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AIR FORCE TEST CENTER**

**AIR FORCE TEST CENTER
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Test and Evaluation**

**TEST CONTROL PERSONNEL
TRAINING AND EVALUATION**

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This publication implements Air Force Instruction (AFI) 99-103, *Capabilities-Based Test and Evaluation* and AFI 11-290_Air Force Materiel Command (AFMCSUP), *Cockpit/Crew Resource Management Program*. This instruction specifies the responsibilities of key personnel and procedures for the control of flight and ground testing for which the Air Force Test Center (AFTC) is responsible. It presents instruction and requirements for test team member qualifications and training for test events that require real-time data monitoring and control. This instruction applies to military, government civilian, and contractor test control personnel conducting ground or flight test operations for all AFTC units and detachments regardless of their operating location. It also applies to those Air National Guard and Air Force Reserve units supporting flight and ground testing for which AFTC is responsible. Wings/Complexes within AFTC will supplement this instruction to provide detailed test control training and evaluation processes, coordinating with all stakeholders IAW AFI 33-360, *Publications and Forms Management*. All direct Supplements must be routed to the Office of Primary Responsibility (OPR) of this publication for coordination prior to certification and approval by the 412 and 96 Test Wings (TW) or Arnold Engineering Development Complex Commanders. Attachment 1 lists abbreviations and acronyms used in this instruction. Requests for waivers must be submitted to the OPR listed above for consideration and approval. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual 33-363, *Management of Records*, and disposed of IAW Air Force Records Disposition Schedule located in the Air Force Records Management System. This publication requires the collection and/or maintenance of information protected by the Privacy Act of 1974 authorized by Title 37 U.S.C. 301a (Incentive Pay), Public Law 92-204, Section 715 (Appropriations Act for 1973), Public

Laws 93-570 (Appropriations Act for 1974), 93-294 (Aviation Career Incentive Act of 1974), and Executive Order 9397 as amended. The applicable Privacy Act SORN(s) F011 AF XO A, Aviation Resource Management Systems is available at <http://privacy.defense.gov/notices/usaf/>. Refer recommended changes and questions about this publication to the OPR using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command.

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Chapter 1

GENERAL

1.1. Purpose. This instruction lays the foundation for standardization of test control personnel training and evaluation programs across the AFTC to ensure that fundamental test and test control personnel competencies are produced to execute the test in a safe, secure, effective, and efficient manner. This instruction establishes the policies, requirements, roles and responsibilities for training and evaluating test essential personnel within the scope of responsibility of the AFTC.

1.2. Waivers. Unless otherwise specified, the Air Force Test Center Engineering Director (AFTC/EN) is the waiver authority for requirements in this instruction.

1.3. Scope. This instruction applies to military and government civilians conducting ground or flight test operations for all AFTC organizations and detachments regardless of their operating location. Contractors will be expected to meet the intent of this instruction. For the purpose of this instruction, the key distinction between personnel is whether or not they perform a test-essential role responsible for safety of test or flight criteria during a given test event. It is important to note that personnel can switch between test-essential and non-test-essential depending on their role within a given test program. It will be incumbent on units to evaluate who is test-essential during the test and safety planning process and ensure individuals are properly trained to support those tests.

1.4. Test Organization. For purposes of this instruction, "test organization" will be used with Wing/Wing Equivalents under AFTC. Additionally, in this instruction, "unit" will be used synonymously with "Combined Test Force (CTF)/squadron". Where there is no test organization supplement, units will assume duties listed.

1.5. Delegation. Any authority granted to the Commander/Director by this instruction may be delegated to an appropriate authority within the organization as determined by the Commander/Director.

Chapter 2

RESPONSIBILITIES

2.1. Roles and Responsibilities.

2.1.1. AFTC/EN

2.1.1.1. Determine the fundamental skills required for Test-Essential Personnel (TEP) to fulfill their roles and responsibilities.

2.1.1.2. Create, maintain, and distribute standardized training and evaluation materials for TEP.

2.1.1.3. Determine metrics and track compliance.

2.1.1.4. Assess compliance of AFTC organizations with this instruction during site visits, staff assisted visits (SAVs) and virtually through Management Internal Control Toolset (MICT).

2.1.2. Wing/Wing Equivalent Commanders:

2.1.2.1. Determine additional training and evaluation requirements and standards.

2.1.2.2. Approve Wing-level training and evaluation programs, if required, and conduct SAVs and inspections of implementing units' training and evaluation programs.

2.1.2.3. Track training effectiveness and reports metrics to AFTC/EN, when requested.

2.1.3. Squadron/CTF/Equivalent Commanders/Directors:

2.1.3.1. Ensure a trained and qualified TEP workforce.

2.1.3.2. Develop unit-specific training and evaluation requirements.

2.1.3.3. Approve Qualifications/Certifications (Letter of Xs) and accept qualifications.

2.1.3.4. Approve initial test execution and training cadre, as required.

2.1.3.5. Track and report training effectiveness and evaluation metrics to the Wing, when requested.

2.1.3.6. Ensure accurate training records are maintained, and ensure training is traceable to, and consistent with, roles and responsibilities defined in applicable test organization and Squadron operating instructions.

2.1.3.7. Ensure all test-essential duties are assigned to a qualified individual.

2.1.4. Test-Essential Personnel (TEP) responsibilities. The following TEP responsibilities are the AFTC standard for units controlling test events. Depending on the complexity of the test event, units may modify the allocation of TEP duties to include having a single person fulfill the roles of a Test Director (TD), Test Conductor (TC) and/or Test-Essential Specialist (TES). Contractual requirements or test activities involving multiple government agencies may also necessitate some modification of the duties listed.

2.1.4.1. Test Directors. TDs are ultimately responsible for safe, secure, efficient and effective testing. TDs will:

- 2.1.4.1.1. Ensure mission preparation is accomplished in accordance with local procedures.
 - 2.1.4.1.2. Ensure test discipline during test execution.
 - 2.1.4.1.3. Be familiar with the test package, platform, and test control facility to safely, securely and effectively provide oversight to test execution.
 - 2.1.4.1.4. Safeguard sensitive/critical test information and adhere to Program Protection Plan, Security Classification Guide and Data Distribution Limits.
 - 2.1.4.1.5. Terminate the test event or mission based on inputs from subject matter experts (SMEs) if technical validity of test is in question or safety is jeopardized.
- 2.1.4.2. Test Conductors. TCs are responsible for pre- and post-mission briefs, real-time test control and conduct, security, and are the primary communicators to the aircraft/mission system. TCs will:
- 2.1.4.2.1. Be responsible for real-time coordination of ground/flight test activities with test crew.
 - 2.1.4.2.2. Pace the progression through test procedures, as agreed to in the pre-mission briefing.
 - 2.1.4.2.3. Make test event “terminate” and “go or no-go” calls based on real-time engineering analyses of control room data. Terminate the test event if the technical validity of the test is in question or safety is jeopardized or in question.
 - 2.1.4.2.4. Be familiar with the test package, platform, and test control facility to safely, securely and effectively control test execution.
- 2.1.4.3. Test-Essential Specialists. TES can include, but are not limited to, personnel typically referred to as SMEs, discipline engineers, test control support personnel, or facility operators/technicians who are responsible for performing Safety of Test (SOT) and Safety of Flight (SOF) duties. TESs will:
- 2.1.4.3.1. Have sufficient knowledge of the system under test and test/safety planning as it relates in practical application to their specialty/assigned duties to allow for the following in pursuit of safe and effective test execution.
 - 2.1.4.3.1.1. Determine if the test point execution was adequate and give the TC recommendation to repeat the test point or continue.
 - 2.1.4.3.1.2. Monitor SOT and/or SOF parameters and inform the TC if those parameters are off-scale or inoperative.
 - 2.1.4.3.1.3. Inform the TC if the test aircraft/mission system is approaching or has exceeded a critical parameter limit.
 - 2.1.4.3.2. Communicate directly with the test aircraft/mission system as briefed for their TES role.
 - 2.1.4.3.3. Possess the authority to terminate the test point.

