETC except as noted. (It does not apply to Air Force Reserve Command [AFRC] units.) Throughout this instruction, AFSC 13B refers to air battle managers (ABM) and air weapons officers (AWO). AFSCs 1C5X1D and 1A4X1D refer to weapons directors (WD). AFSC 1C5X1 refers to personnel performing the duties of or instructing weapons technicians (WT) or weapon simulation technicians (WST). This instruction does not apply to individuals serving solely as academic platform instructors. See Attachment 1 for a glossary of references and supporting information used in this publication.

Units will coordinate supplements to this instruction with HQ AETC/DOFV before publication and forward one copy to HQ AETC/DOFV after publication. ANG units will coordinate supplements to this instruction with ANG/C4I and ANG/DOT before publication and forward one copy to HQ AETC/DOFV, 19 AF/DOK, and ANG/DO after publication. Submit suggested improvements to this supplement on AF Form 847, **Recommendation for Change of Publication**, through stan/eval channels, to HQ AETC/DOFV, 1 F Street, Suite 2, Randolph AFB TX 78150-4325.

Request waivers to this instruction through stan/eval channels to HQ AETC/DOF or ANG/DO (as appropriate). Copies of ANG-approved waivers will be forwarded to 19 AF/DO and HQ AETC/DOF. The operations group (OG) commander of the unit that generated the supplement will handle waivers to supplemental guidance.

	Report Docume	entation Page		
Report Date 7 Dec 2000	Report Type N/A	Dates Covered (from to) -		
Title and Subtitle		Contract Number		
AETC Instruction 130-101 Control Command and Con	Space Missile, Command a ntrol Systems Evaluation	Grant Number		
Criteria		Program Element Number		
Author(s)		Project Number		
		Task Number		
		Work Unit Number		
	Name(s) and Address(es) g Command Randolph AFB	Performing Organization Report Number		
Sponsoring/Monitoring Agency Name(s) and		Sponsor/Monitor's Acronym(s)		
Address(es)		Sponsor/Monitor's Report Number(s)		
Distribution/Availability Approved for public releas				
Supplementary Notes				
Abstract				
Subject Terms				
Report Classification unclassified		Classification of this page unclassified		
Classification of Abstract unclassified		Limitation of Abstract UU		
Number of Pages 16				

21

SUMMARY OF REVISIONS

This instruction is substantially revised and must be completely reviewed.

Chapter 1—OVERVIEW OF EVALUATION CRITERIA

1.1.	Purpose	5
1.2.	Deviations to This Instruction	5
1.3.	Grading Policies	5
1.4.	Overall Qualification Levels	5
1.5.	Rating Deviations	6
1.6.	Area Grades	6
Chapter 2—	BMC QUALIFICATION (POSITIONAL) EVALUATION OF THE AIR BATTLE	C
MANAGER	(ABM), AIR WEAPONS OFFICER (AWO), AND WEAPONS DIRECTOR (WD)	
Section 2A	Evaluation Procedures and Instructions	
2.1.	Air Combat Training Mission and AR Evaluation	7
2.2.	Specific Profiles	7
2.3.	Evaluation Objective	8
Section 2B	Qualification Criteria	
2.4.	Areas and Ratings	8
2.5.	Area 1, Mission Planning	9
2.6.	Area 2, Mission Briefing/Debriefing	9
2.7.	Area 3, Equipment Setup and Status Reporting	9
2.8.	Area 4, Airspace Coordination	9
2.9.	Area 5, Crew Coordination	10
2.10.	Area 6, Communications Selection and Use	10
2.11.	Area 7, Sensors	10
2.12.	Area 8, Weather Information	11
2.13.	Area 9, Identification	11
2.14.	Area 10, Handover Procedures	11
2.15.	Area 11, Console Operations and Displays	11
2.16.	Area 12, Radio/Telephone (R/T) Procedures	17
2.17.	Area 13, Air-to-Air Mission Positioning (Critical)	17
2.18.	Area 14, AR Operations Positioning (Critical)	18
2.19.	Area 15, Situation/Threat Information	18
2.20.	Area 16, Safety of Flight Procedures (Critical)	18
2.21.	Area 17, Aircraft Emergency, Search and Rescue (SAR) Procedures (Critical)	19
2.22.	Area 18, Equipment Safety Procedures (Critical)	19
2.23.	Area 19, Documentation	19
Chapter 3—	QUALIFICATION EVALUTION OF THE WEAPONS TECHNICIAN (WT)	
Section 3A	Evaluation Procedures and Instructions	
3.1.	Air Combat Training Mission	20
3.2.	Specific Profiles	20

3.5.	Area 1, Mission Planning	21
3.6.	Area 2, Mission Briefing/Debriefing	21
3.7.	Area 3, Equipment Setup and Status Reporting	21
3.8.	Area 4, Airspace Coordination	22
3.9.	Area 5, Crew Coordination	22
3.10.	Area 6, Communications Selection and Use	22
3.11.	Area 7, Sensors	22
3.12.	Area 8, Weather Information	23
3.13.	Area 9, Identification	23
3.14.	Area 10, Handover Procedures (Critical)	23
3.15.	Area 11, Console Operations and Displays	24
3.16.	Area 12, Radio/Telephone (R/T) Procedures	29
3.17.	Area 13, Checklists	29
3.18.	Area 14, Mission Assistance	29
3.19.	Area 15, Situation/Threat Information	30
3.20.	Area 16, Safety of Flight Procedures (Critical)	30
3.21.	Area 17, Aircraft Emergency, Search and Rescue (SAR) Procedures (Critical)	30
3.22.	Area 18, Equipment Safety Procedures (Critical)	30
3.23.	Area 19, Documentation	31

Chapter 4—CERTIFICATION EVALUATION OF THE WEAPONS SIMULATION TECHNICIAN (WST) Section 4A Evaluation Procedures and Instructions

Section 4A	Evaluation rocedures and instructions	
4.1.	Minimum Mission Level	32
4.2.	Performance Session	32
4.3.	Evaluation Objective	32
Section 4B	Certification Criteria	
4.4.	Areas and Ratings	32
4.5.	Area 1, Mission Planning	32
4.6.	Area 2, Mission Briefing/Debriefing	32
4.7.	Area 3, Equipment Setup and Status Reporting	33
4.8.	Area 5, Crew Coordination	33
4.9.	Area 6, Communications Selection and Use	33
4.10.	Area 9, Identification and Check-In	33
4.11.	Area 11, Console Operations and Displays	34
4.12.	Area 12, Radio/Telephone (R/T) Procedures	34
4.13.	Area 13, Tactics and Maneuvers	34
4.14.	Area 18, Equipment Safety Procedures (Critical)	35
Chapter 5—	QUALIFICATION EVALUATION OF THE POSITIONAL INSTRUCTOR (PI)	
Section 5A	Evaluation Procedures and Instructions	
5.1.	Minimum Mission Level	36
5.2.	Demonstration or Performance Session	
5.3.	Evaluation Objective	36
Section 5B	Qualification Criteria	
5.4.	Areas and Ratings	36
5.5.	Area 20, Mission Planning	36

5.6.	Area 21, Conduct Mission Briefing	37
5.7.	Area 22, Instructor Knowledge	
5.8.	Area 23, Conduct Appropriate Demonstration/Performance	37
5.9.	Area 24, Monitor Student Performance/Corrective Guidance	38
5.10	Area 25, Situation/Threat Information	38
5.11	. Area 26, Safety of Flight Procedures (Critical)	38
5.12	Area 27, Use of Training Materials	39
5.13	. Area 28, Mission Debrief	39
5.14	Area 29, Ability To Instruct	39
5.15	. Area 30, Student Training Documentation	39
5.16	Area 31, Objectivity	40
Section 6A	-OBJECTIVITY EVALUATION OF THE STAN/EVAL EXAMINER (SEE) Evaluation Procedures and Instructions Conducting a SEE Objectivity Evaluation	41
6.1.	Conducting a SEE Objectivity Evaluation	41
6.2.	Evaluation Objective	
Section 6B	Qualification Criteria	
6.3.	Areas and Ratings	41
6.4.	Area 32, Compliance With Stan/Eval Directives (Higher Headquarters and Local)	41
6.5.	Area 33, Evaluation Briefing	42
6.6.	Area 34, Identification of Discrepancies and Assignment of Area Ratings	42
6.7.	Area 35, Assignment of Overall Ratings	42
6.8.	Area 36, Corrective Action	42
6.9.		
6.10		42
Attachmen	t 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION	43

Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION43Attachment 2—SAMPLE EVALUATION GRADE CARD45

Chapter 1

OVERVIEW OF EVALUATION CRITERIA

1.1. Purpose. AETC conducts all initial battle management training for the Air Force. This instruction gives AETC stan/eval examiners (SEE), instructors, flight commanders, and operations personnel the procedures and evaluation criteria to use during positional evaluations, both qualification and certification. It is a reference document and a standard for training and operational purposes. Specific areas are prescribed to ensure an accurate assessment of the proficiency and capabilities of operations personnel. HQ AETC/DOF is responsible for the overall management of AETC battle management stan/eval program.

1.2. Deviations to This Instruction. Deviations are not authorized unless approved by HQ AETC/DOF or ANG/DOT (as appropriate).

1.3. Grading Policies:

1.3.1. Evaluators will use the policies and procedures in AFI 13-1STAN/EVAL, Volume 2, *Ground Command and Control Systems Standardization/Evaluation Program—Organization and Administration*, and the evaluation criteria in this instruction for conducting all positional evaluations. Evaluators will use qualification ratings detailed in this supplement, which are reflective of standard AETC Flying Training ratings found in AFI 11-202, Volume 2, *Aircrew Standardization/Evaluation Program*. An overall rating of unqualified (U) could result from an unsatisfactory rating of single critical or multiple noncritical areas. Specific criteria are listed in the individual chapters or areas. Evaluators may use the AF Form 4144, **Positional Evaluation Checklist**, or a locally developed and HQ AETC/DOF-approved form (such as the sample form in Attachment 2) to initially document all evaluations.

1.3.2. Academic platform instructor evaluations will be accomplished using the procedures and criteria defined in AETCI 36-2202, *Faculty Development and Master Instructor Programs*.

1.4. Overall Qualification Levels. There are three possible overall qualification levels that can be awarded based on an individual's performance. They are qualification level 1 (Q1), qualification level 2 (Q2), and qualification level 3 (Q3). (See paragraph 1.5 for rating deviations.) The standards for awarding each qualification level are as follows:

1.4.1. Qualification Level 1 (Q1). Evaluators will award a Q1 rating when the examinee has demonstrated desired performance and knowledge of procedures, equipment, and directives within specified limits and tolerances. The examination may have multiple areas rated as "debriefed," as long as the examinee did not have any deficiencies downgraded to Q-. If the individual has demonstrated exceptional skill and knowledge in all phases of the evaluation, he or she can receive an exceptionally qualified (EQ) annotation. The evaluation must be free of discrepancies, and the requisite written examination score must be a 96 percent or higher. For trend analysis and stan/eval review board purposes, Qualification level 1 with downgrades (Q1/ABM/AWO/WD) will be awarded when the examinee has demonstrated satisfactory performance on all evaluation criteria, but one or more areas contained discrepancies rated as Q- (debriefed to standards). In this case, AF Form 4143, **Certificate of Qualification**, will still contain an overall grade annotation of Q1.

1.4.2. Qualification Level 2 (Q2). A Q2 rating is awarded when the examinee demonstrates the ability to perform duties in a safe manner, but one of the following conditions exist: (1) an area is assigned additional training, or (2) a grade of U is given in a noncritical area and no additional training is assigned. The examinee is considered fully qualified and may still perform basic mission capable (BMC) and instructor duties while completing any assigned additional training unless specified otherwise on the AF Form 4143.

