BY ORDER OF THE COMMANDER
53D WING (ACC)

53D WING INSTRUCTION 99-101

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Test and Evaluation

53D WING TEST AND EVALUATION

COMPLIANCE WITH THIS INSTRUCTION IS MANDATORY

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This instruction implements AFPD 99-1, *Test and Evaluation*; Air Force Manual (AFMAN) 11-260, *Tactics Development Program*; Department of Defense Instruction (DoDI) 5000.89_Department of the Air Force Instruction (DAFI) 99-103, *Capabilities-Based Test and Evaluation*; DoDI 5000.80_DAFI 63-146, *Operation of the Middle Tier of Acquisition*, and Air Combat Command Instruction *(*ACCI) 99-101, *ACC Test and Evaluation*, and AFI 63-101/20-101, *Integrated Life Cycle Management*, as applicable to operational testing of combat weapons systems and the evaluation of aircrew training devices. This instruction designates the 53d Wing Technical Director as the wing focal point for all test management processes, procedures, and policies; and provides guidance for group and squadron leadership, project managers, test team members, support and management personnel in planning, conducting, analyzing, reporting on test projects, and disseminating data and information. This wing instruction also implements applicable elements of Department of the Air Force Manual (DAFMAN) 63-119, *Mission Oriented Test Readiness Certification* and Technical Order (TO) 00-35D-54, *USAF Deficiency Reporting, Investigation, and Resolution*. This instruction is not intended to be an all-inclusive document; and does not take precedence over established directives, instructions, manuals, or standards. The 53 WG Test Team Handbook (TTH) contains more detailed "how to" guidance, including document formats and examples. The TTH is located on the wing test training office SharePoint site at 53 WG/TEU Test Training and Information - Home (dps.mil). Additional supporting or clarifying directives and policies may be found in DoDI 5000.02, *Operation of the Adaptive Acquisition Framework*; DODI 5000.81, *Urgent Capability Acquisition*, AFI 10-601, *Operational Capability Requirements Documentation and Validation*; AFI 61-201, *Management of Scientific and Technical Information*; DAFI 99-106, *Joint Test and Evaluation Program*; T.O. 00-5-1-WA-

1, *Air Force Technical Order System*; T.O. 00-5-3-WA-1, *Air Force Technical Manual Acquisition Procedures*; Commander, Air Combat Command (COMACC) Plan 001 and Air Force Global Strike Command (AFGSC)/CC Plan 001, *Nuclear Weapon System Evaluation Program (NucWSEP) Combat Sledgehammer*; Chief of Staff of the Air Force (CSAF) Plan 53, *Weapons System Evaluation Program*; and Air Force Test Center Instruction (AFTCI) 91-202, *Air Force Test Center Test Safety Review Policy*. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Form 847s from the field to 53 WG/TD, 203 West D Avenue, Suite 600, Eglin AFB Florida, 32542-6867. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW AFI 33-322, *Records Management and Information Governance Program*, and disposed of IAW Air Force Records Information Management System Records Disposition Schedule. This publication may be supplemented at any level, but all supplements must be routed to the OPR of this publication for coordination prior to certification and approval. Compliance with the attachments in this publication is mandatory. See **Attachment 1** for a complete glossary of references and supporting information.

SUMMARY OF CHANGES

Implements fact-of-life administrative changes and corrects document errors. It reflects process adjustments and updates as a result of external and internal reorganization. It also modifies some internal NucWSEP responsibilities and document coordination procedures.

Chapter 1

TEST AND EVALUATION CONCEPT

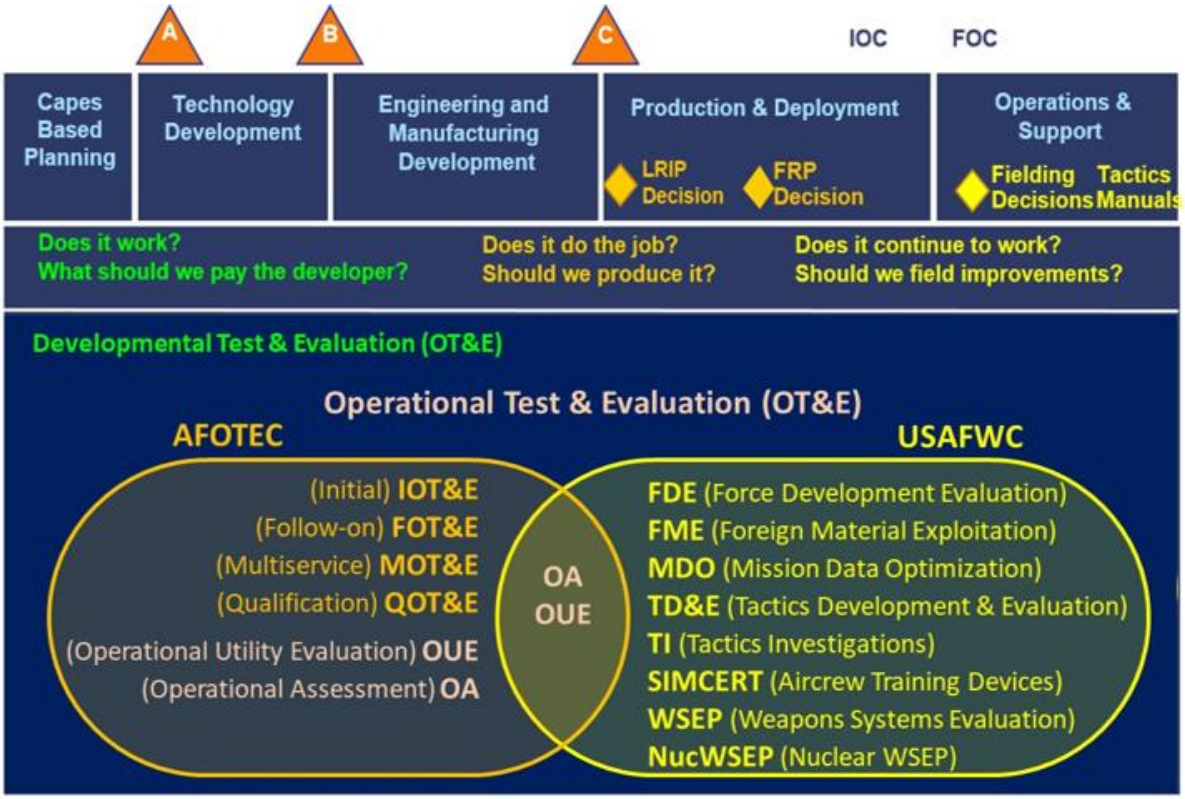
1.1. Purpose of Test and Evaluation (T&E). The overarching functions of T&E are to mature system designs, manage risks, identify and resolve deficiencies expeditiously, and ensure systems are operationally effective and suitable. The Air Force T&E community plans for and conducts integrated T&E as an efficient continuum in collaboration with the requirements and acquisition communities. DoDI5000.89_DAFI 99-103 describes the roles and responsibilities of the T&E community in executing this function.

1.2. Traditional T&E.

1.2.1. **Developmental Test and Evaluation (DT&E).** Developmental testing is conducted throughout the acquisition and sustainment processes to assist in engineering design and development and to verify critical technical parameters are achieved. Developmental testing supports the decision to certify systems as mission ready according to DAFMAN 63-119. The 53 WG supports DT&E, as requested, through Air Combat Command (ACC)/A5/8/9.

1.2.2. **Operational Test and Evaluation (OT&E).** Service Component Operational Test Agency (OTA) operational testing includes initial operational test and evaluation (IOT&E), qualification operational test and evaluation (QOT&E), follow-on test and evaluation (FOT&E), multi-service operational test and evaluation (MOT&E), operational assessments (OA), and operational utility evaluations (OUE). These tests are normally conducted by the United States Air Force (USAF) OTA, which for materiel solutions is the Air Force Operational Test and Evaluation Center (AFOTEC), and for joint tactics, techniques, and procedures (TTP) is the Air Force Joint Program Office (AFJO). Since AFOTEC does not possess aircraft, the 53 WG supports AFOTEC's OT&E of Combat Air Forces (CAF) systems when directed by ACC/A5/8/9. Operational testing in ACC is conducted through two test centers: the United States Air Force Warfare Center (USAFWC) using the 53 WG and 505th Command and Control Wing (CCW); and the Air National Guard Air Force Reserve Command Test Center (AATC); as well as two non-test center-aligned wings: the 67th Cyber Wing (CW) and the 557th Weather Wing (WW). The scope of ACC and AFGSC user MAJCOM testing and/or assessment includes force development evaluations (FDE), OA, OUE, sufficiency of test reviews (SOTR), verification flight testing (VFT), capabilities and limitations reports (C&LR), capabilities readiness assessments (CRA), tactics development and evaluations (TD&E), tactics investigations (TI), foreign materiel exploitation (FME), Weapons Systems Evaluation Program (WSEP), Nuclear Weapons System Evaluation Program (NucWSEP), simulator certification (SIMCERT), simulator validation (SIMVAL), and mission planning environment (MPE) testing. Definitions of these test types of testing and assessment products can be found throughout the document, in the Glossary, and in DoDI500.89_DAFI 99-103.

Figure 1.1. The Acquisition and Test Continuum.



1.2.3. **Joint Test (JT), Quick Reaction Test (QRT), and Collaborative Joint Test (CJT) Support.** The JT, QRT, and CJT programs are sponsored by the Air Force Joint Test and Evaluation (JT&E) Program Office to evaluate technical or operational tactics, techniques, and procedures applicable to more than one service. Candidate programs are nominated by the services and directed and funded by the Office of the Secretary of Defense (OSD). The USAFWC is the USAF agent for JTs, QRTs, and CJTs. JTs, QRTs, and CJTs usually do not result in the acquisition of systems.

1.2.4. **Foreign Comparative Test (FCT).** An FCT is an OSD-sponsored T&E program conducted on foreign nations' systems, equipment, and technologies to determine their potential to satisfy validated US operational requirements.

1.2.5. **Investigative Firings/Special Interest Profiles.** The goal of these firings is to further define weapon system envelopes, evaluate deficiencies which surface during WSEP, or complete unfinished phases of DT&E/OT&E for fielded weapons or software.