2.1.5. Non-Test-Essential Personnel (non-TEP). The non-TEP is any individual directly involved in test control who is not responsible for performing SOT and/or SOF duties. Non-TEP may increase test effectiveness or efficiency, but their absence may not negatively impact test safety. This category includes all personnel who are not TCs, TDs or TESs. This can include, but is not limited to, personnel typically referred to as SMEs, discipline engineers, test control support personnel, facility operators/technicians, or customers. The term “Non-Test-Essential Personnel” does not imply a lack of responsibility with concerns to safety. All personnel directly involved in test control have a role to play in safe test execution. However a non-TEP shall not be assigned to a specific function that is explicitly related to SOT or SOF. The non-TEP will:

2.1.5.1. Be sufficiently familiar with the test package as it relates to their specialty/assigned duties.

2.1.5.2. Support test execution per the specialty or assigned duties as required.

2.1.6. Instructor Test-Essential Personnel (I-TEP). Instructor TEPs shall be a subject matter expert adept in the methodology of instruction. The instructor can be a TD/TC or TES as appropriate for training and mission requirements. An instructor will:

2.1.6.1. Provide the trainee pre-execution expectations and post execution feedback. Instructors will comply with requirements of mission outlines, as appropriate, for the type of event being executed.

2.1.6.2. Review each trainee’s training record prior to performing each training event.

2.1.6.3. Recommend TC/TD trainee for evaluation once the Instructor TC/TD (I-TC/TD) has ensured all required upgrade training items are completed, training documentation has been signed off, and proficiency has been demonstrated IAW this instruction’s grading requirements.

2.1.6.4. Approve TES trainee as qualified once the Instructor TES (I-TES) has ensured all required upgrade training items are completed, training paperwork has been signed off, and proficiency has been demonstrated.

2.1.7. Evaluators. Evaluator are instructors who have been appointed by the unit Commander/Director to accomplish evaluations. An evaluator will:

2.1.7.1. Conduct TC/TD evaluations IAW Chapter 5.

2.1.7.2. Document evaluations IAW Chapter 4.

2.1.7.3. Immediately correct breaches of safety or discipline during an evaluation.

2.1.7.4. Report the results of the evaluation as soon as practical.

2.1.7.4.1. Notify the examinee’s unit commander (or available supervision if the squadron commander cannot be reached) whenever Qualification Level 2 or 3 (Q2 or Q3) performance is observed.

2.1.7.5. Train evaluators IAW paragraph 4.9.4.

Chapter 3

GROUND-BASED TEST CONTROL PERSONNEL

3.1. General. In order to support the AFTC mission of conducting developmental test and evaluation of air, space and cyber systems numerous types of test approaches have been developed and implemented. These include ground-based tests as well as flight tests. This chapter will discuss three basic categories of ground testing.

3.2. Ground Based Test Facilities . AFTC has a number of unique ground-based test facilities which include, but are not limited to climatic laboratory, anechoic facilities, wind tunnels, turbine engine test cells, space chambers, ballistics ranges, sled tracks, hardware in the loop facilities and radar facilities. Due to the unique nature and requirements for each of these facilities the training and evaluation requirements for the test control personnel will be determined by the Wing-level organization responsible for the facility. Test organizations with ground-based facilities test control personnel will detail processes from the following paragraphs in their organizational supplement.

3.2.1. Identify and develop role-specific training plans for assigned TEP.

3.2.2. Maintain training records to track and document individual progress through the assigned training plan(s).

3.2.3. Certify and document individual mission readiness for role-specific duties following completion of the corresponding training programs.

3.3. On Aircraft Ground Tests . On aircraft ground testing of flight mission critical or safety of flight systems in support of a flight test program will follow the training, evaluation and currency requirements as detailed in Chapters 4, 5, and 6.

3.4. Other Ground Tests . Numerous additional types of testing occur within the AFTC enterprise that are not conducted within one of the ground-based test facilities or on an aircraft in support of a flight test program. Some examples of these types of tests are cyber penetration testing, systems integration lab or hardware in the loop testing, business systems testing, etc. Test organizations will document their unique test operations which do not fit in either the Ground-Based Test Facility or On Aircraft Ground Tests categories and will include this in a supplement to this instruction. Additionally, they will document the following, with respect to that testing:

3.4.1. Identify and develop role-specific training plans for assigned TEP.

3.4.2. Maintain training records to track and document individual progress through the assigned training plan(s).

3.4.3. Certify and document individual mission readiness for role-specific duties following completion of the corresponding training programs.

Chapter 4

FLIGHT TEST TEP TRAINING

4.1. Objective. The AFTC Test Control Personnel Training and Evaluation program objective is to ensure TEP are trained and evaluated consistently to execute test events in a safe, secure, effective and efficient manner. This will be accomplished through AFTC/EN and unit developed role-specific training programs to ensure all test control personnel are properly briefed/trained to the level required for them to perform their assigned roles.

4.2. Overview . Due to the diversity of test programs and unique test facilities across the AFTC, the competencies may vary for each specific test and it is incumbent upon each organization to determine specific competency categories. Units will develop role-specific training plans for TEP based upon the basic test control competencies outlined in this instruction, organization or facility unique requirements and unit requirements.

4.3. General.

4.3.1. Training consists of three general areas:

4.3.1.1. Test Control Fundamentals Training

4.3.1.2. Mission Certification Training

4.3.1.3. Instructor/Evaluator Training

4.3.2. Units will develop training plans for TEP roles with specific requirements for TD, TC and TES as appropriate based on the minimum competencies defined in this chapter and unit/mission specific requirements.

4.3.3. Although there is no specified sequence to accomplish general training areas, test organizations may specify a sequential order for completion of those requirements in a supplement to this instruction or in their training plans. All training plans will be reviewed internally on a triennial basis to ensure accuracy and relevance.

4.3.4. Training will not take place during high risk test events, unless approved by the unit Commander/Director.

4.3.5. TEP training and qualification will be accomplished within a time frame that has been established by the test organization IAW their supplement to this instruction.

4.4. Acceptance of Training and/or Qualification. The unit Commander/Director may accept the training and/or qualifications from other organizations when the personnel will be performing test-essential roles. Acceptance of training and/or qualification will be signed by the Commander/Director and documented in the individual's training documentation.

4.4.1. Acceptance of Training and/or Qualification may be used for:

4.4.1.1. Personnel assigned to the organization.

4.4.1.2. Intra-AFTC Organizations For example, subject matter experts from across the enterprise such as Air Force Seek Eagle Office personnel supporting tests at either 96 TW or 412 TW.

4.4.1.3. Non-AFTC affiliated organizations. For non-AFTC personnel, it will be the responsibility of the unit to maintain the documentation for the length of time for which the unit has accepted the training and/or qualifications.

4.4.2. Acceptance of Training and/or Qualifications will include:

4.4.2.1. Additional Training Requirements (e.g., operating location orientation, test control orientation and aircraft/mission system orientation).