1.4.3. Qualification Level 3 (Q3). A Q3 rating is awarded anytime a U is awarded in a critical area or, in the SEE's judgement, there is justification based on discrepancies to award a U grade on two or more noncritical areas. A Q3 on an evaluation will result in a U status, which will require a reevaluation as defined in AFI 13-1STAN/EVAL, Volume 2.

1.5. Rating Deviations. Evaluators will not consider momentary deviations when grading if the examinee applied prompt corrective action and such deviations did not impact safety of flight. Cumulative deviations will determine the overall rating. Regardless of performance, an EQ rating may not be awarded during a spot evaluation unless the individual chooses to complete all examination requirements for a recurring evaluation.

1.6. Area Grades. A three-level grading system is established for individual areas as specified in the appropriate grading criteria (Section 2B). *NOTE:* Areas identified as critical will only be graded Q or U. The grading system is as follows:

1.6.1. Q. This grade is the desired level of qualification. To receive this grade, the examinee must have demonstrated a satisfactory knowledge of all required information, performed duties within tolerances prescribed by this instruction, and accomplished the assigned mission.

1.6.2. Q-. This grade indicates the examinee is qualified to perform the assigned tasks, but requires debriefing or additional training as determined by the SEE. Deviations from standards did not jeopardize mission accomplishment. The SEE must annotate any discrepancies on AF Form 4143 as "debriefed to standards" or in sufficient detail to allow the examinee's additional training to be focused on specific learning objectives.

1.6.3. U. This grade is assigned for any performance outside allowable parameters or deviations from prescribed procedures that compromise mission accomplishment. Additional training is normally required, and the SEE must annotate the AF Form 4143 in sufficient detail to allow the examinee's additional training to be focused on specific learning objectives. In some cases, it is not necessary to require additional training, especially if the assignment of such action will not constructively improve the examinee's performance. In such a case, the AF Form 4143 will be annotated as "debriefed to standards."

Chapter 2

BMC QUALIFICATION (POSITIONAL) EVALUATION OF THE AIR BATTLE MANAGER (ABM), AIR WEAPONS OFFICER (AWO), AND WEAPONS DIRECTOR (WD)

Section 2A—Evaluation Procedures and Instructions

NOTE: This section contains criteria applicable to ABM, AWO, and WD positional evaluations.

2.1. Air Combat Training Mission and AR Evaluation. The minimum event for the BMC qualification is the air combat training mission (live). If the individual is designated to be live air refueling (AR) qualified by the squadron operations officer (DO), the evaluation will also include a live AR evaluation. Live qualification in AR will be annotated, using a Letter of Xs. (An air-to-surface mission is not an evaluation requirement in AETC.) The DOT or DOV (determined locally by the squadron DO) will maintain a letter of Xs, designating the live and simulation qualifications of all unit personnel. The letter of Xs will supplement the AF Form 4143 to show the specific mission ABMs, AWOs, or WDs are qualified to conduct and or teach.

2.2. Specific Profiles. The ABM, AWO, and WD will be evaluated on live missions to the maximum extent possible. Additionally, the SEE is responsible for determining whether briefed or conducted control activities meet qualification requirements. With the exception of the air combat training or dissimilar air combat training (air-to-air) portion of the evaluation, the missions conducted have to conform to specific profiles as defined by the OG stan/eval (OGV).

2.2.1. Live Air-to-Air Mission. Conduct a live air-to-air mission where the ABM, AWO, or WD provides control to high performance aircraft as briefed by the aircrew. The mission should consist of at least two engagements. A single continuous engagement or fight must last at least 10 minutes in order to meet evaluation requirements.

2.2.1.1. Control must be provided to at least two separate fighters or elements against two adversaries who are cleared for evasive maneuvering. The SEE will ensure that the ABM, AWO, or WD participates in all phases of the mission. Another controller on a separate frequency may control the adversaries.

2.2.1.2. It is desired, although not required, for this mission to result in a maneuvering dogfight. If a mission degrades to a one-versus-two engagement, the examinee will control the single ship. The SEE will determine the mission's suitability for an evaluation based on the workload of the examinee. A one-versus-two engagement is the minimum sufficient to meet evaluation requirements.

2.2.2. AR Operations:

2.2.2.1. If applicable, conduct an AR operation where control is provided to at least two separate receivers or elements simultaneously (that is, talking and/or providing vectors to both receivers or elements at the same time, either pre- or post-fueling) on one or more tankers. The ABM, AWO, or WD must demonstrate proficiency on AR tactics using the continuum of control, including a point-parallel and receiver turn-on rendezvous. This evaluation will consist of a complete AR operation, from anchor activation to the return of the airspace block.

2.2.2.2. Evaluations should be scheduled for an AR operation with one tanker. The examinee may elect to complete an evaluation on an AR operation with a cell of tankers, but the increased difficulty level of the operation does not prohibit the requirement to achieve rendezvous criteria outlined Area 14, Air Refueling Operations Positioning (paragraph 2.18).

2.2.2.3.The examinee will have two opportunities to meet criteria for each type of rendezvous. Failure to achieve parameters in two attempts will result in a rating of U for Area 14. Once AR operation positioning minimum criteria are met, the examinee is free to conduct any type of rendezvous, including tactical. Subsequent AR missions must also meet standards.

2.2.2.4. If, due to airspace or receiver restrictions, the examinee is unable to complete one of the required rendezvous types (for example, a point parallel) within 30 days of evaluation start, but is able to show proficiency on the other type of AR rendezvous, he or she will be deemed to have met requirements for this portion of the examination. In addition, the AF Form 4143 will be annotated in the remarks section indicating the examinee is required to perform the other type of rendezvous during a spot evaluation on an AR operation within 60 days of evaluation completion.

2.2.2.5. If the examinee does not complete the AR operation within 60 days or fails to meet rendezvous parameters during the spot evaluation, Area 14 will be given a rating of U and the provisions of paragraph 2.2.5 will then apply.

2.2.3. Close Control Intercept Event. If applicable, direct a close control intercept event according to Area 13, Air-to-Air Mission Positioning. The ABM, AWO, or WD should perform this portion of the examination in a live environment. If the evaluation was not accomplished in a live environment, indicate the reasons why on AF Form 4143. If the evaluation is accomplished in a simulator, the next evaluation must be under live conditions.

2.2.4. Critical Areas. Certain areas require a degree of knowledge and proficiency absolutely mandatory for successful mission accomplishment. Consequently, a U rating in any of the following critical areas will result in an overall grade of Q3: Area 13, Air-to-Air Mission Positioning; Area 16, Safety of Flight; Area 17, Aircraft Emergency Search and Rescue (SAR) Procedures; and Area 18, Weapon System Safety Procedures.

2.2.5. Receiving a U Rating in Area 14. An examinee who receive a U rating in Area 14 is prohibited from conducting live AR operations unsupervised. However, if this is the only area rated U, the examinee will still be qualified to perform duties on air-to-air missions. The restrictions column of AF Form 4143 will contain the statement, "Not air refueling qualified." Once TRs are complete, annotate as "air refueling qualified."

2.3. Evaluation Objective. The examinee must demonstrate the ability to operate safely and effectively according to technical orders, Federal Aviation Administration (FAA) regulations, and other operational directives.

Section 2B—Qualification Criteria

2.4. Areas and Ratings. Paragraphs 2.5 through 2.23 provide the different qualification areas, possible ratings for each, and definitions of the ratings (Q, Q-, and U, as applicable) for each area.

2.5. Area 1, Mission Planning:

2.5.1. Q. Properly annotated forms and complied with guidance in the operations information file (OIF) prior to accepting first handover. Noted all factors applicable to mission execution; for example, number and type aircraft, call signs, planned scenarios or tactics, blocks, airspace and limitations, and radio frequencies. Reviewed mission guides, airspace and radio limitations, and emergency and no radio (NORDO) procedures. Developed a sound plan of action to accomplish the mission.

2.5.2. Q-. Forms were incomplete and/or failed to comply with guidance in the OIF. Resulting omissions noted in mission planning did not jeopardize the outcome of the mission, but caused delays and detracted from mission accomplishment.

2.5.3. U. Forms were incomplete and/or failed to comply with guidance in the OIF. Resulting omissions compromised mission execution or safety of flight. Major errors in mission planning prevented safe and effective mission accomplishment. Faulty knowledge of operations and/or procedures prevented meaningful contribution to aircrew briefing.

2.6. Area 2, Mission Briefing/Debriefing:

2.6.1. Q. Prepared ABM, AWO, or WD mission briefing according to locally developed guidance. Clarified all items necessary for efficient mission conduct. Debriefed information (when required) to recreate the mission or clarify problem areas during aircrew debrief.

2.6.2. Q-. Errors or omissions were noted during the briefing. Failed to clarify all mission elements. As a result, aircrew had to reemphasize employment considerations during the mission. Unprepared to contribute to the reconstruction of the mission or clarify problem areas during the aircrew debrief.

2.6.3. U. Unprepared to conduct ABM, AWO, or WD mission briefing. Major errors or omissions during the briefing jeopardized the outcome of the mission. Did not address or debrief problem areas or assist with recreating the mission.

2.7. Area 3, Equipment Setup and Status Reporting:

2.7.1. Q. Followed technical manuals, operating guides, and other equipment-related instructions to build the best radar presentation and maximize console operations. Selected the appropriate video maps, overlays, or intercept training areas. Recognized, corrected, and reported alerts, alarms, or system errors.

2.7.2. Q-. Committed obvious errors or deviations that did not cause damage to equipment or jeopardize mission outcome.

2.7.3. U. Committed major errors or omissions with the potential to damage equipment or hinder mission accomplishment. Radar presentation or console setup jeopardized mission outcome.

2.8. Area 4, Airspace Coordination:

2.8.1. Q. Supervised the WT to ensure compliance with letters of agreement (LOA), approved checklists, and local operating directives to confirm airspace, exchange pertinent mission information

(such as, call sign, frequency, phone number, etc.), and receive airspace restrictions. Directed the WT to coordinate with adjoining airspace users to verify communications. Ensured appropriated post-mission coordination was conducted according to LOAs and local directives.

2.8.2. Q-. Allowed the WT to deviate from LOAs, approved checklists, and/or local operating directives when coordinating airspace. Resulting errors did not jeopardize mission accomplishment, but created delays and/or confusion. Failed to ensure appropriate coordination with agencies working in adjacent airspace.

2.8.3. U. Failed to prevent major errors and/or omissions that compromised mission execution or created an unsafe working environment. Aircraft entered or remained in an unauthorized airspace without appropriate coordination.

2.9. Area 5, Crew Coordination:

2.9.1. Q. Briefed, exchanged, and verified mission information with WT and adversary weapons team according to local operating directives. Both control teams were aware of the airspace status and intentions of each team's aircraft.

2.9.2. Q-. Errors in coordination created confusion with the WT and adversary weapons team. Coordination hindered entry and exit procedures or forced delays in mission execution, but did not jeopardize overall mission.

2.9.3. U. Failed to notify the WT and adversary weapons team of applicable mission information, which resulted in significant delays with a major negative impact on mission accomplishment.

2.10. Area 6, Communications Selection and Use:

2.10.1. Q. Demonstrated satisfactory ability to establish primary and alternate ground-to-ground and ground-to-air communications. Set and programmed frequencies, made required communication checks, and reported outages according to technical manuals and local directives.