1.2.6. **Simulator Certification (SIMCERT).** SIMCERT is an ACC program defined in AFI 16-1007, *Management of Air Force Operational Training Systems*, as a process of ensuring, through validation of hardware and software baselines, that an aircrew training device (ATD) and its components provide accurate and credible training and also makes sure the device continues to perform to the delivered specifications, performance criteria, and configuration

levels. SIMCERT is conducted in accordance with (IAW) procedures coordinated with HQ ACC and defined in the SIMCERT Test Master Plan.

1.2.7. **Simulator Validation (SIMVAL).** SIMVAL is the process for comparing a training device's operating parameters and performance to the current intelligence assessment of a prime mission system, threat and interaction between the prime mission system and threat; and documenting the differences and impacts. This process includes generation and deployment of an intelligence data baseline of the system, comparison of simulator characteristics and performance, support for the modification and upgrade of the simulator, a comparison of simulator and threat operating procedures, and correction of any significant deficiencies SIMVAL is conducted IAW procedures coordinated with HQ ACC and defined in the SIMVAL Master Plan.

1.2.8. **Aircraft Monitor and Control (AMAC) Certification and Surveillance Test Program.** The Air Force Nuclear Weapons Center, Nuclear Systems Division (AFNWC/NCS), Kirtland AFB, New Mexico, performs periodic certification and surveillance testing of the nation's vital deterrent systems. The purpose of surveillance testing for each weapon system is to monitor changes in the baseline for each system that would indicate a design issue created by aging, aircraft modification, or a combination thereof. This testing is performed IAW AFI 63-125, as prescribed in the test plan provided by the AFNWC/NCS.

1.2.9. **Cybersecurity and Cyber Resiliency Testing.** ACC operational test units will incorporate appropriate (i.e., sufficient to establish mission assurance) cybersecurity and cyber resiliency testing for all systems-under-test that possess hardwired or air gap (e.g., RF, IR, data transfer cartridges, etc.) connectivity.

1.2.9.1. The focus of mission assurance OT will be on system and mission level capabilities against credible, real-world threats (i.e., realistic system attack surfaces with rationally exploitable system-under-test vulnerabilities), and will specifically address whether technical, physical, operational, and managerial controls for the system-under-test provide the necessary ability to mitigate potential adverse functionality in the system's intended operating environment.

1.2.9.2. The 67th Cyber Wing (CW) is the principal ACC organization responsible for planning, coordinating, and accomplishing CAF Cyber-related T&E.

1.3. Urgent Needs.

1.3.1. Combatant Command-identified and Joint Staff or Service Component-validated, urgent operational needs represent the highest priority of the DoD. Under the authority, direction, and operational control of the DepSecDef, the Director, Joint Rapid Acquisition Cell (JRAC), manages the urgent capability acquisition pathway IAW DoDD 5000.71. The defense rapid acquisition system using its rapid acquisition authorities (RAA) is designed to rapidly deliver capability to the warfighter; it is optimized for speed and considers acquisition risks (cost, schedule, and performance) and the operational risk to the user if an effective solution is not deployed in the required timeframe identified by the requesting Commander. The goal for fielding an initial capability is within 2 to 24 months.

1.3.1.1. DELETED.

1.3.1.2. **Urgent Operational Needs (UON).** UONs are capability requirements identified by a DoD Component as impacting an ongoing or anticipated contingency operation. If left unfulfilled, UONs result in capability gaps potentially resulting in loss of life or critical mission failure. A UON normally includes a target date for initial fielding and a description of the concept of operations (CONOPs). The CONOPs identifies any non-materiel options under consideration to mitigate the gap.

1.3.1.2.1. DoD Service Component-Specific UON. These types of UONs are defined in Chairman, Joint Chiefs of Staff Instruction (CJCSI) 5123.01H, *Charter of the Joint Requirements Oversight Council (JROC) and Implementation of the Joint Capabilities Integration and Development System (JCIDS)* and further discussed in DoDD 5000.71, *Rapid Fulfillment of Combatant Commander Urgent Operational Needs*. For USAF, a Commander, Air Force Forces (COMAFFOR) submits a UON to the lead command and the lead command validates the need IAW AFI 10-601, Attachment 2.

1.3.1.2.2. The Chief of Staff of the Air Force (CSAF) Urgent Need Requirements. CSAF provides top-down direction to rapidly fulfill an urgent need, to include assignment of a lead command. The lead command notifies AF/A5RP, SAF/AQXA, and the implementing command for action.

1.3.1.3. **Joint Urgent Operational Need (JUON)/Joint Emerging Operational Need (JEON).**

1.3.1.3.1. JUONs are UONs that are identified by a Combatant Command or by DoD as inherently joint and impacting an ongoing contingency operation, as detailed in CJCSI 5123.01H.

1.3.1.3.2. JEONs are UONs that are identified by a Combatant Command as inherently joint and impacting an anticipated or pending contingency operation.

1.3.1.3.3. The SAF/AQX will receive DoD tasking for and will disposition AF-assigned JUON/JEONs. Once received, JUON/JEONs will be administratively processed in the same manner as UONs per DODI 5000.81, *Urgent Capability Acquisition,* and AFI 10-601, *Operational Capability Requirements Documentation and Validation*.

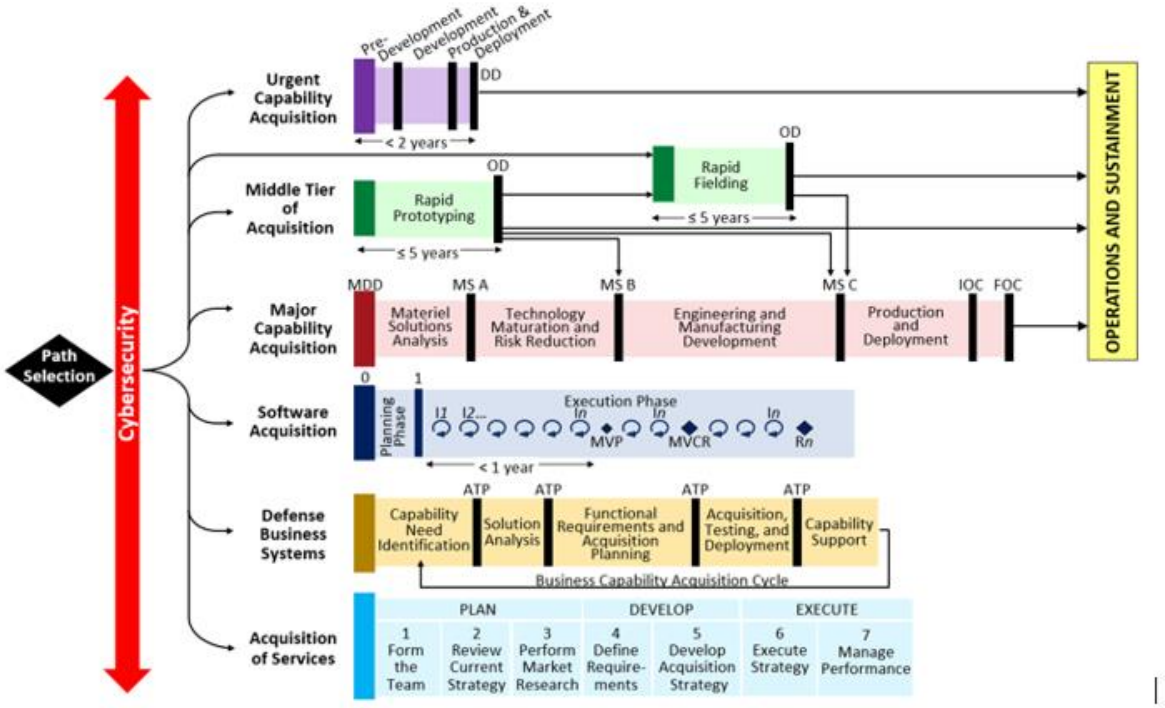
1.4. Adaptive Acquisition, Rapid Acquisition, Agile Software Development.

1.4.1. **Adaptive Acquisition Framework (AAF).** The new AAF enables innovative acquisition strategies through policy, and empowers the Defense Acquisition Workforce to tailor their approach to the specific requirements of their program. It is a transformational tool that improves the ability to deliver warfighting capability at the speed of relevance.

1.4.1.1. The updated AAF website (**www.dau.edu/aaf**) now has policies for all six acquisition pathways and includes additional guidance and resources to help acquisition professionals better understand the pathways and the flexibilities they offer. Program teams will utilize the applicable one of this series of six pathways, each designed for the unique characteristics of the capability being acquired. This revised method supports the Defense Acquisition System with the objective of delivering effective, supportable, and affordable solutions in a timely manner. The DoD 5000 Series Acquisition Policy Re-write is enabling innovative acquisition approaches that deliver warfighting capability at the

speed of relevance by simplifying acquisition policy; tailoring acquisition approaches; empowering program managers; conducting data driven analysis; actively managing risk; and emphasizing sustainment.

Figure 1.2. Adaptive Acquisition Framework.



1.4.2. **Technology Transition Mechanisms.** Technology transition mechanisms include advanced technology demonstrations (AdTD), joint capability technology demonstrations (JCTD), exercises, and experiments. The ACC/A5/8/9 occasionally tasks 53 WG to support these efforts.