4.4.2.2. TEP duties.

4.4.2.3. Justification for acceptance of training/qualification or supporting documentation.

4.4.3. Contractors may provide training to their employees using their own training plans and forms. The training and qualification must be documented in an acceptance of training memorandum signed by the unit Commander/Director.

4.4.4. Appointment of TEP Cadre (Grandfathering). Upon implementation of this instruction, unit Commanders/Directors will draft a Qualification and Certification Memorandum. This memorandum should include a list of those personnel, currently assigned or attached to the unit, who are immediately qualified to perform the test control duties according to the qualifications and certifications within this instruction. Those individuals will not require additional training to perform the duties identified in the memorandum, but must adhere to currency, qualification and requalification requirements established in this instruction. Implementation of this instruction and Qualification and Certification Memorandum does not extend existing training suspenses or timelines.

4.5. Documentation.

4.5.1. Training Documentation. Each unit will be required to maintain documentation related to training. Training documentation will include how personnel received qualifications. At a minimum training documentation shall include:

4.5.1.1. Acceptance of qualification paperwork.

4.5.1.2. Completed training plans.

4.5.1.3. Currency requirements (e.g. Crew Resource Management (CRM) Academics, Publications Review, Test Control Event).

4.5.2. Forms. Document training and evaluations on the following forms, or their equivalents, including instructor, and evaluator training:

4.5.2.1. Air Force Materiel Command (AFMC) Form 67, *Ground Training Record* for academic training.

4.5.2.2. AFMC Form 68, *Flight Training Record* for completion of test execution training items.

4.5.2.3. AFMC Form 69, *Flying Training Comments* for narratives of test execution events.

4.5.2.4. Evaluation Record. Units will create an evaluation record that at a minimum tracks the individual's qualification level and completion dates.

4.5.2.5. Contractors may document training on their own forms; however, the unit will document this training IAW paragraph 4.4.

4.5.3. Letter of Qualifications/Certifications. Each unit will maintain a LOX for TEP approved by the unit Commander/Director. An example is shown in Attachment 4. The LOX will be maintained as defined by the test organization. A qualification on the LOX will only be updated with an acceptance of qualification memorandum, an initial cadre memorandum or an applicable AFMC Form 68 and/or an evaluation record signed at the conclusion of training, for each TEP basic qualification and/or mission certification.

4.6. Test Control Fundamentals Training.

4.6.1. Fundamentals Training. This segment of the training establishes the competencies required for test control in the respective test control and conduct roles. This training will provide the fundamental capabilities and skills for qualification for participation during test control in support of a test mission. Units may add training as necessary due to their unique test facility or mission requirements.

4.6.2. TC/TD Test Control Fundamentals Training

4.6.2.1. Test organizations will develop courses/training where TCs/TDs at course completion will possess the following competencies:

4.6.2.1.1. Prepare for and execute flight test missions via practical application of test and safety planning.

4.6.2.1.2. Communicate flight cards IAW local policies and procedures.

4.6.2.1.3. Participate in and/or conduct pre- and post-mission briefs.

4.6.2.1.4. Execute real-time test control.

4.6.2.1.5. Demonstrate ability to communicate within the control room and between the control room and all participating test entities using effective CRM principles.

4.6.2.1.6. Ability to determine if the test package (test and safety planning), test cards and other required documents have been generated, reviewed and approved IAW applicable instructions, guidelines and local policy.

4.6.2.2. TC/TD training will conclude with an evaluation and a corresponding evaluation record signed by an approval authority IAW Chapter 5 of this instruction.

4.6.3. TES Test Control Fundamentals Training.

4.6.3.1. Test organizations will develop courses/training where TESs at course completion will possess the following competencies:

4.6.3.1.1. Technical skill which allows them to monitor critical SOT and SOF parameters, determine data accuracy and quality, and communicate critical information effectively with the rest of the test team, as required by a test package.

4.6.3.1.2. Prepare for and execute flight test missions via practical application of test and safety planning.

4.6.3.1.3. Participate in and/or conduct pre- and post-mission briefs.

- 4.6.3.1.4. Communicate within the control room and between the control room and all participating test entities using effective CRM principles.
- 4.6.3.1.5. TES unit-level training for discipline, mission, or platform specifics will be provided by qualified instructors.
- 4.6.3.2. TES completion of training will be documented on an AFMC Form 68, 67 or equivalent signed by an approval authority.
- 4.6.4. Concurrent Training. Test Control Fundamentals Training may be accomplished concurrently with Mission Certification training.
- 4.6.5. Test Control Fundamentals Training will be given by an instructor TEP holding that qualification or by individuals approved by the unit Commander/Director.
- 4.6.6. Non-TEP training will be defined by the unit.

4.7. Mission Certification Training.

- 4.7.1. Mission certification(s) may include aircraft type, test facility, unique aircraft systems, specialized test techniques, unique equipment, or unique elevated risk mission types, as defined by the unit.
- 4.7.2. Since each test facility and test unit has very specific and unique requirements, units will determine Mission Certification requirements and competencies.
- 4.7.3. Training plans. Units will develop and maintain Mission Certification training plans specific to their organization, test event requirements, and test control requirements. Units will determine the minimum ground and/or execution training required for each Mission Certification. Training plans will be reviewed triennially to ensure accuracy and relevance.
- 4.7.4. Concurrent Training. Mission Certification training may be accomplished concurrently with Test Control Fundamentals Training. Multiple Mission Certification training plans may be accomplished concurrently.
- 4.7.5. Mission Certification Training for a particular mission will be given by any I-TEP holding that certification or by individuals approved by the unit Commander/Director. Aircraft Systems Certifications training may also be provided by qualified test aircrew.

4.8. Special Considerations.

- 4.8.1. An individual may hold more than one TEP qualification (Example: a TC may also hold a TD and/or TES qualification).
- 4.8.2. Units with multiple aircraft/mission types may separate TEP training plans into Test Control Fundamentals Training and Mission Certification training plans.
- 4.8.3. Units with similar aircraft/mission types may provide differences orientation and document as a part of an acceptance of training and/or qualification memorandum in the trainee's training documentation.
- 4.8.4. Proficiency Advancement (PA). If the trainee demonstrates proficiency, at a level beyond their current requirement, the instructor may proficiency advance that item. The PA will be annotated in the individuals' training documentation with appropriate justification from the instructor.

4.8.5. During non-simulated test events, an instructor may not perform additional test control duties outside the scope of the applicable instructor duties, unless approved by the unit Commander/Director.

4.9. Instructor/Evaluator Training.

4.9.1. Instructor/Evaluator Training is reserved for highly experienced TEPs. It further expands on the basic skill sets, roles and responsibilities to include Instructor or Evaluator duties.

4.9.2. TEP Instructor Training. Instructor candidates will be selected based on experience, judgment, ability to instruct, airborne aptitude (if applicable), and technical knowledge.

4.9.2.1. Test organizations will develop a course for instructor upgrade where at course completion individuals will possess the following competencies:

4.9.2.1.1. Communicate effectively during instruction and provide appropriate corrective guidance when necessary.

4.9.2.1.2. Reconstruct a test event, offer event analysis, and provide corrective guidance where appropriate.

4.9.2.1.3. Administer and document training in accordance with this instruction.

4.9.2.1.4. Effectively demonstrate and instruct test control and conduct procedures and techniques to include identifying learning objectives and difficulties, and prescribing and conducting remedial instruction.

4.9.2.1.5. Demonstrate appropriate knowledge of the system under test, aircraft systems, procedures, and all applicable publications and instructions.