2.10.2. Q-. Made errors in communications selection that impacted the ability to communicate with the aircrew or other agencies. Had difficulty establishing communications or was slow to react to errors. Did not establish or coordinate for alternate communications in a timely manner.

2.10.3. U. Errors and/or omissions created severe delays or prevented mission accomplishment.

2.11. Area 7, Sensors:

2.11.1. Q. Used all available sensors to create the best possible radar picture. Corrected or reported degraded presentations. Recognized the presence of electronic or mechanical jamming or interference.

2.11.2. Q-. Errors and/or omissions resulted in degraded radar and identification friend or foe (IFF) presentation or hindered mission effectiveness, but did not jeopardize overall mission.

2.11.3. U. Unable to present a workable radar presentation. Lack of system knowledge hindered mission

outcome. Failed to recognize or compensate for the presence of electronic or mechanical jamming or interference.

2.12. Area 8, Weather Information:

2.12.1. Q. Obtained and extracted essential weather information (including winds aloft for AR). Processed weather information and provided updates to the aircrew upon notification of weather changes affecting the mission according to AFI 11-214, *Aircrew and Weapons Director Procedures for Air Operations*, and local directives. Relayed weather updates and recovery airbase status in a timely manner.

2.12.2. Q-. Errors and/or omissions of essential weather information caused delays in mission accomplishment, but did not jeopardize overall mission.

2.12.3. U. Unable to obtain or extract essential weather information or failed to relay important weather information.

2.13. Area 9, Identification:

2.13.1. Q. Located all mission aircraft within 1 minute prior to declaring radar contact. During the mission, properly identified participating and nonparticipating aircraft using IFF/selective identification feature (SIF), pointouts, or pilot maneuvering.

2.13.2. Q-. Deviations from standards (greater than 1 minute) created delays in identifying either participating or nonparticipating aircraft and hindered mission accomplishment, but did not jeopardize overall mission.

2.13.3. U. Unable to locate all mission aircraft within 2 minutes prior to declaring radar contact. Pointouts, pilot maneuvering, or IFF/SIF interpretation was incorrect. Actions jeopardized mission.

2.14. Area 10, Handover Procedures:

2.14.1. Q. Ensured WT completed all handovers according to LOAs, local operating directives, or published FAA guidance. Transmitted air traffic control (ATC) clearances and advisories received from WT verbatim. Completed handovers at the appropriate altitude prior to handover or exit point.

2.14.2. Q-. Committed errors or omissions, causing delays that hindered the aircrew's mission accomplishment.

2.14.3. U. Did not comply with handover procedures according to LOAs, local operating directives, or published FAA guidance. Failed to complete handovers at the appropriate altitude prior to handover or exit point.

2.15. Area 11, Console Operations and Displays:

2.15.1. Q. Demonstrated desired level of knowledge and performed required switch actions according to technical manuals and positional training guides. Understood and corrected system errors. Was able to

interpret operational displays to maximize mission effectiveness. Demonstrated proficiency in each of the following (system-specific) switch actions:

2.15.1.1. Modular Control System (MCS):

- 2.15.1.1.1. Operate system access subunit area 1 (SAS-1).
- 2.15.1.1.2. Operate operator console unit (OCU) control panel.
- 2.15.1.1.3. Perform finger on glass (FOG) alignment (OCU TEST).
- 2.15.1.1.4. Perform operator test and switch on line (ON LINE).
- 2.15.1.1.5. Select appropriate symbology displays (SYM DSPL).
- 2.15.1.1.6. Control air track intensity (thumbwheels).
- 2.15.1.1.7. Display velocity vectors (VEL VECTOR).
- 2.15.1.1.8. Select modes and codes for highlighting (SELECT M/CODE).

2.15.1.1.9. Use IFF HOOK.

- 2.15.1.1.10. Determine coordinates (READ COORD).
- 2.15.1.1.11. Use bearing and range control.
- 2.15.1.1.12. Initiate rate-aided and auto tracks.

2.15.1.1.13. Reposition, restart, and cancel tracks (REPOSN, CANCEL TRACK).

2.15.1.1.14. Set up, display, displace, and delete data blocks (SET UP D-BLK, DSPLCE D-BLK).

2.15.1.1.15. Display, respond to, and clear alerts (CLEAR ALERT).

2.15.1.1.16. Display or modify current initialized system voice communications circuits (DSPL VCAU ASGMTS).

2.15.1.1.17. Load, record, replay, and monitor the recorder/reproducer unit (R/RU).

2.15.1.1.18. Select voice communications circuitry (VOICE COMM).

- 2.15.1.1.19. Enter system points (ENTER POINT).
- 2.15.1.1.20. Build or review air tasking orders (ATO) (TASK ORDERS).
- 2.15.1.1.21. Assume control (ASSUME CONT).

2.15.1.1.22. Manually classify emergency tracks (EMER).

2.15.1.1.23. Establish or cancel parameters for trial intercepts (INCPTR ASSIGN).

2.15.1.1.24. Initiate or cancel interceptor assignments (INCPTR ASSIGN). For close control missions, the pairing sequence must be completed not later than 10 nautical miles (NM).

2.15.1.1.25. Release control of aircraft (RLSE CONT).

2.15.1.1.26. Cancel specific aircraft assignments (CANCEL ASSIGN).

2.15.1.1.27. Cancel all assignments for a target or weapon (CANCEL ASSIGN).

2.15.1.1.28. Exclude interceptors from automatic command tracking (CMDTRK EXCL).

2.15.1.1.29. Change command altitude, speed, and heading (CMD ALT, CMD SPD, CMD HDG).

2.15.1.2. Region/Sector Air Operations Center (R/SAOC):

2.15.1.2.1. Verify the status of alerts and operate the control panel.

2.15.1.2.2. Select the appropriate DC STRING.

2.15.1.2.3. Configure the scope with appropriate maps, geography, symbology, and data (CATEGORY SELECT SWITCHES).

2.15.1.2.4. Configure the symbology with the desired features (FEATURE SELECT SWITCHES).

2.15.1.2.5. Adjust the scale and intensity of the display (EXPANSION SWITCH and RHEOSTATS).

2.15.1.2.6. Use the operator position entry device (OPED) as required.

2.15.1.2.7. Designate the heading for initiated tracks (HEADING SWITCH).

2.15.1.2.8. Enter data on the keyboard and use the mode independent switches.

2.15.1.2.9. Identify the sim status and the number of guidance and tracking channels available (OPS CONDITION TD).

2.15.1.2.10. Be able to identify the current weather conditions at a specified airbase (AB WEATHER TD).

2.15.1.2.11. Identify the currently available interceptor training areas (ITA TD).

2.15.1.2.12. Identify available interceptor guidance and status data, including the presence of overrides (INT MSN TD).

2.15.1.2.13. Identify amplifying mission information (TACTICAL MSN TD).

2.15.1.2.14. Determine the number of tracks assigned to own console (WEAPONS ASSGN SUM TD).

2.15.1.2.15. Assign a symbology to own or other console (ASSIGN TRACK).

2.15.1.2.16. Display the maximum available scope expansion (DISPLAY EXPANSION).

2.15.1.2.17. Transfer own symbology to another console (TRANSFER FUNCTION).

2.15.1.2.18. Scramble interceptor symbology (COMMIT).

2.15.1.2.19. Determine the bearing and range between two points (BEARING/RANGE).

2.15.1.2.20. Enable or turn off a specified ITA (ITA ON/OFF).

2.15.1.2.21. Enter a specified approach override or minimum safe altitude (MSA) (APPROACH OVRD).

2.15.1.2.22. Enter a manual heading override (MANUAL HEADING).

2.15.1.2.23. Send an attention arrow to another console (ATTENTION ARROW).

2.15.1.2.24. Input specified attack override parameters (ATTACK OVRD).

2.15.1.2.25. Turn command tracking on or off (COMM TRACK ON/OFF).

2.15.1.2.26. Accept handover on a piece of symbology (ACCEPT HANDOVER).

2.15.1.2.27. Extrapolate a track with heading or speed (EXTRAPOLATE).

2.15.1.2.28. Assign or turn off mode 2 or 3 squawks (ASSIGN IFF).

2.15.1.2.29. Identify the squawks assigned to a piece of data or symbology (IFF LOCATE).

2.15.1.2.30. Recommit aircraft symbology (RECOMMIT) (INTERCEPT, CAP or RTB). For close control missions, the pairing sequence must be completed not later than 10 NM.

2.15.1.2.31. Input the specified rollout range (ROLLOUT RANGE).

2.15.1.2.32. Initiate a track on a piece of data (INITIATE TRACK).

2.15.1.2.33. Reposition symbology with a heading and/or speed (REINITIATE TRACK).

2.15.1.2.34. Change or update information for a track (CHANGE/UPDATE).

2.15.1.2.35. Drop a symbology from the system (DROP).

2.15.1.2.36. Identify the various computer guidance points (for example, TRANSITION, TURN-POINT, INTERCEPT).

2.15.1.2.37. Identify the impact of system alerts (for example, TIMEOUT, STARTOVER, SWITCHOVER).

2.15.1.2.38. Configure the communication panel with a monitor function, as well as ground-to-air transmit/receive (GATR) and air combat maneuvering information (ACMI) radios.

2.15.1.3. AWACS Modeling and Simulation (AMS):

2.15.1.3.1. Identify location and use of the specified parts of the situation display console (SDC) (CATEGORY SELECT).

2.15.1.3.2. Select the appropriate console assignment (ASSIGN).

2.15.1.3.3. Verify the status of alerts and operate the alarm and display control panel.

2.15.1.3.4. Configure the scope with appropriate maps, geography, symbology, and data (CATEGORY SELECT).

2.15.1.3.5. Configure the symbology with the desired features (FEATURE SELECT).

2.15.1.3.6. Adjust the scale of the situation display (EXPANSION SWITCHES).

2.15.1.3.7. Operate alphanumeric entry device as required.

2.15.1.3.8. Operate track ball and hook and enter buttons, as required.

2.15.1.3.9. Operate audio distribution system panel.

2.15.1.3.10. Set up and change displays using augmented assignment TD (ASSIGN).

2.15.1.3.11. Initiate a system track on radar data (INIT).

2.15.1.3.12. Convert a system track to a radar-controlled track (COMMIT). For close control missions, the pairing sequence must be completed not later than 10 NM.