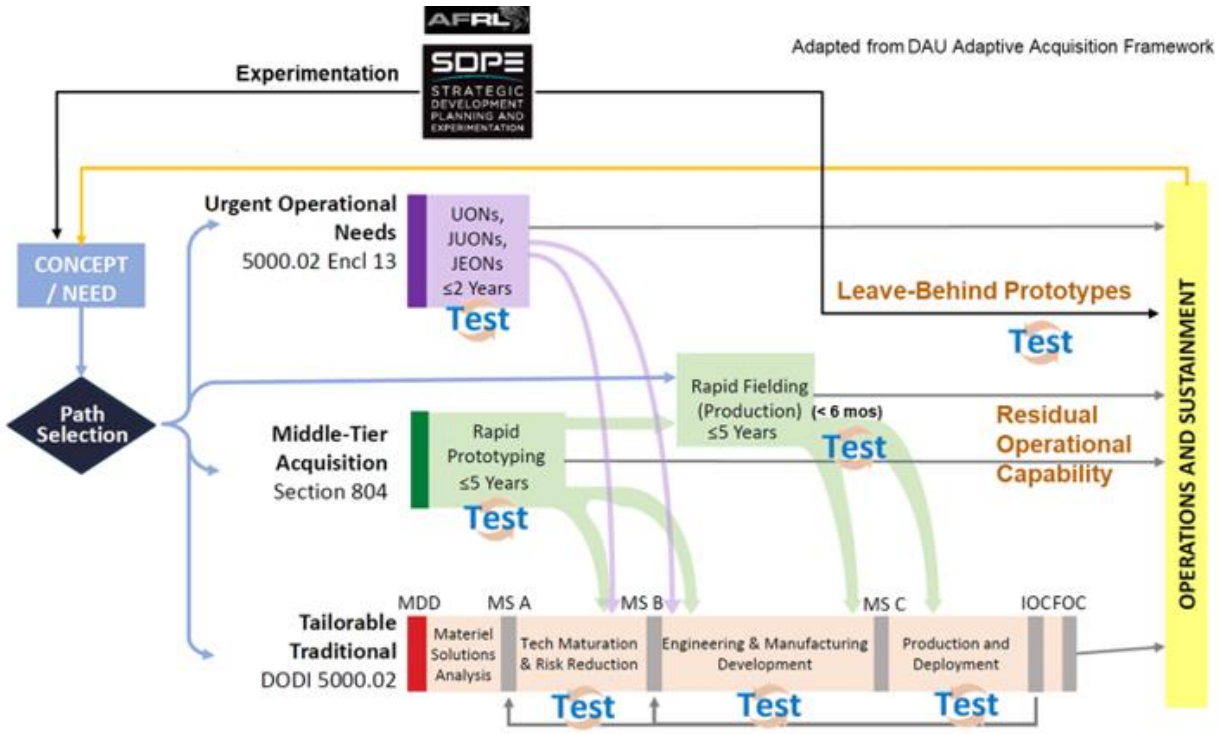
1.4.3. **Innovation, Demonstration, and Experimentation.**

1.4.3.1. **Air Force Futures** . The AF Futures Office, HAF/A5/7, was created to look across USAF's diverse warfighting portfolio and drive enterprise-wide solutions to complex issues. Guided by the National Defense Strategy, AF Futures' efforts and initiatives enable the Air and Space Forces to rapidly identify key areas for investment in new capabilities that build the foundation for a Joint Force that can conduct true multi-domain operations, even in the most difficult scenarios. Through a process of innovative exploration, concept development, and enterprise-wide integration across core functions, AF Futures produces future force design and capability development guidance to synchronize acquisition, planning, and programming.

1.4.3.1.1. DELETED.

1.4.3.2. **Strategic Development Planning and Experimentation (SDPE) Office** . In May 2016, the Air Force stood up the SDPE office as a key component focused on future Air Force multi-domain capabilities. The SDPE office is formally tasked with examining the USAF operational utility of emerging technologies. In its deliberate planning, SDPE continues to be engaged in a campaign across DoD and Industry, structured to provide industry with information about on-going Capability Development Activities and SDPE Experimentation Campaigns, as well as proposed experimentation pathfinders and watch-list efforts. Pathfinders are efforts that are already receiving experimentation funding to develop fully refined experimentation campaigns, while watch-list efforts are strategic areas of interest receiving development planning resources to determine an appropriate way forward.

Figure 1.3. Test Enabling of Adaptive Acquisition Framework.



1.4.4. **Rapid Acquisition.** The AF Acquisition Secretary's 2018 Air Force Guidance Memorandum (AFGM) established the initial vector for rapid acquisition activities using rapid prototyping and rapid fielding authorities from Section 804 of the National Defense Authorization Act of 2016. The authorities addressed in this memorandum emphasized "being dismissive of things that do not matter, but very disciplined on things that do." Program Executive Officers were chartered to track both schedule and delivery acceleration over traditional approaches.

1.4.4.1. Rapid acquisition relies on a cycle of rapid learning, and test is the primary means of learning. Early tester involvement, beneficial in any acquisition strategy, is particularly essential for rapid acquisition. Test rigor and discipline remains critical to the success of rapid prototyping and rapid fielding programs. As AFGM stated, going fast does not mean going sloppily, rapid does not mean reckless, nor does rapid acquisition skimp on test. Every program is different; therefore, the amount and nature of test is tailorable to the particular risk and uncertainty for the system under test. The Air Force T&E enterprise is an engaged partner in delivering innovative and affordable capability at the speed of relevance. The success of rapid acquisition hinges on safe and effective test.

1.4.4.2. In order to field a rapid prototype, the system must be demonstrated / tested in an operationally-relevant environment. Wherever possible, scope and methodology for these tests should be co-developed with end users. User inputs should be documented as part of test planning. Certification that sufficient user input supports the classification of testing as "operationally-relevant" should be approved by the milestone decision authority (MDA) prior to final testing. It is understood that operational conditions cannot be fully recreated in controlled tests.

1.4.4.2.1. The acquisition program manager should demonstrate that major risks (i.e., ones without technical or operational "work-arounds") will be retired by the end of testing with only moderate/minor risks (i.e., ones with "work-arounds") remaining. These risks should be documented as part of test planning.

1.4.4.3. Upon successful operational demonstrations addressing validated requirements, rapid prototyping should transition into procurement and fielding via rapid fielding authorities, incorporation in a current acquisition program, or modification of a fielded system.

1.4.5. **Agile Software Development.** The Air Force's acquisition and test communities are united in providing effective capabilities to warfighters when and where they need them. ASD is a framework for meeting this goal, but it requires a thoughtful development and test approach.

1.4.5.1. In order to succeed at ASD, programs must have these attributes: stable, functioning system baseline; modular system architecture; decomposable, flexible requirements; software shaped by a cross-functional team of developers, users, testers, product owner; test automation framework and strategy; fixed schedule for releases; organizational definition of "Done" for sprints (i.e. interim capability releases); definition of minimum viable capability for releases; and a contract type and structure that supports ASD.

1.4.5.2. The ASD test approach needs to keep pace with system development and releases. Testers must be involved from program initiation through subsequent development to both understand the system and design test. Adequate integrated test must be accomplished on a realistic and relevant frequency to ensure capability delivery stays on track. Documentation should be kept to a minimum to convey test strategy and results. The test planning documentation should include a concise strategy that will define the ASD test framework. A release annex will cover the specifics (time, place, resources) of a planned release. An abbreviated test report will accompany each integrated test; these will be

"quick-look" type reports on the timeline of days versus weeks to ensure relevancy for product owners.

1.4.5.3. It is highly likely that weapons system vulnerabilities uncovered in software cyber testing are classified; testers should comply with all applicable security guidance when collecting data for and/or reporting results of cyber assessments in all test environments, including ASD.

1.5. T&E Guidance. The DAFI 99-103 tasks each MAJCOM's designated test organization to establish disciplined processes for planning and executing T&E activities. The ACC/A5T is the ACC office responsible for testing and is responsible for ACCI 99-101. The USAFWC/A5/8 is the USAFWC coordinating agency for operational testing. This document, along with 53WGI 99-101, 53WGI 99-104, and the 53 WG Test Team Handbook, establishes the direction and processes for conducting 53 WG testing. To that end, the 53 WG will:

1.5.1. To the maximum extent possible, conduct T&E in a joint, integrated DT/OT environment.

1.5.2. Use dedicated test assets (as available) IAW AFPD 10-9, when conducting tests.

1.5.3. Conduct T&E over the life of a system to ensure it continues to meet user requirements and to explore non-materiel means of satisfying deficiencies.

1.5.4. Conduct testing in as realistic an operational environment as possible to determine system operational effectiveness and suitability.

1.5.5. Require all test articles (to include support equipment, software, government-furnished equipment [GFE]) be as production-representative as possible. Sufficient quantities of test articles must be available.

1.5.6. Conduct FDE to refine estimates made during IOT&E or QOT&E, to evaluate changes and verify correction of deficiencies, to assist in TTP development, and to reevaluate a system to ensure it continues to meet operational needs.

1.5.7. Support IOT&E, MOT&E, QOT&E, and FOT&E; however, the 53 WG will not conduct these types of operational test, unless specifically requested by AF/TE and tasked by ACC.

1.5.8. Support quick reaction capability (QRC) processes as directed by ACC and AFGSC.

1.5.9. Support service component and joint interoperability certification testing, as required.

1.6. Integrated Testing . Integrated testing is a concept for test design that must intentionally be built into the earliest program strategies, documentation, and test plans. The earlier that integrated testing strategies are developed and adopted, the greater the opportunities and benefits. Successful integrated testing will identify system design deficiencies much earlier in developmental testing, as well as reduce the number of T&E resources needed for operational testing.

1.6.1. Per DAFI 99-103 and ACCI 99-101, ACC test units will, to the extent practical, integrate testing across the test continuum from system inception through post-Milestone C sustainment and upgrades. This should include collaborative planning and execution of test phases and events to provide shared data in support of independent analysis, evaluation, and reporting by all developmental and operational stakeholders.

1.6.2. As tasked, the 53 WG supports the integrated testing concept, along with other adjunct tester collaboration opportunities, during early requirements definition and system development activities. Key tenets of integrated testing are the operational tester a) must ensure integrity of the data; and b) must also retain data assessment independence.

1.7. Acquisition Professional Development Program (APDP). Congressionally mandated, the APDP is the USAF implementation of the Defense Acquisition Workforce Improvement Act (DAWIA). It applies to government personnel only. The APDP promotes the development and sustainment of a professional acquisition workforce – to include testers – in the Air Force.

1.7.1. There is value in having select 53 WG test and evaluation personnel leverage the variety of Defense Acquisition University (DAU) and Air Force Institute of Technology (AFIT) courseware available, as well as subscribing to the Continuous Learning Points (CLP) program required of all acquisition professionals. It is important for the following three reasons: a) it baselines 53 WG accessions entering the test enterprise for the first time with general information regarding how they fit into the grand scheme of requirements, acquisition, and test, b) it arms key wing, group, and unit leadership with the knowledge they need to interact effectively with acquisition professionals outside our organization; and to successfully mentor aircrew, project management, and technical professionals (i.e. engineers, analysists), and c) APDP participation guarantees that our young military and civilian technical professionals will compete well for future jobs outside of ACC, where being acquisition-savvy and rising through the tiers of APDP are expected.