4.9.3. Appointed Instructor Cadre. At the implementation of this instruction, or due to test programs that may arise which present unique requirements not covered in existing mission certification specialized training (e.g. new aircraft, extensive modifications to aircraft, new test technique, extensive downtime between test programs, etc.). Under these conditions, a memo signed by the unit Commander/Director may establish an initial instructor cadre from current and qualified TEP. This memo will be included in the TEP's training documentation.

4.9.4. TC/TD Evaluator Training. Unit Commanders/Directors will approve instructors for evaluator upgrade. Instructors identified for evaluator upgrade will possess superior knowledge of test conduct, training and evaluation policies and procedures. Test organizations will develop a course for evaluator upgrade where at course completion individuals will possess the following competencies:

4.9.4.1. Administer and document evaluations IAW Chapter 4 and 5.

4.9.4.2. Understand and systematically apply the evaluation standards IAW Attachments 2 and 3.

4.9.5. Appointed Evaluator Cadre. At the implementation of this instruction, or due to other circumstances, units may not have an evaluator to conduct evaluator upgrades. Under these conditions, a memo signed by the unit Commander/Director may establish an evaluator cadre from current and qualified TEP. This memo will be included in the TEP's training documentation.

Chapter 5

FLIGHT TEST TC/TD EVALUATIONS

5.1. Objective. The purpose of the TC/TD evaluation program is to provide Commanders/Directors a tool to validate TC/TD readiness and the effectiveness of test organization TC/TD operations, including documentation and standardization of individual TC/TD member qualifications. The test organization TC/TD evaluation program will accomplish the following:

- 5.1.1. Provide a system to assess and document individual TC/TD proficiency and capability to accomplish assigned test operations.
- 5.1.2. Evaluate an individual's ability to execute standardized control procedures.
- 5.1.3. Evaluate compliance with appropriate test, operational, training, and administrative directives.
- 5.1.4. Evaluate test directives, procedures, and techniques as required.
- 5.1.5. Recognize trends and recommend/initiate changes to training programs and directives.

5.2. Overview. Evaluations shall be given by an evaluator qualified in the respective TC/TD role. Unit Commanders/Directors may allow evaluator TDs to evaluate TCs.

5.2.1. Evaluators will not administer evaluations to personnel who are responsible for writing or endorsing the evaluator's performance report or contract evaluations without specific approval from the unit Commander/Director.

5.3. Evaluation Categories. TC/TD evaluations are divided into three categories.

- 5.3.1. QUAL. Basic qualification in a test control/mission system role.
- 5.3.2. INSTR. An instructor qualification focuses primarily on the TC's/TD's instructional ability in their role. INSTR evaluations should be accomplished with real trainees whenever possible. A successful INSTR evaluation also serves as a QUAL evaluation.
- 5.3.3. SPOT. Spot evaluations may be conducted at the unit Commander/Director's discretion or for cause. Spot evaluations are intended to evaluate a subset of test control/mission system skills included in the evaluation criteria.

5.4. Prefixes. The following prefixes will be used to further describe the evaluations listed in paragraph 5.3.

- 5.4.1. INIT (Initial). Initial evaluations are the first evaluation of a basic or instructor qualification. Initial qualifications are required for TC/TD with no previous qualifications or if the most recent qualification has lapsed more than five years. Initial evaluations expire for flight test personnel 24 calendar months following a successful initial evaluation. Initial evaluations for ground test personnel will expire if unable to maintain currencies IAW Chapter 6.
- 5.4.2. PER (Periodic). Periodic evaluations are subsequent evaluations of a basic or instructor qualification. Periodic evaluations expire for flight test personnel 24 calendar months following the last successful QUAL or INSTR evaluation.

5.4.2.1. To maintain instructor qualification, an instructor TC/TD will require an instructor evaluation during subsequent periodic evaluations that consists of at a minimum their primary qualification and instructor ability.

5.4.3. RQ (Requalification). A requalification evaluation is required for personnel who did not receive a periodic evaluation before the last successful evaluation expires or are unable to maintain currencies IAW Chapter 6. RQ evaluations expire for flight test personnel 24 calendar months following a successful evaluation.

5.4.4. N/N (No-Notice). No-Notice evaluations provide Commanders/Directors a sampling of daily TC/TD performance and an assessment of unit's training effectiveness. Examinee is notified of the evaluation at the beginning of normal preparation for the event, as defined by the unit.

5.5. Evaluation Procedures.

5.5.1. Evaluations will be conducted according to the evaluation criteria found in this instruction (Attachments 2 and 3). These criteria define the minimum evaluation criteria for the qualification of TCs/TDs. Test organizations may append additional criteria as approved by the test organization Commander/Director. To ensure standard and objective evaluations, evaluators will be thoroughly familiar with and adhere to the prescribed evaluation criteria.

5.5.2. An evaluator may not perform additional test control/mission system duties outside the scope of the applicable evaluator duties, unless approved by the unit Commander/Director.

5.5.2.1. If during an evaluation the examinee's actions are deemed unsafe for a continuation of their role, the evaluator must be prepared to assume the role of the examinee.

5.5.3. An evaluator may perform multiple evaluations during the same event as long as opportunities exist that provide adequate duration/activities for a thorough evaluation of each examinee.

5.5.4. The evaluator will brief the examinee on the purpose of the evaluation and how it will be conducted, to include specific evaluation criteria, prior to observing examinee performance during the evaluation.

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

5.5.6. For trainees with multiple mission/aircraft certifications, evaluations may be accomplished on any mission/aircraft in which they are certified or training.

5.6. Grading Instructions. A two-step grading system is used to evaluate and document TC/TD performance.

5.6.1. In the first step, individual grades are assigned to each area/subarea of TC/TD performance against established evaluation criteria. Areas/subareas have a three-tier (Q/Q-/U) or two-tier (Q/U, for critical areas) grading system. Any area graded U will have additional comments documenting the reason(s) for the assignment of that grade.

5.6.1.1. Q (qualified) indicates the examinee demonstrated both a satisfactory knowledge of all required information of the area/subarea and performed test control/mission system duties within prescribed expectations.

5.6.1.2. Q- (marginally qualified) indicates the examinee is qualified to perform the assigned area/subarea task, but requires debriefing specific to minor discrepancies in that area or additional training at the evaluators' discretion.

5.6.1.3. U (unqualified) indicates performance in the area/subarea was outside allowable parameters, compromising safety and/or quality of test, affecting event accomplishment, or breaching test control/mission system discipline, requiring additional training.

5.6.2. In the second step, the evaluator assigns an overall qualification level from a composite of all area/subarea grades based on the following.

5.6.2.1. **Q1** (Qualified). The TC/TD demonstrated desired performance and knowledge of procedures, facilities, and directives within expectations specified in the grading criteria. Award a Q1 when no discrepancies were noted. If discrepancies existed, a Q1 may be awarded if:

5.6.2.1.1. No U grades were awarded for any area.

5.6.2.1.2. In the judgment of the evaluator, none of the discrepancies preclude awarding an overall Q1.

5.6.2.1.3. All areas/sub-areas graded as Q- during the evaluation were cleared during debrief.

5.6.2.2. **Q2** (Qualified with discrepancies). The TC/TD demonstrated the ability to perform duties safely, but:

5.6.2.2.1. Additional training was assigned to one or more area(s)/sub-area(s).

5.6.2.2.2. A non-critical area/subarea grade of U was awarded.

5.6.2.2.3. In the judgment of the evaluator, justification of a Q2 grade exists based on Q- performance in one or several area(s)/subarea(s).