2.15.1.3.13. Designate a heading for initiated tracks (RE-INIT).

2.15.1.3.14. Identify available interceptor guidance and status data, including the presence of overrides (RCT MSN TD).

2.15.1.3.15. Identify amplifying mission information (TRACK TD).

2.15.1.3.16. Assign a symbology to own or other console (ASSIGN/DEFER).

2.15.1.3.17. Determine the bearing and range between two points (BEARING/RANGE).

2.15.1.3.18. Enter a specific attack option (COMMIT).

2.15.1.3.19. Send an attention arrow to another console (ARROW).

2.15.1.3.20. Extrapolate a track with heading or speed (REINIT).

2.15.1.3.21. Reposition symbology with a heading and/or a speed (REINIT).

2.15.1.3.22. Identify the squawks assigned to a piece of data or symbology (REQUEST SIF SD).

2.15.1.3.23. Recommit symbology to combat air patrol (CAP) or return to base (RTB) (CAP/RTB).

2.15.1.3.24. Drop a symbology from the system (DROP).

2.15.1.3.25. Identify the various computer guidance points: intercept and turn-point (COMMIT; INT L/R LINE SD).

2.15.1.3.26. Define an area of interest (AREA DEF/DEL).

2.15.1.3.27. Build a restricted area (RSTRCTD AREA).

2.15.1.3.28. Build an IFF corridor (AREA DEF/DEL, CORIDOR IFF SD).

2.15.1.3.29. Build a weapons airbase (INIT SPCL PT, ADD/DEL AIRBASE).

2.15.1.3.30. Bring up the International Civil Aviation Organization (ICAO) for an airbase (RN/DES/NTN SD).

2.15.1.3.31. Create an order of battle element (ORD BAT ADD/DEL).

2.15.1.3.32. Bring up only enemy order of battle (ORDER BAT SD).

2.15.1.3.33. Create a pooled and nonpooled circle (CIRCLE).

2.15.1.3.34. Create a pooled and nonpooled line (LINE).

2.15.1.3.35. Input a Zody point (LINE).

2.15.1.3.36. Input a pooled and nonpooled Bull's eye (LINE).

2.15.1.3.37. Display the coordinates of a specified location or point (COORDS).

2.15.1.3.38. Convert coordinates from one system to another (COORDS).

2.15.1.3.39. Create and update a free text message (MESSAGE).

2.15.1.3.40. Pack an RCT MSN TD (RCT MSN TD).

2.15.1.3.41. Enable drop protection on a track (DROP).

2.15.1.3.42. Specify sensor-tracking data to be used on a track (SENSOR TRKING).

2.15.1.3.43. Send an interconsole message (MESSAGE).

2.15.1.3.44. Send an arrow with a message to another console (ARROW).

2.15.2. Q-. Had discrepancies in three to four switch actions (paragraphs 2.15.1.1 through 2.15.1.3.44). Slow to correct system errors or interpret data/displays.

2.15.3. U. Had major errors and deficiencies in more than four switch actions (paragraphs 2.15.1.1 through 2.15.1.3.44). Unable to perform required switch actions during the mission. Lack of system knowledge jeopardized mission outcome.

2.16. Area 12, Radio/Telephone (R/T) Procedures:

2.16.1. Q. Communications with aircrew were according to applicable volumes of AFTTP 3-1 (*Tactical Employment*), AFI 11-214, and local operating directives.

2.16.2. Q-. Multiple incorrect terminology errors or omissions occurred, but did not hinder mission accomplishment. Extraneous R/T presented only minor distractions to the aircrew.

2.16.3. U. Communications were inadequate or excessive. Inaccurate or confusing terminology degraded mission information and/or execution. Actions jeopardized mission accomplishment.

2.17. Area 13, Air-to-Air Mission Positioning (Critical):

2.17.1. Q. Positioned aircraft to accomplish mission objectives according to AFI 11-214, applicable volumes of AFTTP 3-1, and briefed rules of engagement (ROE). If close control was provided, established appropriate geometry. In all cases, provided updates as changes occurred, unless briefed otherwise.

2.17.1.1. Cutoff (if Applicable):

2.17.1.1.1. Target cleared on a briefed threat axis, from which the pilot could deviate \pm -20 degrees at the start of the engagement. If the target deviated, it maintained the new heading until the completion of the intercept.

2.17.1.1.2. Established an accurate cutoff heading no later than 10 NM (5 NM for MU-2 profiles) from the target that provided collision guidance to a point 0 to 3 NM (0 to 2 NM for MU-2 profiles) behind the target.

2.17.1.2. Stern (if Applicable):

2.17.1.2.1. Target cleared on a briefed heading, from which the pilot could deviate +/-20 degrees at the start of the engagement. If the target deviated, it maintained the new heading until the completion of the intercept.

2.17.1.2.2. Directed fighter to a valid turnpoint from which a final turn, not less than 90 and no more than 180 degrees, was executed. At rollout, final positioning was 0 to 3 NM astern of the target and within a 40-degree cone (+/-20 degrees of the target track line).

2.17.2. U. Failed to meet air-to-air positioning criteria as outlined in paragraphs 2.17.1 through 2.17.1.2.2.

2.18. Area 14, AR Operations Positioning (Critical):

2.18.1. Q. Prioritized refueling activity. Placed receivers and/or tankers in a position to accomplish mission objectives according to AFI 11-214 and local operating directives. When providing close control, established geometry and updated ranges as they occurred. On both point parallel and receiver, turned on rendezvous-positioned receivers within a 60-degree cone (+/-30 of the target) 1 to 3 NM astern of the tanker.

2.18.2. U. Failed to meet AR operation positioning requirements.

2.19. Area 15, Situation/Threat Information:

2.19.1. Q. Provided initial situation and threat briefs to aircraft upon check-in. Correctly identified, labeled, and anchored groups and formations according to AFI 11-214, applicable volumes of AFTTP 3-1, and local operating directives. Updated briefing as requested or as the situation changed. Threat information, to include targets, was accurate to within 10 degrees and 2 NM of sensor returns. If required or requested, information was accurate to the closest cardinal direction or quadrant. Maintained surveillance of adversaries, airspace (according to LOAs or local operating directives), and other mission-related factors.

2.19.2. Q-. Was slow to respond to changes in adversary tactics. Advisory calls concerning airspace or threat information were slow or sporadic. Threat information (to include targets) was approximately correct, but not within 10 degrees and 2 NM of sensor returns.

2.19.3. U. Did not demonstrate the appropriate response to changes in adversary tactics or threat information. Did not advise aircrew of airspace calls or critical mission information according to LOAs or local operating directives. Actions jeopardized mission accomplishment.

2.20. Area 16, Safety of Flight Procedures (Critical):

2.20.1. Q. Ensured all participants maintained airspace integrity, including time limits. Ensured compliance with all applicable LOAs, FAA directives, and mandatory safety calls (that is, fights on, terminate, and knock-it-off) during all phases of the mission, including the notification of the appropriate agency when an uncontrolled ingress or egress was imminent or taking place. Provided accurate traffic and safety advisories, ensured proper altitude separation, and complied with airspace and altitude restrictions. Transmitted 10 NM calls and weapons safety checks, when applicable, and used directive

control to keep aircraft clear of hazards according to AFI 11-214 and other directives.

2.20.2. U. Was not aware of or did not comply with safety factors during the mission. Actions and responses were unsafe and/or dangerous.

2.21. Area 17, Aircraft Emergency, Search and Rescue (SAR) Procedures (Critical):

2.21.1. Q. Demonstrated sound knowledge of emergency and SAR procedures. Implemented necessary actions with little hesitation. Coordinated emergency aircraft recovery actions and ensured notification of all required agencies. Monitored frequencies and assisted aircrew. Ensured all critical checklist items were complete. When directed, initiated and/or executed SAR actions according to directives. Directed WT to inform appropriate agencies.

2.21.2. U. Errors and/or omissions during coordination created confusion and/or delays for the recovery aircraft. Failed to properly initiate or execute SAR actions. Failed to ensure WT disseminated aircraft emergency information. Actions jeopardized mission accomplishment.

2.22. Area 18, Equipment Safety Procedures (Critical):

2.22.1. Q. Properly executed required actions necessary to continue the mission or safely transfer aircraft to the appropriate agency while experiencing an equipment malfunction. Safely demonstrated actions during either a simulated or actual operations room or equipment emergency (halon dump, electrical fire, smoke emitting from a console, etc.). Notified affected personnel in a timely matter.

2.22.2. U. Failed to take required action when experiencing an equipment malfunction. Failed to ensure the safe transfer of all aircraft to the appropriate agency.

2.23. Area 19, Documentation:

2.23.1. Q. Verified the WT properly prepared and submitted required documentation at the conclusion of the mission according to local directives.

2.23.2. Q-. Required documentation contained errors that detracted significantly from the required documentation, but did not prohibit the communication of the content.

2.23.3. U. Pertinent information was either missing or not legible. Contents could not be communicated through the documentation.

Chapter 3

QUALIFICATION EVALUATION OF THE WEAPONS TECHNICIAN (WT)

Section 3A—Evaluation Procedures and Instructions

NOTE: This section contains criteria applicable to WT positional evaluations.

3.1. Air Combat Training Mission. The minimum event for the BMC qualification is the air combat training mission. The evaluation may also include the AR operation.

3.2. Specific Profiles. To the maximum extent possible, the WT will be evaluated on live missions where the ABM, AWO, or WD provides control as briefed by the aircrew. The SEE is responsible for determining whether briefed or conducted control activities meet qualification requirements. With the exception of the air-to-air portion of the evaluation, the missions conducted have to conform to specific profiles as defined by OG OGV.

3.2.1. Live Air-to-Air Mission. Assist in the conduct of a live air-to-air mission where the ABM, AWO, or WD provides control as briefed by the aircrew. The mission should consist of at least two engagements. A single continuous engagement or fight must last at least 10 minutes in order to meet evaluation requirements.

3.2.1.1. The WT must monitor at least two separate fighters or elements against two adversaries who are cleared for evasive maneuvering. The SEE will ensure the WT participates in all phases of the mission to the maximum extent possible. Another control team on a separate frequency may control the adversaries.

3.2.1.2. Although not required, it is desired for this mission to result in a maneuvering dogfight. If a mission degrades to a one-versus-two engagement, the examinee will be part of the weapons team providing control to the single ship. The SEE will determine the mission's suitability for an evaluation based on the workload of the examinee. A one-versus-two engagement is the minimum sufficient to meet evaluation requirements.

3.2.2. AR Operations:

3.2.2.1. The examinee will assist the ABM, AWO, or WD in the conduct of AR operations where the WT monitors at least two separate receivers or elements simultaneously (that is, receivers or elements are on the primary control frequency at the same time—either pre- or post-fueling) on one or more tankers. The missions need not include specific AR rendezvous. This evaluation consists of a complete AR operation, from anchor activation to the return of the airspace block.

3.2.2.2. Evaluations should be scheduled for an AR operation with one tanker. The examinee may elect to complete an evaluation on an AR operation with a cell of tankers, but the increased difficulty level of the operation does not exclude the requirement to achieve any qualification criteria.

3.2.3. Critical Areas. Certain areas require a degree of knowledge and proficiency that is absolutely mandatory for successful mission accomplishment. Consequently, a U score in any of the following critical areas will result in an overall grade of Q3: Area 10, Handover Procedures; Area 16, Safety of

Flight; Area 17, Aircraft Emergency, Search and Rescue (SAR) Procedures; and Area 18, Equipment Safety Procedures.

3.3. Evaluation Objective. The examinee must demonstrate the ability to operate safely and effectively according to technical orders, FAA regulations, and other operational directives.

Section 3B—Qualification Criteria

3.4. Areas and Ratings. Paragraphs 3.5 through 3.23 provide the different qualification areas, possible ratings for each, and definitions of the ratings (Q, Q-, and U, as applicable) for each area.

3.5. Area 1, Mission Planning:

3.5.1. Q. Received the mission briefing from the ABM, AWO, or WD. Noted all factors applicable to airspace coordination and mission execution; for example, number and type aircraft, call signs, planned scenarios or tactics, blocks, airspace and limitations, and radio frequencies. Was aware of alternate mission, weather, notice to airmen (NOTAM), and emergency and NORDO procedures. Developed a sound plan of action to accomplish all airspace and mission coordination. Properly annotated forms and complied with guidance in the OIF prior to accepting first handover.

3.5.2. Q-. Forms incomplete and/or failed to comply with guidance in the OIF. Resulting omissions noted in mission planning did not jeopardize the outcome of the mission, but caused delays and detracted from mission accomplishment. Due to lack of compliance, mission information had to be reemphasized by the aircrew or the ABM, AWO, or WD real time.