1.7.2. Understanding that the primary mission of the 53 WG is not to develop career acquisition professionals, the standard APDP rubric for our professional technical personnel has been augmented with an abbreviated "onboarding" test training program designed for most aircrew and select leadership. Leveraging AFIT or DAU distance learning offers, the purpose of this "onboarding" training is to minimally acquaint new non-test professional entrants into the T&E enterprise with the very basics of acquisition and test.

1.7.3. Details of 53 WG implementation of APDP can be found in the 53d Wing Acquisition Professional Development Program (APDP) Action Plan, 1 Feb 2022.

1.8. Applicability . The following operational test and test support policies, processes, procedures, and products outlined below in this instruction will be used for all 53 WG-conducted operational test, test support, and aircrew training device certification projects, regardless of acquisition category (ACAT), to include non-ACAT programs, unless specifically excluded by this directive or superseded by other applicable higher headquarters guidance or direction.

1.8.1. Unless specified, this publication does not apply to 53 WG conventional WSEP.

Chapter 2

TEST OPERATIONS

2.1. Organization . The 53 WG is organized into three groups, and one wing support agency made up of an A-Staff and a Technical Directorate, all with distinct, but interrelated, missions.

2.1.1. **The 753d Test and Evaluation Group (TEG).** The 753 TEG manages and executes operational test and provides test support for all AFGSC bomber and select high altitude command control, intelligence, surveillance, reconnaissance (C2ISR) mission design series (MDS). It evaluates materiel solution combat capabilities, as well as develops TTP to meet current and future warfighter needs. The 753 TEG is the functional manager and technical expert for testing, modification, acquisition, sustainment, and certification of all CAF aircrew training device (ATD) systems and conducts Combat Forge, the ATD WSEP, IAW CSAF Plan 53. Responsibilities include but are not limited to negotiating taskings, securing resources, developing support plans/agreements, planning and collaborating, overseeing flying activities, analyzing data, preparing/publishing plans and reports, as well as developing and delivering roadshows to educate CAF operational units on emerging capabilities and tactics. The 753 TEG also provides operational test management services for a specific subset of developmental systems that require expedited delivery to the warfighter. To that end, designated 753 TEG units are responsible for planning, coordinating, and managing resources; developing support plans and agreements; monitoring test execution; gathering and analyzing data; and preparing and publishing plans and reports for these systems, as directed by ACC/A8ZG, but at the discretion and approval of the 753 TEG Commander. These specially designated units leverage both traditional and rapid prototyping and fielding test processes and guidance, with streamlined higher headquarters (HHQ) oversight. The 753 TEG also provides operational and operational test subject matter expertise to meet HQ OSD and AF, Joint Staff, COCOMs, AFMC, AFOTEC, and user MAJCOMs needs. The 753 TEG provides OT&E execution, instrumentation, and analysis support to AFOTEC for IOT&E and FOT&E of CAF weapon systems. Through the 49 TES and 72 TES, the 753 TEG also executes NucWSEP (Combat Sledgehammer) IAW CSAF Plan 53 and in support of AFGSC Plan 001.

2.1.2. **The 53d Test and Evaluation Group (TEG).** The 53 TEG manages and executes operational test and provides test support for all USAF fighter, combat search and rescue (CSAR), select tactical intelligence, surveillance, and reconnaissance (ISR) MDSs, as well as Agile Combat Support, including chemical and biological defense systems, Aircrew Flight Equipment Systems, air-to-air missiles, air-to-ground weapons, electronic warfare, and MPE operational testing and evaluation for USAF and non-USAF agencies. It evaluates materiel solution combat capabilities, as well as develops TTP to meet current and future warfighter needs. Responsibilities include negotiating tasking, securing resources, developing support plans/agreements, planning and collaborating, overseeing flying activities, analyzing data, preparing/publishing plans and reports, and delivering roadshows to educate CAF operational units on emerging capabilities and tactics. It occasionally provides support for the dual capable aircraft (DCA) aspects of NucWSEP (Combat Sledgehammer) IAW COMACC Plan 001. The 53 TEG provides operational and operational test subject matter expertise to meet HQ OSD and AF, Joint Staff, COCOMs, AFMC, AFOTEC, and user MAJCOMs needs. The 53 TEG provides OT&E execution, instrumentation, and analysis support to AFOTEC for IOT&E and

FOT&E of CAF weapon systems. The 53 TEG is also the wing focal point for all non-EW aspects of applicable foreign military acquisition (FMA)/foreign military exploitation (FME).

2.1.3. **The 53d Weapons Evaluation Group (WEG).** The 53 WEG conducts the USAF Air-to Air WSEP (Combat Archer), the USAF Air–to-Ground WSEP (Combat Hammer), and the Command and Control WSEP (Combat Axe) IAW CSAF Plan 53. It also supports Weapons Instructor Course air-to-air formal training syllabi under COMACC Plan 92, and through the 86 FWS executes Dual Capable Aircraft (DCA) NucWSEP (Combat Sledgehammer) IAW CSAF Plan 53 in support of COMACC Plan 001. The 82d Aerial Targets Squadron (ATRS) supports DoD and international customers by providing air-to-air targets primarily in the Eglin Gulf Test and Training Range at Tyndall AFB, Florida; White Sands Missile Range, Holloman AFB, New Mexico; and Utah Test and Training Range, Hill AFB, Utah. In addition, two E-9A aircraft provide range sweep, telemetry relay, and communications link support for numerous DoD tests. The 53 Test Support Squadron ensures realistic aerial target threat EW replication, provides rapid prototyping and fabrication, and administers flight scheduling, communications, and acquisitions support for 53 WEG activities. The 81st Aerial Control Squadron (ACS) provides tactical command and control for WSEP activities.

2.1.4. DELETED.

2.2. Scope of 53d Wing Testing . The 53 WG is annually assigned a variety of tests by ACC and by AFGSC. The 53 WG "managing" group (and associated unit) is defined as that organization tasked to lead the test and is responsible for the planning, analysis, reporting, and in most cases, the execution. Tests are broken into five main categories.

2.2.1. **Wing Conducted.** Wing conducted tests identify the 53 WG as the lead operational test organization (OTO) and are managed by a 53 WG-assigned project manager (PM). The PM is responsible for project planning, execution, and final reporting.

2.2.2. **Wing Supported.** Wing supported tests are managed or conducted by other lead test agencies (AATC, 505 CCW, AFMC, AFOTEC, DARPA, etc.) with close involvement by an assigned 53 WG PM. The 53 WG PM is responsible for writing a test support plan and coordinating 53 WG support for the lead test agency as directed in the ACC operational test support request (OTSR). The managing group commander may waive developing a formal test support plan if the lead test agency plan adequately delineates 53 WG execution responsibilities. Although a formal 53 WG-published test report is not required, PMs will provide a memorandum for record (MFR) to the managing group commander summarizing 53 WG participation, if directed.

2.2.3. **Wing Integrated.** Some tests are combined DT&E and OT&E efforts, where the 53 WG is supporting other organizations in one portion of the overall test, but is conducting a dedicated operational test (OA, FDE, OUE, etc.) in another portion. All 53 WG units should look to conduct integrated testing in order to reduce costs, optimize schedules, and increase overall test efficiency. Test planning will reflect both support and conducted responsibilities.

2.2.4. **Wing Monitored.** A wing monitored test has no organic 53 WG flying or ground test support. 53d WG personnel either monitor another agency's testing or monitor early progress or planning of a project in anticipation of a future test. An ACC tasking is not required to monitor product development/test activity and unit funds may be expended (e.g., travel) at the discretion of the unit commander.

2.2.4.1. In some cases, select 53 WG aircrew may be requested fly in non-53 WG aircraft to provide an operational perspective or to operate equipment. ACC taskings, test support plans, test readiness reviews, and reporting are not required to participate in these missions; the decision to follow some or all of the traditional 53 WG test process, as delineated in this document, is at the discretion of the managing group commander. If additional clarifications are necessary, contact 53 WG/TD.

2.2.5. **Wing Early Involvement.** Early involvement provides an opportunity for 53 WG participation – usually in the pre-Milestone B acquisition phase – in test planning activities, and normally for either ACAT 3 or MAJCOM-managed acquisition programs. The 53 WG participants are authorized to provide operational test advice, as well as draft test planning inputs to the acquisition community, for programs projected to be assigned to the 53 WG for future operational testing. Draft inputs include, but are not limited to, operational test planning inputs for Test and Evaluation Master Plans (TEMP). The 53 WG personnel are authorized and encouraged to participate in the associated acquisition program office-sponsored Integrated Test Teams (ITT). Participating 53 WG personnel will ensure they are not setting/perceived-as-setting MAJCOM capability requirements for the system under development.

2.3. T&E Funding . The funding sources for T&E depend upon the nature and purpose of the work and type of testing. Test agencies are referred to DoD 7000.14-R, *Financial Management Regulation*, Vol 2A, Chapter 1; AFMAN 65-605 Vol 1, *Budget Guidance and Procedures*, Chapter 14; and AFI 99-109, *Major Range & Test Facility Base (MRTFB) Test & Evaluation Resource Planning*, for explicit guidance.

2.3.1. The primary sources for 53 WG operational test funding are the ACC and AFGSC budget processes. These normally yield an initial distribution from the associated MAJCOM financial management (FM) to the 53 WG and ultimately to the groups and units. AFGSC and AFOTEC are responsible for funding 53 WG units directly supporting their operational test requirements.

2.3.2. ACC requirements owners are responsible for programming funding through the program objective memorandum (POM) process for acquisition testing (FDE, OUE, etc.) in support of their respective weapon systems. Tactics development and WSEP are centrally funded using O&M resources from PE 28015.

2.3.3. ACC testing is provisioned only to meet CAF requirements. Accordingly, other MAJCOMs, services or agencies requesting ACC test support or expenditure of test assets will be required to provide funding commensurate with test support requested. Funding source, specific fund cite(s) and organizational financial point of contact information, must be included with the OTSR submitted to ACC/A5/8/9 Test and Training Branch (A5TT).