5.6.2.3. **Q3** (Unqualified). The TC/TD demonstrated an unacceptable level of safety, performance, or knowledge. An examinee that receives an overall Q3 grade must receive training in those areas where deficiencies were noted. Additional training must be signed-off by an instructor prior to a subsequent evaluation. Award an overall grade of Q3 if:

5.6.2.3.1. The examinee receives a grade of U in any critical area.

5.6.2.3.2. In the judgment of the evaluator, justification of a Q3 grade exists based on Q- or U performance in one or several non-critical area(s)/subarea(s).

5.7. Remedial Action. All grades of Q- or U require a thorough debriefing of the discrepancy and/or assignment of additional training. Additional training may include, but not limited to, self-study or ground/execution instruction. Document the identification and completion of additional training on the evaluation form.

5.8. Restrictions. Evaluators may restrict certain portions of a qualified TC/TD duties. For example, a TC/TD could be restricted from certain duties until the TC/TD completes additional training to satisfy shortfalls noted in the evaluation. Document restrictions on the evaluation form and annotated in LOX comments.

5.9. Rechecks . If a TC/TD receives a Q3 evaluation grade, a successful recheck must be completed by the end of the third month after the date of the first failure. The recheck is considered successful when the TC/TD performs to Q or Q- standard for each evaluation criteria previously graded U. If a recheck is not successfully accomplished in the required time, the TC/TD must re-accomplish prerequisite training events for an INIT evaluation, and pass a subsequent INIT evaluation. The unit Commander/Director will determine the number of reattempts allowed during this period.

5.9.1. The evaluator that administered the original evaluation will not normally administer the recheck. If a TC/TD receives two Q3 evaluation grades in sequence from the same evaluator, a different evaluator will perform the subsequent evaluation.

5.9.2. The unit Commander/Director must review the training and evaluation records of any individual who receives three consecutive Q3 evaluation grades.

5.9.3. Test organization supplements will define how many rechecks are authorized before individual is refocused/reassigned to another engineering area duty or specialty.

5.10. Commendables . The evaluator may further identify any area/sub-area as “Commendable” if, in the examiner’s determination, the TC/TD member has demonstrated exceptional skill and knowledge. Information pertaining to the Commendable(s) will appear in the individual’s evaluation record.

5.11. Evaluation Authority. The unit Commander/Director is the principal evaluator of TC/TD and the evaluation approval authority in the unit.

5.12. Dual Qualification Evaluations. Units with individuals that carry both TC and TD qualifications may combine reoccurring evaluations as long as the evaluator is appropriately qualified and requirements for both qualifications can be observed.

Chapter 6

FLIGHT TEST TEP CURRENCY

6.1. TEP Minimum Currency Events . Table 6.1 summarizes the currency events and intervals for which TEP in their respective positions need to maintain to stay current and/or qualified.

Table 6.1. TEP Currency Table.

Item	Currency		Action to Regain Currency	
	TC/TD	TES	Non-Current <6 months	Non-Current > 6 months
Test Control Event	6 month ²	Unit Defined	Perform with instructor ^{1,2}	Complete unit re-qualification/certification plan
Publication Review	12 month		Conduct Review	
CRM Academics	36 month	Not Applicable	Complete Academics ³	

NOTES:

1. Supervision level for re-currency is an I-TEP qualified and current in event.
2. Simulations, Playbacks, Rehearsals are authorized
3. At a minimum units will comply with paragraph 6.2.4 for TC/TDs
4. All durations are in calendar months.

6.2. Currency Requirements.

6.2.1. Current and qualified TC/TD who go more than 6 calendar months for flight test without executing a test control event, or an approved simulated event, will be considered non-current for a test control event. Current and qualified TES who go longer than the unit specified time period for flight test without executing a test control event, or an approved simulated event, will be considered non-current for a test control event.

6.2.2. TEP may regain currency by executing a test control event or an approved simulated event with a current and qualified I-TEP. TEP who remain non-current for a test control event for greater than 6 calendar months will be considered unqualified and will require a re-qualification evaluation IAW Chapter 5 or a unit re-certification as applicable for the appropriate TEP position. Any TEP with multiple qualifications (e.g. TD/TC or TC/TES) may log test control events performed in one role only as an event for that role. A test control event is defined by a minimum of one of the following:

- 6.2.2.1. Conducting a test event.

6.2.2.2. Monitoring a parameter or system for the safe and/or effective execution of a test event.

6.2.2.3. Directing the safe and effective execution of a test event.

6.2.2.4. Performing TEP instructor or evaluator duties.

6.2.2.5. Approved test conduct simulations such as playbacks or rehearsals.

6.2.3. Publications review. A review of publications is required for all TEP every 12 calendar months after the initial/previous publication review occurred. TEP must document a publication review prior to executing test events. To reestablish currency for publications review, TEP must document review prior to executing another test event. At a minimum, the annual publication review for all TEP will include a review of the following instructions and local supplements.

6.2.3.1. AFTCI 91-202, *AFTC Test Safety Review Policy*, Chapter 7

6.2.3.2. AFI 11-2FT, Vol 3, *Flight Test Operations Procedures* (For TCs/TDs controlling flight test).

6.2.3.3. AFI 11-2FT, Vol 1, *Flight Test Aircrew Training*, Chapters 2, 3, and 4 (For TEP flying as aircrew for test conduct).

6.2.4. Crew Resource Management (CRM) academics is required for all TC/TD every 36 calendar months.

6.2.4.1. Crew Resource Management (CRM) Academics. CRM Academics will be accomplished IAW AFI 11-290_AFMCSUP. Test organizations may add to their AFMC CRM training plans to fit unique unit processes. OGV or equivalent (or OGV approved facilitator and or courseware) training will satisfy this training requirement. Test organizations and units for which AFI 11-290, *Cockpit/Crew Resource Management Program* does not apply are authorized to create a supplemental course which teaches the same underlying principles.

6.2.4.2. Individuals who have never taken, or cannot produce documentation of CRM academics must complete the “initial” CRM academics. Recurring academics can be satisfied by completion of a “refresher” course.

6.2.5. Mission Certifications. Units may develop currency requirements for mission specialized certifications where appropriate. Test organizations will document these requirements in their supplement to this instruction.

6.2.5.1. Test organizations should consider allowing TEP who are also non-rated aircrew to use the “Sortie” aircrew currency item, defined in AFI 11-2FTV1, for any test organization required Mission Certification/ Aircraft Systems currency.

6.3. Loss of Currency.

6.3.1. TEP who become non-current in specific item(s) will not perform test control/mission system duties unless under the supervision of a current and qualified instructor.

6.3.2. If supervising a non-current TEP, an instructor may perform test control duties apart from the required supervision only with unit Commander/Director approval and if the instructor TEP’s duties allow adequate supervision of the non-current TEP.

6.3.3. If performing test control duties while airborne, a non-current TEP may be supervised by instructor qualified aircrew/test crew in order to regain currency for a test control event.

6.3.4. Unit Commander/Director may waive an overdue currency requirement. Commanders/Directors should consider risk level, TEP experience and event complexity when waiving an overdue currency.