3.5.3. U. Forms incomplete and/or failed to comply with guidance in the OIF. Resulting omissions compromised mission execution or safety of flight. Major errors or omissions would have resulted in unsafe or ineffective mission accomplishment. Failed to understand or clarify mission profile. Had faulty knowledge of operating data or procedures.

3.6. Area 2, Mission Briefing/Debriefing:

3.6.1. Q. Received ABM, AWO, or WD mission briefing according to locally developed guidance. If required, debriefed mission essential information with the ABM, AWO, or WD.

3.6.2. Q-. Failed to clarify errors or omissions during the mission briefing or debriefing.

3.6.3. U. Major errors or omissions jeopardized mission outcome. Unprepared to receive ABM, AWO, or WD mission briefing.

3.7. Area 3, Equipment Setup and Status Reporting:

3.7.1. Q. Followed technical manuals, operating guides, and other equipment-related instructions to build the best radar presentation and maximize console operations. Selected appropriate video maps, overlays, or intercept training areas. Recognized, corrected, and reported alerts, alarms, or system errors.

3.7.2. Q-. Committed obvious errors or deviations, but did not cause damage to equipment or jeopardize

mission outcome.

3.7.3. U. Committed major errors or omissions with the potential to damage equipment or hinder mission accomplishment. Radar presentation or console setup jeopardized mission outcome.

3.8. Area 4, Airspace Coordination:

3.8.1. Q. Followed LOAs and local operating directives to confirm airspace, exchange pertinent mission information (call sign, frequency, phone number, etc.), and receive airspace restrictions. Conducted postmission coordination according to LOAs and local operating directives.

3.8.2. Q-. Deviations from LOAs and local operating directives created delays and/or confusion.

3.8.3. U. Major errors and/or omissions created an unsafe working environment. Aircraft entered or remained in an unauthorized airspace without appropriate coordination.

3.9. Area 5, Crew Coordination:

3.9.1. Q. Briefed, exchanged, and verified mission information with adversary WT according to local operating directives. Adversary WT was aware of airspace status and intentions of other aircraft during both pre- and post-mission.

3.9.2. Q-. Errors in coordination created confusion with the other weapons team. Coordination hindered entry and exit procedures or forced the adversary WT to delay mission execution, but did not jeopardize overall mission.

3.9.3. U. Failed to notify adversary WT of any applicable mission information, which resulted in significant delays with major negative impact on mission accomplishment.

3.10. Area 6, Communications Selection and Use:

3.10.1. Q. Demonstrated satisfactory ability to establish primary and alternate ground-to-ground and ground-to-air communications. Set and programmed frequencies, made required communication checks, and reported outages according to technical manuals and local directives. Conducted necessary coordination with external agencies to ensure communication equipment was configured correctly for unique mission requirements.

3.10.2. Q-. Made errors in communications selection that impacted the ability to monitor the aircrew or other agencies. Had difficulty establishing communications or was slow to react to errors. Did not establish or coordinate for alternate communications in a timely manner.

3.10.3. U. Unable to establish either ground-to-ground or ground-to-air communications. Errors and/or omissions created severe delays or prevented mission accomplishment. Failed to conduct the necessary coordination with external agencies to ensure communication equipment was configured correctly for unique mission requirements.

3.11. Area 7, Sensors:

3.11.1. Q. Used all available sensors to create the best possible radar picture. Corrected or reported degraded presentations. Assisted the ABM, AWO, or WD in recognizing the presence of electronic or mechanical jamming or interference.

3.11.2. Q-. Errors and/or omissions resulted in degraded radar/IFF presentation or hindered mission effectiveness, but did not jeopardize the overall mission. Slow to assist the ABM, AWO, or WD in recognizing the presence of electronic or mechanical jamming or interference.

3.11.3. U. Unable to present a workable radar presentation. Lack of system knowledge hindered mission outcome. Failed to recognize (or assist the ABM, AWO, or WD in recognizing) the presence of electronic or mechanical jamming or interference.

3.12. Area 8, Weather Information:

3.12.1. Q. Contacted the appropriate external agency for essential weather information. Provided updates to the ABM, AWO, or WD upon notification of weather changes affecting mission aircraft according to AFI 11-214 and local directives. Relayed weather updates and recovery airbase status in a timely manner to appropriate crew positions.

3.12.2. Q-. Errors and/or omissions of essential weather information caused delays in mission execution, but did not jeopardize the overall mission.

3.12.3. U. Unable to obtain or extract essential weather information or failed to relay important weather information.

3.13. Area 9, Identification:

3.13.1. Q. Assisted the ABM, AWO, or WD in locating all mission aircraft within 1 minute prior to declaring radar contact. During the mission, assisted the ABM, AWO, or WD in identifying both participating and nonparticipating aircraft, using IFF/SIF, pointouts, or pilot maneuvering.

3.13.2. Q-. Deviations from standards (greater than 1 minute) created significant delays in identifying either participating or nonparticipating aircraft. Slowness of identification procedures hindered portions of the mission, but did not jeopardize overall mission.

3.13.3. U. Unable to assist the ABM, AWO, or WD in locating all mission aircraft within 2 minutes prior to declaring radar contact. Pointouts, pilot maneuvering, or IFF/SIF interpretation was incorrect. Actions jeopardized mission.

3.14. Area 10, Handover Procedures (Critical):

3.14.1. Q. Completed all handovers according to LOAs, ATC guidance, and local operating directives. Passed ATC clearances and advisories verbatim. Verified that handovers occurred at the appropriate altitude and exit point.

3.14.2. U. Did not comply with handover procedures according to LOAs, local operating directives, or ATC guidance. Deviations created an unsafe working environment.

3.15. Area 11, Console Operations and Displays:

3.15.1. Q. Demonstrated desired level of knowledge and performed required switch actions according to technical manuals and positional training guides. Understood and corrected system errors. Was able to interpret operational displays to maximize mission effectiveness. Demonstrated proficiency in all of the following (system-specific) switch actions:

3.15.1.1. MCS:

- 3.15.1.1.1. Operate SAS-1.
- 3.15.1.1.2. Operate OCU control panel.
- 3.15.1.1.3. Perform FOG alignment (OCU TEST).
- 3.15.1.1.4. Perform operator test and switch on line (ON LINE).
- 3.15.1.1.5. Select appropriate symbology displays (SYM DSPL).
- 3.15.1.1.6. Control air track intensity (thumbwheels).
- 3.15.1.1.7. Display velocity vectors (VEL VECTOR).
- 3.15.1.1.8. Select modes and codes for highlighting (SELECT M/CODE).
- 3.15.1.1.9. Use IFF HOOK.
- 3.15.1.1.10. Determine coordinates (READ COORD).
- 3.15.1.1.11. Use bearing and range control.
- 3.15.1.1.12. Initiate rate-aided and auto tracks.
- 3.15.1.1.13. Reposition, restart, and cancel tracks (REPOSN, CANCEL TRACK).
- 3.15.1.1.14. Set up, display, displace, and delete data blocks (SET UP D-BLK, DSPLCE D-BLK).
- 3.15.1.1.15. Display, respond to, and clear alerts (CLEAR ALERT).
- 3.15.1.1.16. Display and modify current initialized system voice communications circuits (DSPL VCAU ASGMTS).
- 3.15.1.1.17. Load, record, replay, and monitor the R/RU.
- 3.15.1.1.18. Select voice communications circuitry (VOICE COMM).
- 3.15.1.1.19. Enter system points (ENTER POINT).