2.3.4. Other funding agencies may include, but are not limited to, aircraft systems program offices (SPO); weapons SPOs; Air Force Research Laboratory (AFRL); Rapid Capabilities Office, other MAJCOMs; and other services. The method for these organizations to provide funding will be coordinated through the PM with the applicable 53 WG budget analyst (FM)/unit resource advisor (RA). Organizations requesting 53 WG support for their testing (e.g. AFMC, AATC, 505 CCW) normally fund all the 53 WG support required for the test except flying hours and civilian/military pay.

2.3.5. The ACC/A5T and ACC/A3T will coordinate to submit annual Program Objective Memorandum (POM) inputs to address CAF TD&E requirements through PE 28015 Combat Development. Available ACC resources may limit the scope and number of TD&E events executed each FY. Partner MAJCOMs with ACC test MOAs should also program for funding to help address weapon system specific TD&Es, as well as cost sharing for large force test environments that benefit MAJCOM objectives.

2.3.6. **Programming and Budgeting for T&E Activities.** Each group within the 53 WG is responsible for budgeting the resources required to accomplish test and evaluation responsibilities.

2.3.6.1. Administrative costs to run each squadron or detachment (e.g., computers, office supplies, phones, etc.) should be budgeted separately from specific T&E activities and submitted upon 53 WG's call for programming and/or execution plans. Funding provided by ACC/FMA within ACC's assigned operating budget account numbers (OBAN) will be distributed to the groups based on recommendations of the financial working group (FWG) and approval by the financial management board (FMB). The groups will then determine distribution to their individual units. Test units will ensure test-specific funding requirements are documented in the test priority list (TPL)/test project order (TPO) process, a web-based tool outlining the test description, its purpose, required resources to accomplish the test, and the scope of the effort for each test program by fiscal year and type of funds.

2.3.6.2. Test units are also responsible for coordinating test-specific funding needs directly with the appropriate user-MAJCOM and implementing MAJCOM (normally AFMC) program offices. Funding received from sources external to the ACC and FME budget process will be controlled and accounted for by the receiving 53 WG unit and reported to 53 WG/FM.

2.3.6.3. **Active Duty Operational Support (ADOS) – Active Component (AC) Man-Day Program.** AFI 36-2619 provides guidance on the ADOS-AC man-day program to access capabilities within the ARC to support Regular AF missions and Total Force Integration (TFI)-tasked operational missions. Relatedly, Military Personnel Appropriation (MPA) is the centrally managed 3500 Regular AF military personnel account that provides pay and allowances for both the Active Component, and the Reserve Component when activated for current contingencies. This MPA account also funds the ADOS-AC man-day program in support of all other Regular AF requirements, to include test. An MPA man-day equates to a day's pay for officer or enlisted personnel. HAF/A1 decides how many-days each command gets.

2.3.6.3.1. ACC/A5T and AFGSC/A1MP send out an annual MPA POM call to all applicable test centers soliciting upcoming MPA test requirements. 53 WG is considered a "test center" for submittal purposes (i.e., MAJCOM test solicitations and 53 WG replies do not flow through USAFWC). 53 WG organizational replies, fed back to ACC and AFGSC via 53 WG/DPM, are then input into M4S, a HHQ tool for generating unit taskings and creating orders for people on tour. For ACC-allocated MPA, each MPA tour of duty has to support an approved OTSR. Based on the HAF/A1 allocation and the adjudicated field test demand, A5T and AFGSC/A1MP provide an

initial MPA expectation notification to each of the test centers at the beginning of the FY.

2.3.7. **A/A and A/G WSEP.** These programs are ACC/A3 centrally managed and executed by the 53 WEG. The 53 WEG will ensure 53 WG/FM has visibility on all project funding.

2.3.8. **NucWSEP.** Air Launched Cruise Missile (ALCM) and B-2 NucWSEP are AFGSC funded; DCA NucWSEP is ACC funded, with USAFE involvement. All aspects of NucWSEP, with the exception of DCA is managed and executed by the 753 TEG; DCA NucWSEP is managed by the 53 WEG/86 FWS. The 753 TEG and 53 WEG will ensure that 53 WG/FM has visibility on all project funding.

2.3.9. **FMA/FME.** A prioritized FMA list will be created by 53 TEG Det 3 action officers and coordinated through the group commanders and 53 WG/CC. In coordination with ACC A5/8Z and the Air Force Test and Evaluation Special Programs Division (AF/TEZ), FME prioritization and budgeting is a 53 TEG process. The 53 WG FM will distribute funds to the respective groups tasked.

2.3.10. **SIMCERT/SIMVAL.** Funding for ACC, USAFE, and PACAF is a 753 TEG-coordinated process in conjunction with ACC/A5T through the 29th Test and Evaluation Squadron (TES). All other SIMCERTs will be funded by the appropriate MAJCOM IAW AFI 16-2007.

2.4. Operational Test Team Composition . Each 53 WG test is conducted using a team effort led by the PM. The test team includes a variety of expertise to include, but not limited to, rated personnel, engineers, analysts, and maintenance support. Unit commanders must ensure personnel assigned to a test team are current and qualified to perform the required duties for support of test operations IAW **Chapter 5** of this instruction.

2.4.1. **Project Manager (PM).** The PM is the single focal point within the 53 WG for assigned test projects. The PM will be assigned to a unit of the group managing the test. The PM is required to be either a civilian or military government employee; the project-managing group commander may waive the requirement for a government project manager, in writing, on a case-by-case basis. Contractors may be designated as Assistant Project Managers (APM) and are allowed to accomplish all PM functions except for those understood to be inherently governmental (e.g., directing government personnel, obligating government funds, etc.). The PM is responsible for developing the appropriate test planning methodology for the project, as well as ensuring that the test is conducted in an operationally representative environment, to include production representative test assets and appropriate operators and maintainers. The PM will direct the test team and assign responsibilities to ensure all aspects of planning, execution, and reporting are accomplished. See **paragraph 2.5.12** for additional PM responsibilities. Note: Some 53 WG units use the characterizations “project manager” and “test director” interchangeably; **paragraph 2.4.6.1** specifies the additional responsibilities of a TD within the context of a mission control room environment.

2.4.2. **Unit Project Officer (UPO).** A UPO will be designated for each 53 WG test execution / supporting unit assigned to the test project. The UPOs will be the personal representatives of the execution / supporting unit commander and have authority to coordinate with outside agencies regarding test details as directed by the PM. Authority to commit the unit’s resources IAW the OTSR will be delegated to the UPO at the discretion of the unit commander. In cases

where the managing and executing functions are performed by the same unit, no UPO is required.

2.4.3. **Rated Project Officer (RPO).** Each test project involving 53 WG flying will have an RPO assigned to the test team. RPOs will be pilots or combat systems officers assigned to either the managing or executing/supporting unit and currently qualified in the test project aircraft. The RPO will be the team expert on aircraft systems, operations, and tactical employment. More than one RPO may be assigned to the test team depending on the number of different types of aircraft involved. RPOs may also act as the UPO at the discretion of both the PM and the executing/supporting unit commander.

2.4.4. **Technical Support.**

2.4.4.1. **Operations Analyst (OA).** The OA is responsible for implementing the appropriate test planning methodology. This will be accomplished in every wing-conducted test by building efficient test matrices (plans) and analyzing results with the appropriate analysis tools. The OA will provide support and feedback to the Operational Suitability Analyst (OSA). The OA will perform data quality management. After collaborating with other test team members, the OA will present this analysis in the required report and/or briefing format at the conclusion of testing.

2.4.4.2. **Test Engineer (TE)/Flight Test Engineer (FTE).** The TE/FTE is normally the subject matter expert in the overall system being tested, possessing the most in-depth knowledge of the test item, its integration with the test platform, and its connectivity with off-board systems. Additionally, a project test engineer usually has primary responsibility for ensuring that the system-under-test is instrumented sufficiently to meet the data collection requirements of the test.

2.4.4.3. The OA and TE/FTE will collaborate to determine the test matrix; execute technical risk assessments and suggest risk mitigation strategies and tradeoffs to the PM; ensure the technical adequacy of the ground or flight test being conducted; develop the mission run cards; interpret the data gathered during test missions; and recommend proper courses of action for subsequent test missions.

2.4.5. **Operational Suitability Analyst (OSA).** The OSAs ensure operational suitability test objectives adequately reflect system requirements and fielding recommendations; and test reports reflect the test team's fielding concerns with respect to system suitability (reliability, maintainability, availability and other suitability factors). The OSAs assist the PM in reviewing, submitting and tracking deficiency reports (DRs).

2.4.6. **Mission Control Room Personnel.** A control room is defined as any facility, ground or airborne, which provides two-way communications with the aircrew and real-time capability to monitor safety of flight, quality of test data, and/or flight termination system information. Essential control room personnel, for the purposes of this instruction, are test directors and test conductors, as well as designated subject matter experts whose active presence in the control room is essential to safety of flight and/or mission success. See 53 WGI 99-104, *Complex Test Mission Preparation and Control*, and the associated 53 WG mission control room web-based training resident on the wing test training SharePoint site for additional guidance on control room operations.

2.4.6.1. **Test Director (TD).** The TD is a highly experienced individual who acts as the test team supervisor in the mission control room and has emergency direct communication with the mission test aircrew.

2.4.6.2. **Test Conductor (TC).** The TC is an experienced individual who is designated as the primary communicator with the test aircrew. The TC will adjudicate in-flight changes to the briefed mission run cards and will clear the test aircrew to proceed from one test point to the next. In missions where a TC is not needed, all test conductor duties will be accomplished by the TD.

2.4.7. **Instrumentation Technician.** Instrumentation technicians are responsible for the pre-flight and post-flight of aircraft, data acquisition, and telemetry systems. Duties include ensuring all data requirements are identified and data collection systems are properly configured to accurately and comprehensively record required test data.

2.5. Roles and Responsibilities . The 53 WG/CC is responsible for the safe, effective, and efficient conduct of all testing within the wing. COMACC, through USAFWC, has delegated approval authority for all non-OSD Oversight 53 WG test plans and reports to the 53 WG commander, acting wing commander, or vice commander. The 53 WG/CC further delegates approval authority to group or unit commanders for specific test types, as itemized in the roles and responsibilities below, and/or as specified in **Chapter 4**, **table 4.1**.