DAVID A. HARRIS, Maj Gen, USAF
Commander

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

AFTCI 91-202, *AFTC Test Safety Review Policy*, 12 April 2016

AFI 11-2FT Vol 1, *Flight Test Aircrew Training*, 28 February 2017

AFI 11-2FT Vol 3, *Flight Test Operations Procedures*, 01 March 2017

AFI 11-290, *Cockpit/Crew Resource Management Training Program*, 15 October 2012

AFI 11-290_AFMCSUP, *Cockpit/Crew Resource Management Training Program*, 20 February 2014

AFI 33-360, *Publication and Forms Management*, 1 December 2015

AFI 99-103, *Capabilities-Based Test and Evaluation*, 6 April 2017

AFMAN 33-363, *Management of Records*, 1 March 2008

Adopted Forms

AF Form 847, Recommendation for Change of Publication

AFMC 67, *Ground Training Record*

AFMC 68, *Flying Training Record*

AFMC 69, *Flying Training Comments*

Abbreviations and Acronyms

AFI—Air Force Instruction

AFMC—Air Force Material Command

AFTC—Air Force Test Center

AFTCI—Air Force Test Center Instruction

CRM—Crew Resource Management

CTF—Combined Test Force

IAW—In Accordance With

LOX—Letter of Qualifications/Certifications “Letter of Xs”

N/N—No-Notice

OG/OGV—Operation Group Standardization and Evaluation

OG—Operations Group

OPR—Office of Primary Responsibility

PA—Proficiency Advancement

PER—Periodic

Q—Marginally Qualified

Q1—Qualified

Q2—Qualified with discrepancies

Q3—Unqualified

Q—Qualified

QUAL—Qualification

RQ—Requalification

SAVs—Staff Assisted Visits

SOF—Safety of Flight

SOT—Safety of Test

SPOT—Spot Qualification

TC—Test Conductor

TEP—Test-Essential Personnel

TES—Test-Essential Specialist

TD—Test Director

TW—Test Wing

U—Unqualified

Terms

Calendar Month— The period of duration from the same date of one month to the last day of the next month. (e.g. 24 calendar months means that if certification occurs 5 March 2013, it's good until 31 March 2015.)

Critical Area— Critical areas are those areas that, upon failure, would most adversely affect the qualification of a TEP. Critical areas will include, but are not limited to, Judgement, Safety, and Security.

Crew Resource Management (CRM)— The effective use of all available resources--people, weapon systems, facilities, and equipment, and environment -- by individuals or crews to safely and efficiently accomplish an assigned mission or task. The term "CRM" will be used to refer to the training program, objectives, and key skills directed to this end.

Mission System — Component, weapon, facility or subsystem critical to the mission of the test article.

Non-Test-Essential Personnel (Non-TEP) — Personnel not responsible for Safety of Test (SOT) and/or Safety of Flight (SOF) parameters and can include, but is not limited to, subject matter experts, discipline engineers, test control support personnel, facility operators/technicians, customers, or guests.

Observer— Non-participating personnel attending a test event, other than those required by the test plan to be present.

Qualified Individual — An individual that has successfully accomplished the requirements found in this instruction and their test organizations supplement.

Safety of Test (SOT)— Parameters are those defined in test and safety planning (IAW AFTCI 91-202) as critical to the safe execution of the test.

Test—Essential Personnel (TEP) - TEP roles include Test Directors (TD) and Test Conductors (TC), Test-Essential Specialist (TES); this does not include facilities maintenance, event observers, or those who may be present during test control activities, but not performing TEP duties. TEP evaluate and monitor aircraft, systems under test, and instrumentation systems to make, or provide recommendations for, test execution decisions. TEP directly contribute to safe, secure, effective and efficient mission execution.

Test—Essential Specialist (TES) - Is responsible for monitoring Safety of Test (SOT) and/or Safety of Flight (SOF) parameters. Additionally, these personnel are often responsible for the technical adequacy of their portion of the test.

Test Conductor (TC) — Is responsible for real-time coordination of ground/flight activities with test crew; paces the progression through test procedures, as agreed to in the pre-briefing; defers to the Test Director for decisions, as appropriate; and is the primary communicator to the aircraft/mission system.

Test Control — The act of pacing and directing the conduct of a test in real-time to ensure safe, secure, effective and efficient test.

Test Essential Duties —Duties that directly contribute to the safe, secure and technical execution of a test.

Test Control Personnel—a generic term used to identify personnel that participate in the conduct of test.

Test Director (TD) — The Test Director is responsible for the technical quality, safety, security, effectiveness, efficiency, communication, and support aspects of the test event, as identified in the test package.

Test Event—A set of actions performed to generate data to satisfy a test objective. A test event has a beginning, a middle, and an end. Test events can vary significantly between test programs in many ways, including duration, types of actions, personnel and equipment involved, level of TEP involvement, risk, intensity, and many others. Test events can include, but are not limited to, “runs”, “cards”, “passes”, “shots”, “firings”, “test points”, etc. The determination of what constitutes a test event for any particular test program rests with the unit Commander/Director.

Test Package— The test package shall be an all-encompassing package of documents consisting of a test plan, safety planning, and any other appendices or documentation that support the test planning. Reference AFTCI 91-202, AFTC Test Safety Review Policy, for detailed requirements.

Attachment 2**TEST CONDUCTOR (TC) EVALUATION CRITERIA****Figure A2.1. Test Conductor (TC) Evaluation Criteria.****Test Conductor**

Test Conductor. Complete Areas A and B for qualification of Test Conductors. Complete areas A, B, and C for instructor evaluations. Unit Commanders/Directors are the approving official for all Test Conductor evaluations.

Area A: General TC.

Area A-1: Safety (Critical):

Q. Aware of and complied with all safety factors required for safe aircraft or ground based facility operating procedures and event accomplishment. Demonstrated ability to anticipate potentially hazardous situations developing and took appropriate actions to prevent occurrence.

U. Was not aware of or did not comply with all safety factors required for safe event accomplishment.

Area A-2: Judgment (Critical):

Q. Executed the assigned event in a timely, efficient manner. Performed duties with a sense of understanding and comprehension.

U. Decisions or lack thereof resulted in failure to accomplish the assigned event. Demonstrated poor judgment to the extent that safety would have been compromised.

Area A-3: Test Control Discipline.

Q. Demonstrated strict professional discipline throughout all phases of the event and enforced professional discipline by all test control personnel.

Q-. Only minor deviations in discipline were noted.

U. Failed to exhibit or enforce strict test control discipline. Violated or ignored rules or instructions.

Area A-4: Use of Checklist/Test procedures

Q. Used only approved test procedures and test control procedures during the event. Approved modifications to event plan or test procedures prior to event execution ensuring that changes were within the scope of technical and safety requirements and promoted event efficiency. Briefed appropriate setup and limitations prior to each event. Completed all post-event items.

Q-. Deviated from test procedures that prevented efficiency or violated technical requirements but did not compromise safety. Pre-event card briefings were inadequate or post-event items were not accomplished preventing efficiency.

U. Failed to use approved test procedures or deviated from cards or procedures resulting in the event being compromised. Pre-event card briefings were inadequate or post-event items were not completed resulting in the event being compromised.

Area A-5: Crew Resource Management.

Q. Coordinated effectively with other test control personnel and all test participants. Effectively used all participating test personnel and ensured all data were monitored and/or recorded. Gave clear, concise instructions.

Q-. Coordinated satisfactorily with other test control personnel and all test participants. Some non-critical data were not monitored and/or recorded. Some instructions were not clear and concise.

U. Failed to coordinate with test control personnel or other test participants. Repeatedly did not give clear and concise instructions. Failed to utilize resources causing degradation of the event. Failed to ensure critical data were monitored and/or recorded.

Area A-6: Communication Procedures.

Q. Radio, intercom, and direct communications were concise, accurate, timely and effectively used to direct maneuvers or describe the situation.

Q-. Minor terminology errors or omissions occurred, but did not significantly detract from situational awareness, mutual support, or event accomplishment. Extraneous comments over primary or secondary communication circuits presented minor distractions.