3.15.1.1.20. Build and review ATOs (TASK ORDERS).

3.15.1.1.21. Manually classify emergency tracks (EMER).

3.15.1.1.22. Use the voice page hotlines and telephone to communicate with external agencies.

3.15.1.2. R/SAOC:

3.15.1.2.1. Verify the status of alerts and operate the control panel (CONTROL PANEL).

3.15.1.2.2. Select the appropriate DC STRING.

3.15.1.2.3. Configure the scope with appropriate maps, geography, symbology, and data (CATEGORY SELECT SWITCHES).

3.15.1.2.4. Configure the symbology with the desired features (FEATURE SELECT SWITCHES).

3.15.1.2.5. Adjust the scale and intensity of the display (EXPANSION SWITCH and RHEOSTATS).

3.15.1.2.6. Use the OPED as required.

3.15.1.2.7. Designate the heading for initiated tracks (HEADING SWITCH).

3.15.1.2.8. Enter data on the keyboard and use the mode independent switches.

3.15.1.2.9. Identify the sim status and the number of guidance and tracking channels available (OPS CONDITION TD).

3.15.1.2.10. Be able to identify the current weather conditions at a specified airbase (AB WEATHER TD).

3.15.1.2.11. Identify the currently available ITAs (ITA TD).

3.15.1.2.12. Identify available interceptor status data, including the presence of overrides (INT MSN TD).

3.15.1.2.13. Identify amplifying mission information (TACTICAL MSN TD).

3.15.1.2.14. Determine the number of tracks assigned to own console (WEAPONS ASSGN SUM TD).

3.15.1.2.15. Assign a symbology to own or other console (ASSIGN TRACK).

3.15.1.2.16. Display the maximum available scope expansion (DISPLAY EXPANSION).

3.15.1.2.17. Transfer own symbology to another console (TRANSFER FUNCTION).

3.15.1.2.18. Scramble interceptor symbology (COMMIT).

3.15.1.2.19. Determine the bearing and range between two points (BEARING/RANGE).

3.15.1.2.20. Enable or turn off a specified ITA (ITA ON/OFF).

3.15.1.2.21. Enter a specified approach override or MSA (APPROACH OVRD).

3.15.1.2.22. Enter a manual heading override (MANUAL HEADING).

3.15.1.2.23. Send an attention arrow to another console (ATTENTION ARROW).

3.15.1.2.24. Input specified attack override parameters (ATTACK OVRD).

3.15.1.2.25. Turn command tracking on or off (COMM TRACK ON/OFF).

3.15.1.2.26. Accept handover on a piece of symbology (ACCEPT HANDOVER).

3.15.1.2.27. Extrapolate a track with heading or speed (EXTRAPOLATE).

3.15.1.2.28. Assign or turn off mode 2 or 3 squawks (ASSIGN IFF).

3.15.1.2.29. Identify the squawks assigned to a piece of data or symbology (IFF LOCATE).

3.15.1.2.30. Recommit aircraft symbology (RECOMMIT) (INTERCEPT, CAP, or RTB).

3.15.1.2.31. Input the specified rollout range (ROLLOUT RANGE).

3.15.1.2.32. Initiate a track on a piece of data (INITIATE TRACK).

3.15.1.2.33. Reposition symbology with a heading and/or speed (REINITIATE TRACK).

3.15.1.2.34. Change or update information for a track (CHANGE/UPDATE).

3.15.1.2.35. Drop a symbology from the system (DROP).

3.15.1.2.36. Display computer guidance points (for example, TRANSITION, TURN-POINT, INTERCEPT).

3.15.1.2.37. Identify the impact of system alerts (for example, TIMEOUT, STARTOVER, SWITCHOVER).

3.15.1.2.38. Configure the communication panel with a monitor function, as well as GATR and ACMI radios.

3.15.1.2.39. Use the voice page hotlines and telephone to communicate with external agencies.

3.15.1.3. AMS:

3.15.1.3.1. Assign console to correct ABM, AWO, or WD mode (ASSIGN CONSOLE).

3.15.1.3.2. Initiate track symbology (INIT).

3.15.1.3.3. Reinitiate track symbology (RE-INT).

3.15.1.3.4. Change symbology heading (RE-INT).

3.15.1.3.5. Extrapolate track symbology (RE-INT).

3.15.1.3.6. Change track ID (RE-INT).

3.15.1.3.7. Obtain and read track TD (TRACK TD).

3.15.1.3.8. Obtain and read a SIF TD (TRACK TD).

3.15.1.3.9. Clear TDs (TD INDEX).

3.15.1.3.10. Know how to obtain, read, and clear a track to track bearing and range (BEARING RANGE).

3.15.1.3.11. Know how to obtain, read, and clear a point-to-point bearing and range (BEARING RANGE).

3.15.1.3.12. Display and read bearing and range TD (BEARING RANGE).

3.15.1.3.13. Drop track symbology (DROP).

3.15.1.3.14. Request IFF/SIF on particular data (REQUEST SIF SD).

3.15.1.3.15. Initiate and drop a special point (INIT SPCL PT).

3.15.1.3.16. Send an arrow with attached message to another console (ARROW).

3.15.1.3.17. Display coordinates of a specific location (COORDS).

3.15.1.3.18. Read radar-controlled track (RCT) mission TD (RCT MSN TD).

3.15.1.3.19. Recommit a target to CAP mission (CAP).

3.15.1.3.20. Assign a track to your console (ASSIGN/DEFER).

3.15.1.3.21. Use ALL, OFF, and HOOK modifiers.

3.15.1.3.22. Locate and state functions of reference number (RN), designator (DES), and NATO track number (NTN) SD.

- 3.15.1.3.23. Locate and state functions of RSTRCTD AREA.
- 3.15.1.3.24. Locate and state functions of SENSOR TRKING.
- 3.15.1.3.25. Locate and state functions of AIRBASE WX TD.
- 3.15.1.3.26. Locate and state functions of ADD/DEL AIRBASE.
- 3.15.1.3.27. Locate and state functions of CIRCLE.
- 3.15.1.3.28. Locate and state functions of LINE.
- 3.15.1.3.29. Locate and state functions of MESSAGE.
- 3.15.1.3.30. Locate and state functions of CORRIDOR IFF SD.
- 3.15.1.3.31. Locate and state functions of AREA DEF/DEL.
- 3.15.1.3.32. Locate and state functions of LOCATE SIF.
- 3.15.1.3.33. Locate and state functions of TD UPDATE.
- 3.15.1.3.34. Locate and state functions of COMMIT.
- 3.15.1.3.35. Read date and time display.
- 3.15.1.3.36. Identify data presentation types (IFF and radar uncorrelated and correlated).
- 3.15.1.3.37. Read track block for A, C, and E feature select switches.
- 3.15.1.3.38. Demonstrate vector on and off.
- 3.15.1.3.39. Identify STOPR symbol.
- 3.15.1.3.40. Identify airbase symbol.
- 3.15.1.3.41. Identify ID symbols (interceptor, pending/unknown, friend, etc.).
- 3.15.1.3.42. Demonstrate category selects (ON, OFF, and ISOLATE).
- 3.15.1.3.43. Recognize and acknowledge all alerts.
- 3.15.1.3.44. Obtain bearing and range; operate RESET, using auxiliary cursor panel.
- 3.15.1.3.45. Offset SID using auxiliary cursor panel.
- 3.15.1.3.46. Adjust expansion using auxiliary cursor panel.

3.15.1.3.47. Correctly log-in to change audio configuration.

3.15.1.3.48. Demonstrate changing audio configuration to meet mission requirements.

3.15.1.3.49. Demonstrate turning individual radios on and off.

3.15.1.3.50. Select appropriate audio configuration for airspace.

3.15.1.3.51. Demonstrate turning NETS on and off.

3.15.1.3.52. Use correct hotline or phone number.

3.15.2. Q-. Had deficiencies or lack of knowledge with three to four switch actions (paragraphs 3.15.1.1 through 3.15.1.3.52). Slow to correct system errors or interpret data or displays.

3.15.3. U. Had major errors and deficiencies with four or more switch actions (paragraphs 3.15.1.1 through 3.15.1.3.52). Unable to perform required switch actions during the mission. Lack of system knowledge jeopardized mission outcome.

3.16. Area 12, Radio/Telephone (R/T) Procedures:

3.16.1. Q. Communications with FAA and other agencies were according to applicable volumes of AFTTP 3-1 and local operating directives.

3.16.2. Q-. Multiple incorrect terminology, errors, or omissions occurred, but did not hinder mission accomplishment. Extraneous R/T presented only minor distractions.

3.16.3. U. Communications with FAA and other agencies were inadequate or excessive. Inaccurate or confusing terminology degraded mission information and/or execution. Lack of system knowledge jeopardized mission outcome.

3.17. Area 13, Checklists:

3.17.1. Q. Followed procedures established in OG OGV-approved local operating directive (positional checklist).

3.17.2. Q-. Deviations or errors to checklist usage caused minor delays, but did not jeopardize mission execution.

3.17.3. U. Did not follow established operating procedures written in the positional checklist. Poor checklist discipline created numerous errors or delays and jeopardized mission execution.

3.18. Area 14, Mission Assistance:

3.18.1. Q. Demonstrated required knowledge of mission flow from ingress to egress. Assisted ABM, AWO, or WD with calls, and executed required actions promptly and without error. Anticipated pilot and ABM, AWO, or WD requests that enhanced mission execution.

3.18.2. Q-. Errors and/or omissions in knowledge of mission flow caused delays and/or confusion. Was slow to respond with required and directed actions. Did not aggressively anticipate aircraft actions or requirements.

3.18.3. U. Failed to assist the aircrew or ABM, AWO, or WD during the mission. Did not respond to aircrew or ABM, AWO, or WD directives and/or requests.

3.19. Area 15, Situation/Threat Information:

3.19.1. Q. Assisted the ABM, AWO, or WD with accurate threat information. Recognized and/or reacted to changes in target maneuvering and monitored the area of responsibility for new threats. Maintained surveillance of adversaries, airspace (according to LOAs or local operating directives), and other mission-related factors.

3.19.2. Q-. Slow to recognize adversary's tactics. Airspace advisory calls and/or threat information were slow or sporadic.

3.19.3. U. Did not demonstrate the appropriate response to changes in adversary tactics or threat information. Did not advise the ABM, AWO, or WD of airspace calls or critical mission information according to LOAs or local operating directives. Actions jeopardized mission accomplishment.

3.20. Area 16, Safety of Flight Procedures (Critical):

3.20.1. Q. Prompted the ABM, AWO, or WD to ensure all participants maintained airspace integrity, including time limits. Assisted with the compliance of all applicable LOAs, FAA directives, and mandatory safety calls (such as fights on, terminate, or knock-it-off) during all phases of the mission. Provided FAA agencies with accurate traffic and safety advisories, ensured proper altitude separation, and complied with airspace and altitude restrictions. Assisted the ABM, AWO, or WD with 10 NM calls and weapons safety checks, when applicable. Provided timely inputs to keep aircraft clear of hazards according to AFI 11-214 and other directives. Using the proper format, notified the appropriate agency when an uncontrolled ingress or egress was imminent or taking place.

3.20.2. U. Was not aware of or did not comply with safety factors during the mission. Actions and responses were unsafe and/or dangerous.

3.21. Area 17, Aircraft Emergency, Search and Rescue (SAR) Procedures (Critical):

3.21.1. Q. Recognized and reacted to aircraft experiencing an emergency. Assisted the controller in gathering information, monitoring the event, and advising ATC of intentions or action being taken. Informed appropriate agencies. Initiated and/or executed SAR actions (when directed) according to local directives.

3.21.2. U. Errors and/or omissions during coordination created confusion and/or delays for the recovery aircraft. Failed to properly initiate or execute SAR actions. Did not disseminate aircraft emergency information. Actions jeopardized mission accomplishment.

3.22. Area 18, Equipment Safety Procedures (Critical):

3.22.1. Q. Properly executed required actions necessary to continue the mission or safely transfer aircraft to the appropriate agency while experiencing an equipment malfunction. Safely demonstrated actions during an operations room or equipment emergency (such as halon dump, electrical fire, or smoke emitting from a console). Notified all affected personnel in a timely matter.

3.22.2. U. Failed to take required action when experiencing an equipment malfunction. Failed to ensure the safe transfer of all aircraft to the appropriate agency.

3.23. Area 19, Documentation:

3.23.1. Q. Properly prepared and submitted required documentation according to local directives. Writing was neat and legible with no errors noted.

3.23.2. Q-. Required documentation contained errors that detracted significantly from the required documentation, but did not prohibit the communication of the content.

3.23.3. U. Pertinent information was either missing or not legible. Contents could not be communicated through the documentation.

Chapter 4

CERTIFICATION EVALUATION OF THE WEAPONS SIMULATION TECHNICIAN (WST)

Section 4A—Evaluation Procedures and Instructions

NOTE: This section contains criteria applicable to WST evaluations.

4.1. Minimum Mission Level. The minimum level of mission that must be accomplished for the WST is one that is representative of the individual's duties. A second simulated mission may be utilized to observe areas not adequately evaluated during the first mission.

4.2. Performance Session. During the mission, the examinee will conduct a performance session. The event will be task oriented, allowing the examinee to make necessary inputs. The evaluator is responsible for determining if the examinee has met performance requirements. The student's performance during the mission does not determine whether this area is rated satisfactory.

4.3. Evaluation Objective. The examinee must demonstrate the ability to operate safely and effectively according to technical orders, FAA regulations, and other operational directives.

Section 4B—Certification Criteria

4.4. Areas and Ratings. Paragraphs 4.5 through 4.23 provide the different qualification areas, possible ratings for each, and definitions of the ratings (Q, Q-, and U, as applicable) for each area.

4.5. Area 1, Mission Planning:

4.5.1. Q. Noted all factors applicable to the mission execution, airspace coordination; for example, number and type of aircraft, call signs, planned scenarios or tactics, airspace and limitations, and radio frequencies.

4.5.2. Q-. Resulting omissions in mission planning did not jeopardize mission outcome, but caused delays and detracted from mission planning. Due to lack of compliance, mission information had to be reemphasized real time.

4.5.3. U. Resulting omissions compromised mission execution. Major errors would have resulted in ineffective mission accomplishment. Failed to understand or clarify mission profile. Had faulty knowledge of standard operating procedures.

4.6. Area 2, Mission Briefing/Debriefing:

4.6.1. Q. Attended the instructor mission briefing according to locally developed guidance. If required, debriefed mission essential information with the instructor controller and passed out pseudo-pilot feedback forms.

4.6.2. Q-. Failed to attend the mission briefing or debriefing.

4.6.3. U. Unprepared to receive the instructor's or controller's inputs. Did not satisfactorily attend the mission briefing or debriefing.

4.7. Area 3, Equipment Setup and Status Reporting:

4.7.1. Q. Followed equipment guides and operating instructions to build the best radar presentation possible and maximize console operations. Selected the appropriate settings, maps, and other applicable database information. Recognized, corrected, and reported alerts or system errors.

4.7.2. Q-. Committed obvious errors or deviations, but not cause damage to equipment or jeopardize mission outcome.

4.7.3. U. Committed major errors or omissions with the potential to damage equipment or hinder mission accomplishment. Console presentation or console setup jeopardized mission outcome.

4.8. Area 5, Crew Coordination:

4.8.1. Q. Briefed, exchanged, and verified mission with other WSTs and instructors, if applicable, on airspace, frequencies, and mission execution.

4.8.2. Q-. Errors in coordination created confusion with other weapons team members. Coordination hindered mission execution, but did not jeopardize overall mission.

4.8.3. U. Failed to notify other WSTs or instructors of any applicable mission information, which resulted in significant delays with major negative impact on mission accomplishment.