2.5.1. **53 WG Technical Director (TD).** Provides overall technical policy, guidance, standardization, oversight and control for all technical aspects of test and evaluation for the 53d Wing. The 53 WG/TD will:

2.5.1.1. Provide technical advice to the commander and vice commander.

2.5.1.2. Facilitate and participate in external and internal technical director/advisor exchanges.

2.5.1.3. Act as wing science and technology information (STINFO) manager.

2.5.1.4. Act as wing acquisition functional manager.

2.5.1.5. Coordinate on all test technical documents destined for higher headquarters (HHQ) review and approval.

2.5.1.6. Act as wing management internal control toolset (MICT) lead for ACCI 99-101, DODI 5000.89_DAFI 99-103, 53WGI 99-101, and 53WGI 99-104.

2.5.1.7. Act as wing lead for all senior leader test enterprise activity.

2.5.1.8. In collaboration with the 53 WG Chief Scientist (53 WG/TE), act as OPR for wing test modeling and simulation initiatives.

2.5.1.9. Act as wing OPR for content and standardization in 53 WGI 99-101, 53 WGI 99-104, test team handbook, test documents templates, test information file, and test and execution readiness review templates.

2.5.1.10. Act as wing OPR for the test information file (TIF).

2.5.1.11. Act as wing OPR for test lessons learned.

2.5.1.12. Share wing advanced program access approval authority (AAA) responsibilities.

2.5.1.13. In collaboration with 53 WG/TE, act as OPR for all wing data technology initiatives.

2.5.1.14. As delegated by MAJCOM (ACC/A5T), act as MAJCOM Acquisitional Functional Manager approval authority for all 53 WG APDP change and waiver actions.

2.5.2. **53 WG Test Operations (TEO).** The wing test operations office is the wing focal point for all test tasking from and reporting to HQ ACC and HQ AFGSC, except for WSEPs. The wing test operations office has direct liaison authority with ACC and AFGSC, as well as USAFWC Staff. Wing test operations personnel will:

2.5.2.1. Participate in the ACC Test Priority List (TPL) integrated product team (IPT) conference; coordinate the ACC TPL; coordinate all 53 WG additions, deletions, and changes to the ACC TPL; generate quarterly and annual TPL Assessments.

2.5.2.2. As available, participate in the CAF Tactics Review Board (TRB) and Weapons and Tactics Conference (WEPTAC).

2.5.2.3. Coordinate all wing test documents (OTSRs, plans, reports, fielding recommendations, release recommendations, TRPs, TEMPs, etc.) through all group, safety, wing, and higher headquarters (HHQ) offices, as applicable.

2.5.2.4. Act as 53 WG focal point for SEEK EAGLE requests, as directed by AFI 63-101_20-101, for all aircraft directly supporting 53 WG operational testing, except 53 WEG-owned E-9 and drone aircraft.

2.5.2.5. Manage all wing conventional munitions requests (except 53 WEG air-to-air missiles), allocations, transfers, and reporting. Submit all wing munitions requirements and reports to HQ ACC/A3TW, IAW AFI 11-212 and DAFAFMAN 21-201. The wing alternate munitions manager is assigned to 59 TES/EAS and is responsible for all Nellis AFB-based munitions activity.

2.5.2.6. Manage the wing's A/A target requests and kill authorizations (except for 53 WEG).

2.5.2.7. Manage the wing's telemetry instrumentation kit requests and allocations in support of test and evaluations IAW AFI 99-120 (except for 53 WEG).

2.5.2.8. Act as the 53 WG focal point for all temporary modifications and instrumentation management activities, guidelines, and procedures, IAW AFI 63-101/20-101. Forward AF Form 1067 for appropriate reviews and approvals. Manage aircraft modifications for 53 TEG and 753 TEG-assigned test assets.

2.5.2.9. Maintain and forward any published unclassified and SECRET test plans and test reports (except those caveated formerly restricted data [FRD], restricted data [RD], or NATO classified) to the Defense Technical Information Center (DTIC) IAW the AFRIMS.

2.5.2.10. Ensure that all published 53 WG technical documents (e.g., test plans, test reports) are assigned an ACC document number.

2.5.2.11. Manage the development and sustainment of the operational test and evaluation management system (OTEMS), test document tracker (TDT), and the wing test operations SharePoint site.

2.5.2.12. With the exception of documents caveated FRD, RD, or NATO classified, post appropriate 53 WG test documents (test plans, test reports, etc.) on the 53 WG Test Plans and Reports Secret Internet Protocol Router Network (SIPRNET) SharePoint Site after document approval.

2.5.2.13. Organize weekly consolidated test reviews video teleconferencing, and supply read-aheads to participants at least 24 hours prior.

2.5.2.14. DELETED.

2.5.2.15. Submit all unit-generated and managing group commander-approved TTP in the form of Tactics Bulletins (TB), Flash Bulletins (FB), and Operational Test Bulletins (OTB) directly to the 561st Weapons Squadron (WPS) for additional processing.

2.5.3. **53 WG Test Training (TEU).** The Wing test training office is the wing focal point for test training and the TTH. Wing test training personnel will:

2.5.3.1. Develop 53 WG test training course curriculum and conduct annual curriculum reviews.

2.5.3.2. Publish an annual test training schedule and provide for course registration via the wing test training SharePoint Site.

2.5.3.3. Conduct 53 WG test training IAW **Chapter 5** of this instruction.

2.5.3.4. Track unit and individual test training completion and provide quarterly status of test training briefings.

2.5.3.5. Develop and maintain the wing training SharePoint site.

2.5.3.6. Maintain and update the 53 WG TTH and test training courseware.

2.5.3.7. Host the TIF and Test Best Practices (TBP) folders on the wing SharePoint site IAW **Chapter 5** of this instruction.

2.5.3.8. Maintain a data base of all wing personnel in acquisition professional development program (APDP) coded positions and document APDP training status of each individual at least semi-annually.

2.5.3.9. Periodically organize training seminars, as directed by 53 WG/TD.

2.5.3.10. Coordinate for Air Force Institute of Technology (AFIT) instructor support, as required, for 53 WG-sponsored test training.

2.5.4. **53 WG Safety (SE).**

2.5.4.1. Provide a safety representative to support each test team, when requested.

2.5.4.2. Review and coordinate on all test plans for safety considerations and mission risk management (MRM).

2.5.4.3. Provide for a 53 WG RM manager to administer the 53 WG test MRM program, to include developing and maintaining MRM templates and worksheets for test operations.

2.5.4.4. As practical, attend all wing flight readiness reviews.

2.5.5. **53 WG Executive Director (DE).** Provides overall administrative, resource, and fiscal policy, guidance, standardization, oversight and control for supporting elements of test and evaluation for the 53d Wing. The 53 WG/DE will:

2.5.5.1. Provide administrative and resource advice to the commander and vice commander.

2.5.5.2. Facilitate and participate in external and internal strategic planning efforts to include managing 53 WG Program Objective Memorandum (POM) inputs.

2.5.5.3. Manage long-term strategic efforts for the wing including resource sustainment, facility, and personnel/manpower program decisions.

2.5.5.4. Coordinate on all fiscal, resource, and contract requirements documents destined for higher headquarters (HHQ) review and approval, including near-term (current FY+1) and out-year planning processes (FYDP/POM).

2.5.5.5. Coordinate on all wing test, evaluation, plus modeling and simulation initiatives involving new resource/personnel/facility requirements.

2.5.6. **53 WG Senior Intelligence Officer (SIO), 53 WG/A2.** The 53 WG Intelligence is the focal point for all intelligence operations conducted in support of testing and evaluation. As a non-Intelligence Wing, the Senior Intelligence Officer (SIO) has the responsibility for the execution of the Intelligence function across all subordinate units to ensure they are provided the most up-to-date intelligence capabilities to conduct realistic and effective tests missions. The 53 WG/IN will:

2.5.6.1. Develop, implement, and track intelligence mission qualification programs to include evaluation of currency elements.

2.5.6.2. Identify intelligence training and qualification requirements and help develop, equip, and implement programs to meet mission, readiness, and career field standards.

2.5.6.3. Ensure unit level personnel are able to gather/access critical data.

2.5.6.4. Manage and coordinate on utilization of all intelligence personnel within the organization.

2.5.6.5. Provide intelligence tailored to the wing's test and evaluation mission.

2.5.6.6. Provide full-spectrum threat assessments and mission planning in support of deployments, contingencies, operational test, weapons system evaluations, and combat operations, as applicable.

2.5.6.7. Debrief aircrew/operators and write/transmit mission reports/analysis.

2.5.6.8. Conduct Intelligence Oversight (IO) training and manage program execution by unit-level IO monitors.

2.5.7. **53 TEG/CC.** The 53 TEG/CC will:

2.5.7.1. Maintain qualified aircrews and mission-ready aircraft to support 53 WG testing.

2.5.7.2. Manage the annual 53 TEG flying hour program and reflows, re-allocations, and reporting as required to ACC/A3TB. Coordinate with 53 WEG for its E-9 flying hour compilation and submission.

2.5.7.3. Prepare an annual financial plan including resources required to execute assigned testing.

2.5.7.4. Act as lead command validation and approval authority for temporary modifications to assigned test assets.

2.5.7.5. Ensure organizational compliance with the AFGSC-ACC test support MOA.

2.5.7.6. Provide 53 TEG staff assistance to 15 TF, as required, IAW all applicable manpower management directives and agreements.

2.5.7.7. Provide guidance for test planning, coordinating resources, developing support plans/agreements, monitoring execution, gathering and analyzing data, and preparing and publishing plans, reports, fielding recommendations, and interim documents for 53 TEG-managed operational testing.

2.5.7.8. Monitor defense acquisition programs and manage HQ ACC-directed T&E.

2.5.7.9. Support testing conducted by other agencies as directed by HQ ACC.

2.5.7.10. Conduct concept of test briefings (COTBs) for all operational tests managed by 53 TEG.

2.5.7.11. Conduct readiness reviews for all tests managed and/or flown by TEG aircrews and/or aircraft.

2.5.7.12. Develop and maintain a set of metrics on test operations.

2.5.7.13. Ensure procedures are established for planning, conducting, and reporting test programs IAW DODI 5000.89_DAFI 99-103, DAFMAN 63-119, and ACCI 99-101.