U. Communications over primary and/or secondary circuits were inadequate or excessive. Inaccurate or confusing terminology significantly detracted from mutual support, situational awareness, or event accomplishment.

Area A-7: Knowledge of the System Under Test.

Q. Demonstrated thorough knowledge of the system under test, aircraft systems, limitations, facility operating procedures and performance characteristics necessary to perform individual test control duties.

Q-. Knowledge of the system under test, applicable aircraft systems, limitations, facility operating procedures and performance characteristics was sufficient to perform the event safely. Demonstrated deficiencies either in depth of knowledge or comprehension.

U. Demonstrated unsatisfactory knowledge of the system under test, aircraft systems, limitations, facility operating procedures or performance characteristics.

Area A-8: Briefing(s)

Q. Briefing(s) met requirements. Briefings were well organized, professional, and presented in a logical sequence that enabled clear understanding of mission objectives and requirements. Briefings were concluded in time to allow for additional element and/or crew briefing (if applicable). All test events and appropriate items from safety package were adequately briefed, including potential problem areas where appropriate. If test procedure/profile changes were proposed, led technical discussions to understand the necessity for the change and adequately assessed safety and technical implications. If warranted, allowed reasonable red-line changes to test procedures that did not jeopardize

safety or technical requirements.

Q- Briefing(s) met requirements. Some briefing items were hard to follow or redundant. Briefings dwelled on non-essential items or had limited discussion of test techniques and did not identify potential problem areas.

U. Briefing(s) did not meet requirements. Briefing was confusing or lost the interest of test team members. Briefing did not establish objectives for the event or omitted major test events or safety items. If test procedure/profile changes were proposed, failed to lead technical discussions to understand the necessity for the change or failed to adequately assess safety and technical implications. Allowed red-line changes to test procedures that jeopardized safety or technical requirements.

Area B: Qualification, Test Control

Area B-1: Execution

Q. All assets for safe and effective event execution were properly scheduled enabling complete event accomplishment. Test procedures were easily interpreted, identified all required test procedures, clearly defined test crew responsibilities and challenge-response actions, and contained all appropriate safety items and other test procedure requirements. Used only approved test procedures and test control procedures during the event. Approved modifications to event plan or test procedures prior to event execution ensuring that changes were within the scope of technical and safety requirements and promoted efficiency. Briefed appropriate setup and limitations prior to each event. Completed all post-event items. Ensured that post-event reporting and documentation was completed accurately and in a timely manner.

Q- Most assets for safe and effective event execution were scheduled permitting partial event accomplishment. Test events were organized in such a way as to promote a safe test. Deviated from test procedures that prevented efficiency or violated technical requirements but did not compromise safety. Pre-event card briefings were inadequate or post-event items were not accomplished preventing efficiency. Ensured that post-event reporting and documentation was completed but contained minor errors or was untimely.

U. Insufficient assets were scheduled resulting in failure to accomplish any part of the event. Test procedures were not executable as written, contained insufficient safety limits or did not meet test procedure requirements. Test events were not organized in such a way as to promote a safe test. Failed to use approved test procedures and/or procedures or deviated from cards or procedures resulting in event being compromised. Pre-event card briefings were inadequate or post-event items were not completed resulting in event being compromised. Failed to ensure completion of post-event reporting and documentation.

Area B-2: Security (**Critical**).

Q. Adequate security of event information and material was maintained throughout the event.

U. Inadequate security procedures were carried out which would lead to the compromise of event information and/or material.

Area B-3: Emergency Procedures. Evaluation will be conducted during an actual emergency or as a simulated emergency in an actual test control environment if practical. If an actual test control environment cannot be used, an oral evaluation will be conducted. Evaluate a minimum of two emergencies. Scenarios should be tailored to situations the examinee might encounter while performing their specific test control duties.

Q. Decisions and actions were appropriate and contributed to the safe and timely resolution of the emergency.

Q-. Decisions were essentially correct with some deviations or omissions.

U. Did not provide appropriate corrective action where necessary. Actions hindered the safe resolution of the emergency.

Area C: Instructor.

Area C-1: Instructional Ability.

Q. Demonstrated ability to communicate effectively. Provided appropriate corrective guidance when necessary.

Q-. Instruction was essentially correct with some deviations or omissions. Problems in communications or analysis did not degrade effectiveness of instructions.

U. Inability to effectively communicate with the trainee. Did not provide corrective action where necessary. Did not plan ahead or anticipate trainee problems.

Area C-2: Training/Instructional Briefing and/or Debriefing.

Q. Briefings were well organized, accurate, and thorough. Reviewed the trainee's present level of training and defined events to be performed. Satisfactory ability during critique to reconstruct the test event, offer event analysis, and provide corrective guidance where appropriate. Completed all training documents timely and in accordance with prescribed directives. Training syllabi reflected actual performance of trainee relative to standard. Pre-briefed the trainee's requirements for the next event.

Q-. Minor errors or omissions in briefing, critique, and/or training documents that did not affect upgrade progress.

U. Briefings were marginal or non-existent. Did not review trainee's training documentation or past performance. Failed to adequately critique trainee or provide complete event analysis. Training syllabi grade did not reflect actual performance of trainee. Comments in training documentation were incomplete. Strengths and weaknesses were not identified. Overlooked or omitted major discrepancies. Incomplete pre-briefing of trainee's training requirements and/or objectives for event.

Area C-3: Demonstration and Performance

Q. Effectively demonstrated procedures and techniques. Demonstrated thorough knowledge of the system under test, aircraft systems, procedures, and all applicable publications and instructions.

Q-. Minor discrepancies in the above criteria that did not affect safety or adversely affect trainee performance.

U. Did not demonstrate correct procedure or technique. Insufficient knowledge of the system under test, aircraft systems, procedures, or applicable publications and instructions.

Attachment 3**TEST DIRECTOR (TD) EVALUATION CRITERIA****Figure A3.1. Test Director (TD) Evaluation Criteria.****Test Director**

Test Director. Complete Areas A and B for qualification of Test Directors. Complete Areas A, B, and C for qualification of instructor Test Directors. Unit Commanders/Directors are the approving official for all Test Director evaluations.

Area A: General TD

Area A-1: Safety (**Critical**)

Q. Aware of and complied with all safety factors required for safe aircraft or ground based facility operations and event accomplishment. Demonstrated ability to anticipate potentially hazardous situations developing and took appropriate actions to prevent occurrence.

U. Was not aware of or did not comply with all safety factors required for safe event accomplishment.

Area A-2: Judgment (**Critical**)

Q. Manages the assigned event in a timely, efficient manner. Performed duties with a sense of understanding and comprehension.

U. Decisions or lack thereof resulted in failure to accomplish the assigned event. Demonstrated poor judgment to the extent that safety would have been compromised.

Area A-3: Test Control Discipline.

Q. Demonstrated strict professional discipline throughout all phases of the event and enforced professional discipline by all test control personnel.

Q-. Only minor deviations in discipline were noted.

U. Failed to exhibit or enforce strict test control discipline. Violated or ignored rules or instructions.

Area A-4: Use of Checklists/Test Procedures

Q. Ensured only approved test procedures and test control procedures were used during the event. Approved modifications to event plan or test procedures prior to execution ensuring that changes were within the scope of technical and safety requirements and promoted efficiency.

Q-. Allowed deviations from procedures that prevented efficient event accomplishment or violated technical requirements but did not compromise safety.

U. Failed to use approved test procedures or allowed unauthorized deviations from procedures resulting in event being compromised.