4.9. Area 6, Communications Selection and Use:

4.9.1. Q. Demonstrated satisfactory ability to access applicable radio frequencies, made appropriate communications checks, and report outages to lead WST or instructor.

4.9.2. Q-. Made errors in communications selection that impacted the ability to monitor the controller and other applicable agencies. Had difficulty establishing communications or was slow to react to errors. Did not establish communications with the controller in a timely manner.

4.9.3. U. Unable to establish communications with the controller. Errors and/or omissions created severe delays or prevented mission accomplishment. Failed to conduct the proper pre-mission radio checks and ensure proper radio configuration.

4.10. Area 9, Identification and Check-In:

4.10.1. Q. Initiated applicable mission aircraft data and checked in aircraft according to established procedures in a timely manner using IFF/SIF, pointouts, or pilot maneuvering. During the mission, initiated participating and nonparticipating aircraft, depending on the simulator scenario and instructor inputs.

4.10.2. Q-. Deviations from standards or instructor's inputs created significant delays in initiating and

identifying participating and nonparticipating aircraft.

4.10.3. U. Unable to initiate or check in applicable aircraft. Pointouts, pilot maneuvering, or IFF/SIF interpretation was incorrect. Actions taken (or not taken) jeopardized mission.

4.11. Area 11, Console Operations and Displays:

4.11.1. Q. Demonstrated desired level of knowledge and performed required switch actions according to positional training guides. Understood and corrected errors. Was able to interpret operational displays to maximize mission effectiveness.

4.11.2. Q-. Had deficiencies or lack of knowledge with three to four switch actions. Slow to correct system errors or interpret data or displays.

4.11.3. U. Had major errors and deficiencies with console operations or displays. Lack of system knowledge jeopardized mission outcome.

4.12. Area 12, Radio/Telephone (R/T) Procedures:

4.12.1. Q. Communications with controller and other agencies were according to applicable volumes of AFTTP 3-1 and local operating directives.

4.12.2. Q-. Multiple incorrect terminology, errors, or omissions occurred, but did not hinder mission accomplishment. Improper R/T procedures presented only minor distractions.

4.12.3. U. Communications with controller and other agencies were inadequate. Inaccurate or confusing terminology degraded mission information and/or execution. Lack of system knowledge jeopardized mission outcome.

4.13. Area 13. Tactics and Maneuvers:

4.13.1. Q. Knowledge and implementation of prebriefed tactics and maneuvers were correct. Commands from the controller (heading, altitude, and speed) were entered in a timely manner and all radio transmissions were acknowledged. For long range cutoffs, fade, evade, and re-attack events were accomplished skillfully and without hesitation. For long range sterns, final turn and proper turn speeds were entered correctly. For confined airspace and stern, was knowledgeable and skillful in the implementation of target legs. For AR, demonstrated ability to drive three (3) simulator tracks simultaneously. Demonstrated ability to take tanker out of the orbit and established on an anchor. Was knowledgeable of 5 minute note and recovery procedures.

4.13.2. Q-. Deviations from the prebriefed scenario created significant delays in mission accomplishment or student controller training. Multiple errors or omissions were made in responding to controller commands, but did not jeopardize overall mission.

4.13.3. U. Unable to perform scenario or prebriefed tactics or maneuvers and respond to controller voiced commands. Radio responses and computer updates were incorrect, and actions taken jeopardized the entire mission.

4.14. Area 18, Equipment Safety Procedures (Critical):

4.14.1. Q. Properly executed required actions necessary to continue the mission when experiencing malfunction. Safely demonstrated actions during an operations room or equipment emergency (such as halon dump, electrical fire, or smoke emitting from a console). Notified all personnel in a timely manner.

4.14.2. U. Failed to take required action when experiencing an equipment malfunction. Failed to notify affected personnel.

Chapter 5

QUALIFICATION EVALUATION OF THE POSITIONAL INSTRUCTOR (PI)

Section 5A—Evaluation Procedures and Instructions

NOTE: This section contains criteria applicable to ABM, AWO, WD, and WT PI evaluations.

5.1. Minimum Mission Level. The minimum level of mission that must be accomplished for the PI is one that is representative of the instructor's duties. Individuals qualified to instruct in a live environment will accomplish a live air-to-air sortie. (The MU-2 profile evaluation is only required if that duty is representative of the instructor's duties.) Individuals not qualified to instruct in a live environment will accomplish a simulated training event. A second live or simulated mission may be utilized to observe areas not adequately evaluated during the first mission.

5.2. Demonstration or Performance Session. During the mission, the examinee will conduct a demonstration or performance session. The event will be task oriented to allow the examinee to make necessary inputs. The SEE is responsible for determining if the examinee has met demonstration or performance requirements. The student's performance during the mission does not determine whether this area is rated satisfactory. *NOTE:* Demonstrations or performances are not always appropriate during air-to-air PI where a student is performing the mission. Sorties permitting, every effort should be made to accomplish a supplemental air-to-air demonstration performance mission. However, 50 percent of all yearly PI evaluations may be air-to-air where the demonstration or performance is excluded. Due to the limitation to thoroughly evaluate instructor capabilities, an examinee's subsequent PI evaluation must contain a demonstration or performance phase. (All MU-2 evaluations will contain a demonstration or performance phase.)

5.3. Evaluation Objective. The examinee must demonstrate the ability to instruct safely and effectively according to technical orders, FAA regulations, and other operational directives.

Section 5B—Qualification Criteria

5.4. Areas and Ratings. Paragraphs 5.5 through 5.16 provide the different qualification areas, possible ratings for each, and definitions of the ratings (Q, Q-, and U, as applicable) for each area. PI evaluation criteria will be the same as specified for the student in the syllabus or lesson plan unless otherwise specified in this instruction.

5.5. Area 20, Mission Planning:

5.5.1. Q. Noted all factors applicable to the mission; for example, number and type aircraft, call signs, planned scenarios or tactics, blocks, airspace and limitations, and radio frequencies. Was aware of alternate mission, weather, NOTAMs, and emergency and NORDO procedures. Developed a sound plan of action to accomplish the mission. Properly annotated forms and complied with guidance in the OIF before accepting first handover. Reviewed student gradebook for appropriate documentation. Assessed student progression and formulated objectives to be attained during the mission. Ensured all documentation was accurate and complete.

5.5.2. Q-. Forms were incomplete and/or failed to comply with guidance in the OIF. Resulting errors or omissions noted in mission planning did not jeopardize mission outcome, but caused delays and detracted from mission accomplishment. Due to lack of compliance, mission information had to be reemphasized during the mission. Incomplete review of student gradebook resulted in inappropriate mission objectives for the student. Failed to ensure all documentation was accurate and complete.

5.5.3. U. Forms were incomplete and/or failed to comply with guidance in the OIF. Resulting omissions compromised mission execution or safety of flight. Failed to understand or clarify mission profile. Had faulty knowledge of operating data or procedures. Failed to review student gradebook. Failed to set student mission objectives.

5.6. Area 21, Conduct Mission Briefing:

5.6.1. Q. Received aircrew briefing with student (if applicable). Observed student's coordination with the aircrew and adversary controller. Presented a comprehensive, instructional briefing that encompassed all aspects of the mission according to locally developed instructor standards. Developed student mission plan that accounted for mission requirements, employment considerations, equipment limitations, and desired learning objectives.

5.6.2. Q-. Failed to provide necessary inputs to student's coordination with the aircrew and/or adversary controller. Resulting errors or omissions delayed mission execution, but did not jeopardize the sortie. Mission briefing focused primarily on administrative items or failed to provide employment considerations for the phases of the intercept.

5.6.3. U. Failed to observe student's coordination with the aircrew and/or adversary controller. Failed to properly conduct the mission briefing or provided briefing information that was not according to locally developed instructor standards.

5.7. Area 22, Instructor Knowledge:

5.7.1. Q. Demonstrated indepth knowledge of procedures, requirements, weapon systems, mission, and tactics.

5.7.2. Q-. Had noncritical deficiencies in depth of knowledge, procedures, requirements, weapon systems, mission, or tactics.

5.7.3. U. Had critical deficiencies in knowledge and familiarity with procedures, requirements, weapon systems, mission, or tactics.

5.8. Area 23, Conduct Appropriate Demonstration/Performance:

5.8.1. Q. Conducted demonstration or performance according to approved guidance. Described the procedure and, if appropriate, provided personal techniques. Repeated demonstration for the student's benefit, if necessary.

5.8.2. Q-. Demonstration or performance had noticeable deviations and/or incomplete explanations. Had to repeat demonstration or performance in order to be within parameters according to approved

guidance.

5.8.3. U. Failed to conduct demonstration or performance within parameters according to approved guidance (for example, syllabus). Failed to repeat demonstration even though student obviously did not understand fundamentals.

5.9. Area 24, Monitor Student Performance/Corrective Guidance:

5.9.1. Q. Observed student and provided appropriate corrective guidance. Made timely inputs and provided directive guidance to prevent mission degradation. Included techniques or tips for improving performance.

5.9.2. Q-. Inconsistent corrective guidance allowed student to make errors or omissions that caused delays in mission accomplishment. Did not provide any personal techniques or tips for improving performance. Mission not jeopardized by actions.

5.9.3. U. Failed to provide appropriate corrective guidance to student. Inputs did not increase student's situational awareness. Jeopardized mission accomplishment.

5.10. Area 25, Situation/Threat Information:

5.10.1. Q. During all phases of the mission, ensured situation or threat information was according to applicable volumes of AFTTP 3-1, AFI 11-214, and local operating directives. For example, briefing was updated as requested or as the situation changed; groups and/or formations were correctly identified, labeled, and anchored; and threat information was accurate to within 10 degrees and 2 NM of sensor returns or closest cardinal direction or quadrant. Monitored student workload and task saturation level. Coordinated with other instructors and/or students on a real-time basis to maximize effectiveness of training.

5.10.2. Q-. Was slow to correct (or did not correct) student in response to changes in adversary tactics.

5.10.3. U. Failed to ensure correct student responses throughout the mission. Did not effectively monitor student workload. Allowed student to continue even though his or her task saturation was preventing the accomplishment of mission. Actions jeopardized mission accomplishment.

5.11. Area 26, Safety of Flight Procedures (Critical):

5.11.1. Q. Ensured all participants maintained airspace integrity, including time limits. All mandatory safety calls (such as fights on, terminate, and knock-it-off) were passed. Provided accurate traffic and safety advisories, ensured proper altitude separation, and complied with airspace and altitude restrictions. Ensured 10 NM calls and weapons safety checks were accomplished, when applicable, and used directive control to keep aircraft clear of hazards according to AFI 11-214 and other directives. Ensured compliance with all applicable LOAs, FAA, and local directives during all phases of the mission.

5.11.2. U. Was not aware of (or did not ensure) compliance with safety factors during the mission, either directly or through the student. Actions and/or responses were unsafe and/or dangerous. Jeopardized

overall mission accomplishment.

5.12. Area 27, Use of Training Materials:

5.12.1. Q. Demonstrated sound knowledge and/or use of visual aids, recording devices, and other applicable training aids.

5.12.2. Q-. Utilized visual aids, but techniques detracted from student's learning experience.

5.12.3. U. Failed to demonstrate sound knowledge and/or use of visual aids, recording devices, and other applicable training aids.

5.13. Area 28, Mission Debrief:

5.13.1. Q. Thoroughly debriefed student on the key aspects of the mission according to approved instructor standards. Evaluated student's performance with respect to the briefed mission plan and individual goals. Discussed appropriate techniques and highlighted performance, with special emphasis on areas for improvement, if applicable.