2.5.7.14. Approve all certifications of readiness for operational test IAW DAFMAN 63-119.

2.5.7.15. Approve all non-OSD Oversight test plans (where flight test portion of MRM is assessed to be Low Caution and below), test support plans, test reports, and release recommendations authored by TEG personnel. Coordinate on all fielding recommendations authored by 53 TEG personnel, and on OSD Oversight test plans and test reports.

2.5.7.16. Designate 53 TEG staff and assigned unit leadership APDP-coded positions to meet mission requirements. Appoint a group APDP Manager to oversee the group program.

2.5.7.16.1. Ensure APDP designated positions are properly coded in the wing manpower document.

2.5.7.16.2. Review acquisition certification achievement of 53 TEG staff and unit leadership to ensure required certifications and continuous learning is achieved IAW AF policy.

2.5.7.16.3. Ensure overdue APDP certification waiver request packages are approved prior to the established certification suspense date.

2.5.7.17. Ensure that appropriate test safety risk mitigation is accomplished for all 53 WG flying operational test or test support projects which have no assigned Lead Developmental Test Organization (aka non-LDTO).

2.5.7.18. Develop Test Information File (TIF) inputs for review by 53 WG/TD to communicate test process-related information to all test units in the wing.

2.5.7.19. Coordinate USAFWC or 53 WG senior leader acquisition or test meeting attendance plan with 53 WG/CV.

2.5.7.20. Manage the 53 WG FMA/FME program.

2.5.7.21. In collaboration with 53 WG/TD, tailor this document's test guidance, as appropriate, for rapid acquisition programs.

2.5.8. **753 TEG/CC.** The 753 TEG/CC will:

2.5.8.1. Maintain qualified aircrews and mission-ready aircraft to support 53 WG testing.

2.5.8.2. Manage the annual 753 TEG flying hour program and reflows, re-allocations, and reporting as required to ACC/A3TB.

2.5.8.3. Prepare an annual financial plan including resources required to execute assigned testing.

2.5.8.4. Act as lead command validation and approval authority for temporary modifications to assigned test assets.

2.5.8.5. Ensure organizational compliance with the AFGSC-ACC test support MOA.

2.5.8.6. Provide 753 TEG staff assistance to classified activity, as required, IAW all applicable manpower management directives and agreements.

2.5.8.7. Provide guidance for test planning, coordinating resources, developing support plans/agreements, monitoring execution, gathering and analyzing data, and preparing and publishing plans, reports, fielding recommendations, and interim documents for 753 TEG-managed operational testing.

2.5.8.8. Monitor defense acquisition programs and manage HQ ACC-directed T&E.

2.5.8.9. Support testing conducted by other agencies as directed by HQ ACC.

2.5.8.10. Conduct COTBs for all operational tests managed by 753 TEG.

2.5.8.11. Conduct readiness reviews for all tests managed and/or flown by 753 TEG aircrews and/or aircraft.

2.5.8.12. Develop and maintain a set of metrics on test operations.

2.5.8.13. Ensure procedures are established for planning, conducting, and reporting test programs IAW DODI 5000.89_DAFI 99-103, DAFMAN 63-119, and ACCI 99-101.

2.5.8.14. Approve all certifications of readiness for operational test IAW DAFMAN 63-119.

2.5.8.15. Approve all non-OSD Oversight test plans (where flight test portion of MRM is assessed to be Low Caution and below), test support plans, test reports, and release recommendations authored by 753 TEG personnel. Coordinate on all fielding

recommendations authored by 753 TEG personnel, and on OSD Oversight test plans and test reports.

2.5.8.16. Conduct NucWSEP IAW COMACC Plan 001 and AFGSC/CC Plan 001. Coordinate on all 24-Hour Quick Look, Planning Factors, Reliability Scoring Panels, and 53 WG-assigned nuclear Air Launched Munitions Analysis Group (ALMAG) documentation.

2.5.8.17. Designate 753 TEG staff and assigned unit leadership APDP-coded positions to meet mission requirements. Appoint a group APDP Manager to oversee the program.

2.5.8.17.1. Ensure APDP designated positions are properly coded in the wing manpower document.

2.5.8.17.2. Review acquisition certification achievement of 753 TEG staff and unit leadership to ensure required certifications and continuous learning is achieved IAW AF policy.

2.5.8.17.3. Ensure overdue APDP certification waiver request packages are approved prior to the established certification suspense date.

2.5.8.18. Develop Test Information File (TIF) inputs for review by 53 WG/TD to communicate test process-related information to all test units in the wing.

2.5.8.19. In coordination with 53 WG/TD, ensure that appropriate test safety risk mitigation is accomplished for all 753 TEG flying operational test or test support projects which have no assigned Lead Developmental Test Organization (aka non-LDTO).

2.5.8.20. For acquisition or test meetings requiring USAFWC or 53 WG senior leader attendance, coordinate the attendance plan with 53 WG/CV.

2.5.8.21. In collaboration with 53 WG/TD, tailor this document's test guidance, as appropriate, for rapid acquisition programs.

2.5.9. **53 WEG/CC.** The 53 WEG/CC will:

2.5.9.1. Conduct A/A and A/G WSEP IAW CAF Plan 53.

2.5.9.2. Manage the annual WEG flying hour program and reflows, re-allocations, and reporting, as required, for ACC/A3TB. Coordinate with 53 TEG for E-9 flying hour compilation and submission.

2.5.9.3. Develop and maintain a set of metrics on WSEP and drone operations.

2.5.9.4. Prepare an annual financial plan including resources required for each projected evaluation and submit to ACC/A3 through 53 WG/FM.

2.5.9.5. Manage the 53 WEG air-to-air missiles' requests, allocations, and reporting under the Tactical Air Missile Program (TAMP), IAW AFI 11-212 and AFMAN 21-201.

2.5.9.6. Manage the 53 WEG A/A target requests and kill authorizations.

2.5.9.7. Manage the 53 WEG-required telemetry instrumentation kit requests and allocations, IAW AFI 99-120.

2.5.9.8. Act as SEEK EAGLE request focal point, as directed by AFI 63-104, for all 53 WEG-assigned aircraft.

2.5.9.9. Manage temporary aircraft modifications for 53 WEG-assigned E-9 and drone assets.

2.5.9.10. Conduct an appropriate safety review for all weapons system evaluation flying.

2.5.9.11. Develop and maintain 53 WEG operating instructions (or equivalent guidance), as required, tailored to address WSEP and drone operations not covered by this document.

2.5.9.12. Maintain and operate USAF inventory of BQM-167.

2.5.9.13. Maintain and operate DoD's only full-scale inventory of QF-16.

2.5.9.14. Designate 53 WEG staff and assigned unit leadership APDP-coded positions to meet mission requirements. Appoint a group APDP Manager to oversee the program.

2.5.9.14.1. Ensure APDP designated positions are properly coded in the wing manpower document.

2.5.9.14.2. Review acquisition certification achievement of 53 WEG staff and unit leadership to ensure required certifications and continuous learning is achieved IAW AF policy.

2.5.9.14.3. Ensure overdue APDP certification waiver request packages are approved prior to the established certification suspense date.

2.5.10. DELETED.

2.5.10.1. DELETED.

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2.5.10.11. DELETED.

2.5.10.12. DELETED.

2.5.11. **Squadron/Detachment (Unit) Commander** . The unit commander will:

2.5.11.1. Maintain qualified aircrews and mission-ready aircraft to support 53 WG testing, as applicable.

2.5.11.2. Appoint test team members as appropriate for each wing-conducted, wing-supported, wing-integrated, wing-monitored, or wing early involvement test project.

2.5.11.3. Ensure all personnel supporting test operations are trained and qualified.

2.5.11.4. Establish a process to document unit leadership review and approval of all mission run cards and test procedures.

2.5.11.5. Prepare an annual financial plan including resources required for each projected test.

2.5.11.6. Monitor the progress of assigned tests.

2.5.11.7. Ensure timely dissemination of TIF information to test team members and establish a signoff method to ensure individual test team members have read the TIF.

2.5.11.8. As requested by wing, engage in the MAJCOM requirements processes by providing timely and appropriate feedback on outstanding test-derived weapons system deficiencies and/or known operational shortcomings.

2.5.11.9. Develop and maintain a set of metrics on test operations.

2.5.11.10. Supervise an audit of all unit test project folders at least once annually. It is encouraged that these audits be accomplished by the project managers or technical advisors of other 53 WG test units.

2.5.11.11. Designate assigned unit leadership APDP-coded positions to meet mission requirements. Appoint a unit APDP Manager to oversee the program.

2.5.11.11.1. Ensure APDP designated positions are properly coded in the wing manpower document.

2.5.11.11.2. Review acquisition certification achievement of unit APDP-coded personnel to ensure required certifications and continuous learning is achieved IAW AF policy.

2.5.11.11.3. Ensure overdue APDP certification waiver request packages are approved prior to the established certification suspense date.

2.5.11.12. Through respective group, coordinate USAFWC or 53 WG senior leader acquisition or test meeting attendance plan with 53 WG/CV.

2.5.12. **Project Manager (PM).** A PM will be assigned as the 53 WG's single POC for each project assigned to the wing. With some exceptions within 29 TES, 53 WG PMs will:

2.5.12.1. Review and critique OTSR, preplan activities for subsequent ACC-managed or supported T&E, and ensure (in coordination with wing test operations) the OTSR is updated with significant information.

2.5.12.2. Assemble a test team and prepare a test team assignment memorandum to be signed by all USAFWC unit commanders providing support to the test team. The PM will designate a team member as the alternate PM in the memorandum. If team members are required from outside USAFWC, the PM will utilize the applicable MAJCOM processes for obtaining the required support.

2.5.12.3. Confirm all test team members are adequately trained to execute their specific roles in assigned test missions.

2.5.12.4. Establish an electronic records management (ERM) case folder for the project and maintain it IAW **paragraph 4.2.4** of this document.

2.5.12.5. Ensure the adequacy and completeness of test planning including compliance with test objectives. Ensure a comprehensive mission RM analysis is prepared and the summary results are included in the test plan.

2.5.12.6. Monitor the activities of other commands or agencies involved in a particular acquisition effort for assigned projects.

2.5.12.7. Identify and coordinate resources required for the test project. Obtain coordination on information contained within the test plans with other commands, services, or agencies for facilities, ranges, aircraft, personnel, logistics, engineering, funding, or information support.