Area A-5: Crew Resource Management.

Q. Promoted effective coordination between all test team members. Coordinated effectively with other test control personnel. Effectively used all crewmembers. Gave clear, concise crew instructions.

Q-. Coordinated satisfactorily with other test control personnel. Some instructions were not clear and concise.

U. Allowed poor resource management between team members to influence safety or effectiveness. Failed to coordinate with test control personnel. Did not give clear and concise instructions. Failed to utilize resources causing degradation of the event.

Area A-6: Communication Procedures.

Q. Promoted effective communication between all test team members. Radio, intercom, and direct verbal communications were concise, accurate, timely and effectively used to direct maneuvers or describe the tactical situation.

Q-. Minor terminology errors or omissions occurred, but did not significantly detract from situational awareness, mutual support, or event accomplishment. Extraneous comments over primary or secondary communication circuits presented minor distractions. Lack of timely communication presented distractions.

U. Allowed poor communication between team members to influence safety or effectiveness. Communications over primary and/or secondary circuits were inadequate or excessive. Inaccurate or confusing terminology significantly detracted from mutual support, situational awareness, or event accomplishment.

Area A-7: Knowledge of System Under Test.

Q. Demonstrated thorough knowledge of aircraft/mission systems, limitations, and performance characteristics necessary to perform individual test control duties.

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

U. Demonstrated unsatisfactory knowledge of aircraft/mission systems, limitations, or performance characteristics.

Area A-8: Briefings. Test Directors need not conduct briefings, but are to be evaluated on their supervision of briefings.

Q. Ensured briefing(s) were clear and concise and IAW briefing requirements and were well organized, professional, and presented in a logical sequence that enabled clear understanding of event objectives and requirements. Ensured all test events and appropriate items from safety package were adequately briefed, including potential problem areas where appropriate.

Q-. Ensured briefing(s) met requirements.

U. Failed to ensure briefing(s) met requirements. Allowed briefing that did not establish objectives or omitted major test events or safety items

Area B: Qualification, Test Control

Area B-1: Security (**Critical**)

Q. Adequate security of event information and material was maintained throughout test event.

U. Inadequate security procedures were carried out which would lead to the compromise of event information and/or material.

Area B-2: Emergency Procedures. Evaluation will be conducted during an actual emergency or as a simulated emergency in an actual test control environment if practical. If an actual test control environment cannot be used, an oral evaluation will be conducted. Evaluate a minimum of two emergencies. Scenarios should be tailored to situations a Test Director might encounter while performing their specific test control duties.

Q. Decisions and actions were appropriate and contributed to the safe and timely resolution of the emergency.

Q-. Decisions were essentially correct with some deviations or omissions.

U. Did not provide appropriate corrective action where necessary. Actions hindered the safe resolution of the emergency.

Area C: Instructor.

Area C-1: Instructional Ability.

Q. Demonstrated ability to communicate effectively. Provided appropriate corrective guidance when necessary.

Q-. Instruction was essentially correct with some deviations or omissions. Problems in communications or analysis did not degrade effectiveness of instruction.

U. Inability to effectively communicate with the trainee. Did not provide corrective action where necessary. Did not plan ahead or anticipate trainee problems.

Area C-2: Training/Instructional Briefing and/or Debriefing.

Q. Briefings were well organized, accurate, and thorough. Reviewed the trainee's present level of training and defined events to be performed. Excellent ability during critique to reconstruct the test event, offer event analysis, and provide corrective guidance where appropriate. Completed all training documents timely and in accordance with prescribed directives. Training syllabi reflected actual performance of trainee relative to standard. Pre-briefed the trainee's requirements for the next event.

Q-. Minor errors or omissions in briefing, critique, and/or training documents that did not affect upgrade progress.

U. Briefings were marginal or non-existent. Did not review trainee's training documentation or past performance. Failed to adequately critique trainee or provide complete event analysis. Training syllabi grade did not reflect actual performance of trainee. Comments in training documentation were incomplete. Strengths and weaknesses were not identified. Overlooked or omitted major discrepancies. Incomplete pre-briefing of trainee's training requirements and/or objectives for event.

Area C-3: Demonstration and Performance

Q. Effectively demonstrated procedures and techniques. Demonstrated thorough knowledge of aircraft systems, procedures, and all applicable publications and regulations.

Q-. Minor discrepancies in the above criteria that did not affect safety or adversely affect trainee performance.

U. Did not demonstrate correct procedure or technique. Insufficient knowledge about aircraft systems, procedures, and/or proper source material.

Attachment 4

TEST CONTROL PERSONNEL LETTER OF X'S EXAMPLE


Table A4.1. Test Control Personnel Letter of X's Example.

Name	Test Control Fundamentals			Mission Certification						
				Aircraft/Mission System			Specialized			
	TC	TD	TES	F-15	F-16	Wind Tunnel	F-15 Hi AoA	F-16 Hi AoA	Flutter	LCO
Kent, C			T							
Wayne, B	I	X		X	X		X		X	
Stark, A		E	I		X	X		X		
T = enrolled in training X = qualification or certification complete I = instructor E = evaluator										

Attachment 5

ACCEPTANCE OF QUALIFICATION AND/OR TRAINING MEMORANDUM

Figure A5.1. Acceptance of Qualification and/or Training Memorandum Example.



DEPARTMENT OF THE AIR
FORCE
(INSERT HEADQUARTERS)
(BASE AND LOCATION)

(DATE)

MEMORANDUM FOR (SQUADRON)/CC FROM: (SENDING PARTY)

SUBJECT: Acceptance of (SPECIFIC JOB TITLE) Qualification

1. Acceptance of qualification is recommended for the following individual(s):
List all new individuals entering the program with prior qualifications

NAME	CURRENT QUAL/ORG	DESIRED TEP QUAL	RECOMMENDED EVENTS
Mr. Always Hope	TC/523 FLTS	TC/575 FLTS	Classroom Training Event
Mr. Not Always Hope	TC/523 FLTS	TC/575 FLTS	TC/TD Evaluation

2. *This paragraph should be used to describe where each individual is coming from and their previous qualification at that organization/squadron. It should also recommend that the individual(s) should now be qualified to operate in the new position in the new location based on previous training and knowledge.*
Example: Mr. Hope was previously qualified as a Test Conductor with the 523 FLTS. Mr. Hope's evaluation and training records from that qualification have been reviewed. Based on the training and evaluation accomplished by the 523 FLTS and Mr. Hope's in depth knowledge of 575 FLTS operations in the role of X-Wing Pilot it is requested the 523 FLTS TC qualification be accepted for work as a 575 FLTS TC once the training outlined in paragraph 3 is accomplished.

3. *This paragraph should state if the individual is ready for immediate certification or if there is any additional training needed before the new position can be awarded.*
Example: Prior to Mr. Hope performing Test Conductor duties, he is required to undergo a classroom academic session with a current 575th ITC. This academic session will cover 575th-specific emphasis areas and the minimum knowledge/ability criteria required to pass a 575th control room checkride.

4. *If required, identify supporting documentation.*

JUSTIN A. DOCUMENT, Civ, USAF
Chief FTE, 575th Flight Test Squadron

Attachments

- 1.
- 2.
- 3.

1st Ind, (*SQUADRON*)CC,

MEMORANDUM FOR (*SENDING PARTY*)

With the accomplishment of the training requirements discussed above, acceptance of qualification(s) are approved / disapproved.

Comments: _____

INSERT A. NAME, Lt Col, USAF
Commander, 575th Flight Test Squadron