5.13.2. Q-. Mission debrief did not completely address briefed mission plan or individual goals. Discussion of techniques for improvement on a few areas was below standards.

5.13.3. U. Failed to thoroughly debrief student on the key aspects of the mission according to approved instructor standards. Did not evaluate student's performance with respect to the briefed mission plan and individual goals. Failed to discuss appropriate techniques and adequately highlight performance with emphasis on areas that did not meet standards for progression.

5.14. Area 29, Ability To Instruct:

5.14.1. Q. Demonstrated excellent instructor ability. Clearly defined mission requirements and any required additional training or corrective action. Instruction was accurate, effective, and timely. Verbal or written communication was effective and unambiguous. Maintained rapport with student and demonstrated appropriate questioning techniques.

5.14.2. Q-. Problems with instruction or analysis detracted from effectiveness of instruction. Communication was effective, but contained numerous verbal or visual distractions. Did not maximize rapport with the student.

5.14.3. U. Unable to perform, teach, or assess techniques, procedures, systems use, or tactics. Communication was not effective.

5.15. Area 30, Student Training Documentation:

5.15.1. Q. Properly prepared and submitted required documentation according to approved directives. Writing was neat and legible and no errors were noted.

5.15.2. Q-. Required documentation contained errors that detracted significantly from the required

documentation, but did not prevent communication of the content.

5.15.3. U. Pertinent information was missing, not legible, or could not be understood.

5.16. Area 31, Objectivity:

5.16.1. Q. Provided feedback and grades according to established AETC rating criteria. Graded procedure instead of technique.

5.16.2. Q-. Had difficulty maintaining objectivity. Graded several items primarily on technique instead of procedure.

5.16.3. U. Failed to provide objective feedback and grades that were according to established AETC rating criteria.

Chapter 6

OBJECTIVITY EVALUATION OF THE STAN/EVAL EXAMINER (SEE)

Section 6A—Evaluation Procedures and Instructions

NOTE: The criteria in this section is according to AFI 13-1STAN/EVAL, Volume 2, and applies to SEE objectivity evaluations.

6.1. Conducting a SEE Objectivity Evaluation:

6.1.1. All areas of the objectively evaluation are considered critical to its success, and the evaluation will be graded only as Q or U. A score of U in any area will result in an overall grade of Q3. Cumulative deviations will be considered when determining an overall rating of either Q1 or Q3.

6.1.2. Only one SEE objectivity evaluation will be required, and it will suffice for all areas the SEE is qualified to evaluate in. If the SEE is qualified in two systems, the objectivity evaluation will only be required in one system.

6.1.3. There are no requirements to conduct an objectivity evaluation on a SEE solely because he or she has become BMC qualified in another system.

6.1.4. SEEs with prior experience as evaluators from other MAJCOMs will still receive an objectivity evaluation.

6.1.5. There is no requirement for recurring objectivity evaluations.

6.1.6. Spot objectivity evaluations will be given at the discretion of the MAJCOM, numbered Air Force (NAF), group, or squadron chiefs of stan/eval, and these evaluations may be given in any or all areas of the SEE's qualification.

6.2. Evaluation Objective. The examinee must demonstrate a thorough understanding of stan/eval directives and ensure safety of flight as well as compliance with applicable technical orders, FAA regulations, and operational directives.

Section 6B—Qualification Criteria

6.3. Areas and Ratings. Paragraphs 6.4 through 6.10 provide the different qualification areas, possible ratings for each, and definitions of the ratings (Q and U, as applicable) for each area.

6.4. Area 32, Compliance With Stan/Eval Directives (Higher Headquarters and Local):

6.4.1. Q. Complied with directives pertaining to administration of the evaluation. Deviations did not jeopardize effectiveness of the evaluation or mission accomplishment.

6.4.2. U. Failed to comply with directives pertaining to administration of the evaluation. Deviations jeopardized effectiveness of the evaluation or mission accomplishment.

6.5. Area 33, Evaluation Briefing:

6.5.1. Q. Briefed the conduct of the evaluation, mission scenarios, and grading criteria according to stan/eval directives. Omissions did not impact evaluation outcome.

6.5.2. U. Did not thoroughly brief conduct of the evaluation, mission scenarios, and grading criteria according to stan/eval directives. Omissions impacted the evaluation outcome.

6.6. Area 34, Identification of Discrepancies and Assignment of Area Ratings:

6.6.1. Q. Identified discrepancies and assigned area ratings according to this instruction.

6.6.2. U. Failed to properly identify discrepancies or assign area ratings according to this instruction.

6.7. Area 35, Assignment of Overall Ratings:

6.7.1. Q. Assigned correct overall rating according to stan/eval directives.

6.7.2. U. Failed to assign correct the overall rating according to stan/eval directives.

6.8. Area 36, Corrective Action:

6.8.1. Q. Recommended corrective actions or additional training areas were based on identified discrepancies. Corrective actions were designed to ensure correction of examinee's deficiencies.

6.8.2. U. Recommended corrective actions or additional training areas were not based on identified discrepancies or designed to ensure correction of examinee's deficiencies.

6.9. Area 37, Mission Debrief:

6.9.1. Q. Debriefed examinee on all key aspects of the evaluation.

6.9.2. U. Failed to debrief examinee on all key aspects of the evaluation.

6.10. Area 38, Evaluation Documentation:

6.10.1. Q. Completed required evaluation documentation according to stan/eval directives. Errors in documentation did not affect evaluation validity.

6.10.2. U. Failed to complete required evaluation documentation according to stan/eval directives. Errors in documentation affected evaluation validity.

WILLIAM WELSER III, Major General, USAF Director of Operations

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 11-202, Volume 2, Aircrew Standardization/Evaluation Program AFI 11-214, Aircrew and Weapons Director Procedures for Air Operations AFI 13-1STAN/EVAL, Volume 2, Ground Command and Control Systems Standardization/Evaluation Program--Organization and Administration AFPD 13-1, Theater Air Control System AFTTP 3-1 (applicable volumes), Tactical Employment AETCI 36-2202, Faculty Development and Master Instructor Program

Abbreviations and Acronyms

ABM—air battle manager ACMI—air combat maneuvering information AFSC—Air Force specialty code AMS—AWACS modeling and simulation ANG—Air Nautical Guard **AR**—air refueling ATC—air traffic control ATO—air tasking order AWACS—advanced warning air control system AWO—air weapons officer **BMC**—basic mission capable C2—command and control CAP—combat air patrol **DC**—display controller **DES**—designator **DO**—operations officer EQ—exceptionally qualified FAA—Federal Aviation Administration FOG—finger on glass GATR—ground-to-air transmit/receive **ICAO**—International Civil Aviation Organization **IFF/SIF**—identification friend or foe/selective identification feature **ITA**—interceptor training area LOA—letter of agreement MCS—modular control system **MQT**—mission qualification training MSA—minimum safe altitude MSN—mission NAF—numbered Air Force **NM**—nautical mile

NOTAM—notice to airman NTN—NATO track number **OGV**—OG stan/eval OG—operations group **OIF**—operations information file **OPED**—operator position entry device PI—positional instructor **PST**—primary simulation trainer Q1/ABM/AWO/WD—qualification level 1/with downgrades Q1—qualification level 1 Q2—qualification level 2 Q3—qualification level 3 Q-qualified R/RU—recorder/reproducer unit **R/SAOC**—region or sector air operations center **R/T**—radio/telephone **RCT**—radar-controlled track **RN**—reference number **ROE**—rules of engagement **RTB**—return to base SAR—search and rescue SAS-1—system access subunit area 1 **SD**—situation display **SEE**—standardization/evaluation examiner stan/eval-standardization/evaluation **TD**—tabular display TRS—training squadron U—unqualified WD—weapons director WST—weapons simulation technician WT—weapons technician

Attachment 2

SAMPLE EVALUATION GRADE CARD

WD/WT OR INSTRUCTOR EVALUATION GRADE CARD							
EXAMINEE NAME		GR	ADE	DUTY POSITION			
Mathew Smith		Ca	pt	Weapons Director			
TYPE EVALUATION				SEE			
INITIAL X RECURRING	REEVALUATI	0NS	РОТ	S/E OBJECTIVITY Capt Jones			
Y PRIOR NOTICE ADDITIO	NAL TRAINING	REQUIRED?	ov	ERALL QUALIFICATION			
	ES X NO			EQ X 01 Q2 Q	3		
MISSION PROFILE 1 - V-1 MU2's in E MOA. Capt Smith successfully completed 2 cutoff & 2 stern intercepts.							
DISCREPANCIES							
None							
RECOMMENDED ADDITIONAL TRAINING		CT101					
None	RECOMMENDED ADDITIONAL TRAINING/CORRECTIVE ACTION None						
	EVAL	UATION C	RITERIA I	AW AETCI 13-101			
		REQUIR	ED ITEMS	FOR ALL WD EVALS			
	a	Q.	U		٥	<u>Q-</u>	U
1. MISSION PLANNING	<u> </u>			11. CONSOLE OPS/DISPLAY	X		
2. MISSION BRIEF/DEBRIEF	X			12. R/T PROCEDURES	X		
3. EQUIP SET-UP/STATUS	X			13. **AIR/AIR POSITIONING**	<u>X</u>		
4. AIRSPACE COORDINATION	<u> </u>			14. **AIR REFUELING POSITIONING**	NA	· · ·	
5. CREW COORDINATION	NA			15. SA/THREAT INFO	<u>X</u>		ļ
6. COMM SELECTION/USE 7. SENSORS	<u> </u>			16. **SAFETY OF FLIGHT**	<u>X</u>		<u> </u>
8. WEATHER INFORMATION				17. **SAR PROCEDURES** 18. **EQUIPMENT SAFETY PROCEDURES **	NA X		
9. IDENTIFICATION	X			19. DOCUMENTATION	X		
10. HANDOVER PROCEDURES	- Â						
		REQU	IRED ITEN	IS FOR WT EVALS	I		I
	a	Q-	U		٥	Q-	U
20. MISSION PLANNING				30. CONSOLE OPS/DISPLAY			1
21. MISSION BRIEF/DEBRIEF			·	31. R/T PROCEDURES			
22. EQUIP SET-UP/STATUS				32. CHECKLISTS			
23. AIRSPACE COORDINATION				33. MISSION ASSISTANCE			
24. CREW COORDINATION				34. SA/THREAT INFO			
25. COMM SELECTION/USE				35. **SAFETY OF FLIGHT**			
26. SENSORS				36. **SAR PROCEDURES**			
27. WEATHER INFORMATION				37. **EQUIPMENT SAFETY PROCEDURES **			
28. IDENTIFICATION 29. ** HANDOVER PROCEDURES**				38. DOCUMENTATION			
		REQUIRED	ITEMS FO	RINSTRUCTOR EVALS			1
······	Q	Q-	U		Q	Q-	U
39. MISSION PLANNING		-		45. **SAFETY OF FLIGHT**	_		
40. CONDUCT MISSION BRIEF				46. TRAINING MATERIALS			1
41. INSTRUCTOR KNOWLEDGE				47. MISSION DEBRIEF			
42. CONDUCT DEMO/PERFORMANCE				48. ABILITY TO INSTRUCT			
43 MONITOR STUDENT PERFORMANCE/ CORRECTIVE GUIDANCE				49. STUDENT TRAINING DOCUMENTATION			
44. SA/THREAT INFO				50. OBJECTIVITY			
** INDICATES CRITICAL AREA				USE REVERSE SIDE TO DEPICT MISSION	FLOW FOR	EACH MISS	NON.
(Front)							



(Reverse)