2.5.12.8. Ensure test data handling, processing, distributing, and archiving is IAW test requirements, applicable security policies, security classification guides, and GPS non-standard cryptographic key handling CONOPs.

2.5.12.9. Submit munitions allocation requests to the wing munitions manager for inclusion into the forecast for planned tests. Report munitions expenditures to the munitions manager for inclusion in the semi-annual reports.

2.5.12.10. Ensure Concept of Test Briefings (COTB), Combined Readiness Reviews (CRR), and Test Support Plan (TSP) Flight Readiness Reviews (FRR), as applicable, are prepared and presented to the appropriate group commander(s).

2.5.12.11. Ensure an environmental impact analysis is completed and approved before any decision to start testing as required. Where needed, submit AF Form 813 to appropriate environmental office for analysis.

2.5.12.12. Develop and publish project test plans or test support plans, as required.

2.5.12.13. Identify critical operational issues/objectives and ensure test is executed to answer those issues/objectives.

2.5.12.14. Ensure OTEMS is current and accurate for all assigned tests. Make OTEMS updates a minimum of bi-weekly during planning and reporting, and weekly during execution. After the project is completed, the PM will close out the project in OTEMS IAW **paragraph 4.7**.

2.5.12.15. Prepare test reports and assist the MAJCOM project officer in updating test information, as required.

2.5.12.16. Prepare fielding/release recommendations, when required, within 30 days after the last test event (or suspense as agreed to with the managing group commander) and initiate the coordination process.

2.5.12.17. Submit TB and FB to the 53 WG/TEO within 30 days and OTB within 60 days after the last test event (or suspense as agreed to with the managing group commander), for additional document coordination and processing.

2.5.12.18. Ensure a road show brief is prepared within 30 days of the last test event (or suspense as agreed to with 753 TEG/CC) for any test which results in a fielding recommendation or provides TTP for operational use.

2.5.12.19. Participate in high performance teams (HPT), as directed by MAJCOM, when new capabilities documents are being developed.

2.5.12.20. Participate in ITTs; participate in test integrated product teams (TIPT) or test plan working groups (TPWG), as required.

2.5.12.21. Participate in Joint Reliability and Maintainability Evaluation Teams (JRMET) to assist in collecting, analysis, verification, and categorization of reliability, maintainability, and availability data.

2.5.12.22. Ensure appropriate system deficiencies are submitted as prescribed in T.O. 00 35D 54-WA-1, *USAF Deficiency Reporting, Investigation, and Resolution.* Technical data discrepancies will follow T.O. 00-5-1-WA-1 *Air Force Technical Order System* and T.O. 00-5-3-WA-1 *Air Force Technical Manual Acquisition Procedures,* direction. Participate in deficiency review processes as applicable.

2.5.12.23. For testing requiring 53 WG flying, other than TD&Es and TIs, ensure that the appropriate developmental test hazard/test safety risk management (i.e. risk management boards, test hazard analysis worksheets, safety review boards, etc.) has previously been accomplished by the product development MAJCOM (normally AFMC); or that an adjudicated waiver has been agreed-to by the managing group commander.

2.5.12.24. Protect all Personally Identifiable Information (PII) collected during testing.

2.5.12.25. Provide a read-ahead and pre-brief to any USAFWC and/or 53 WG senior leader who is participating in a system-under-test decision meeting – e.g., Mission Oriented Operational Test Certification, Initial Operational Capability (IOC) review – at least two days prior to the event.

2.5.12.26. Coordinate future test-specific funding needs directly with the appropriate user-MAJCOM and implementing MAJCOM (normally AFMC or SMC) program offices in sufficient time to be entered into the annual Program Objective Memorandum (POM).

2.5.12.27. Ensure that aircrew training devices remain concurrent with platform configurations as modifications/updates are delivered.

2.5.12.28. Through respective unit and group, coordinate USAFWC or 53 WG senior leader acquisition or test meeting attendance plan with 53 WG/CV.

2.5.13. **53 WG Weapons Shop.** Headquartered at Nellis AFB, and actively supported by 53 WG/A3/2/5 and all 53 WG groups, the wing weapons shop promotes increased integration across the Wing to optimize test and better inform leadership of tactical and operational level considerations. It is led by the 53 TEG/OSK chief and sustained by select group deputies who are dual hatted as OSK chiefs. Duties include, but are not limited to, coordination across all wing test and evaluations units, managing large force test events (LFTE), informing WEPTAC at a tactical level, coordinating designated efforts within the wing and center levels, as directed by the USAFWC/CC or the 53 WG/CC. The Wing Weapons Shop will be supported by an intelligence flight (53 TEG/OGI) to facilitate all applicable planning, execution, and debrief

activities. The Wing Weapons Shop Chief will be an 11-series or 12-series rated officer stationed at Nellis Air Force Base. The wing weapons shop will:

2.5.13.1. Optimize 53 WG weapon system integration activity.

2.5.13.2. Through a Wing Weapons Shop Director, manage, host, conduct and report on the Black Flag and Black Banner LFTEs. Coordinate 53 WG Black Flag activities, participation, and findings with Orange Flag LFTE (a developmental event managed by the 412 TW), Emerald Flag LFTE (a datalink and C2 event managed by the 96 TW), and Gray Flag (an LFTE managed by the US Navy VX-9), to include maximum sharing of lessons learned and capability transition.

2.5.13.3. Coordinate tactics improvement proposals (TIPs) by flowing information up to decision-makers, down to test executors, and out to the warfighter at large.2.5.13.4. Apprise wing and group leadership of activities and opportunities via an established, periodic communications protocol.

2.5.13.4. Apprise wing and group leadership of activities and opportunities via an established, periodic communications protocol.

2.5.13.5. Coordinate non-material solution operational testing requirements and requests from other domains/agencies/commands/services/organizations with test units inside and outside the 53 WG.

2.5.13.6. Service tactical level requests for information, to include those of ACC/A3TW, the annual weapons and tactics conference (WEPTAC), and special use range requirements.

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2.5.14.3. DELETED.

2.5.15. **28 TES/83 FWS OT and Combat Archer (CA) Missile Integration Activity** . The 28 TES Air Dominance Division will be the focal point for missile system test and OT/CA integration. The 28 TES will maintain an up-to-date database of all OT missile employments. This database should be referenced by CA for annual special interest profile (SIP) planning.

2.5.15.1. The 28 TES will coordinate with the 83d Fighter Weapons Squadron (FWS) on 1) all test results as they become available; 2) captive-carry and live-fire test point planning data; 3) all OT-derived deficiency reports (DRs) and unresolved watch items (WITs); 4) the annual CA WSEP SIP listing; 5) all CA derived DRs and unresolved WITs.

2.5.15.2. The 28 TES will be the focal point for all missile test inquiries from the 83 FWS and the operational community, with the purpose of coordinating this information with all major air to air weapon stakeholders, to include DT, AFOTEC, USN, AIM-120/AIM-9 program offices, aircraft program offices, and Raytheon Missile Systems.

2.5.15.3. The 28 TES will organize an integration-meeting (IM) between all stakeholders on a semi-annual basis, but not as a formal part of the Advanced Medium Range Air to Air Missile Performance Exchange. The focus of this IM is to allow all stakeholders to discuss issues relevant to their programs. At a minimum, OT will discuss tests during the previous half with lessons learned/issues and all tests planned for the upcoming half. The CA will discuss shots taken during the previous half with lessons learned/issues. All WITs, DRs, and upcoming software improvements (SIPS) will be discussed.

Chapter 3

TEST ENTERPRISE

3.1. Introduction . The 53 WG supports test efforts across the spectrum of a system's life cycle. The 53 WG units support developmental efforts of AFMC systems program offices and the AFRL; operational testing with AFGSC, AFOTEC, AATC, 505 CCW, and other MAJCOMs; as well as other services' OT&E efforts. This chapter addresses requirements for providing this support.

3.2. Test and Evaluation Master Plan (TEMP). The TEMP integrates requirements, acquisition, T&E, and sustainment strategies, along with all T&E schedules, funding, and resources, into an efficient continuum of integrated testing. The acquisition program manager updates the TEMP before each major milestone of the acquisition program. The 53 WG will provide inputs to the TEMP for all tests where it is designated the lead operational test organization (OTO).

3.3. Test Resource Plan (TRP). The TRP is a document identifying the resources and timelines required to support an AFOTEC or other agency-conducted test. All projects which support AFOTEC-managed tests require a TRP. The HQ ACC/A5T is the focal point for the ACC TRP coordination process. The HQ ACC/A5TT will task the appropriate staff agency and 53 WG to coordinate and concur on the resource requirements cited in the TRP. Coordinated inputs will be integrated into a formal concur or non-concur memorandum back to AFOTEC by HQ ACC/A5T.

3.4. Integrated Test Teams (ITT). The ITT is a cross functional team of empowered representatives from multiple disciplines and organizations and co-chaired by operational testers and the acquisition program manager. The ITT is responsible for developing the T&E strategy and TEMP, assisting the acquisition community with T&E matters, and guiding the development of integrated test plans.

3.4.1. The managing group commander is normally the approval authority for ITT Charters which specify 53 WG participation.

3.4.2. In cases where 53 WG is the operational test co-chair of an ITT, the managing group commander normally fulfills this responsibility.

3.4.3. Any 53 WG subject matter expert (SME) may be tasked to support an ITT at the discretion of the project manager, in coordination with the SME's unit commander.

3.4.4. **Combined Test Forces (CTF).** The preferred tactical test planning and execution arm of an ITT is the CTF. One of the greatest challenges in developing a productive CTF is implementing truly integrated testing, while also respecting the unique requirements, philosophies, methodologies, techniques, and reporting chain of each team stakeholder. Stakeholders normally include, but are not limited to, the acquisition program office, the prime contractor, developmental test, the operational test agency (as applicable), and MAJCOM operational test. The CTF operations must be cooperative to the degree that they exploit the collective resources and expertise of all participating stakeholders. Via memorandum of agreement, these stakeholders normally recognize one member organization as the de facto CTF leader, whose job it is to orchestrate a safe, efficient, and collaborative endeavor in an effort to enable a truly integrated effort.

3.5. Lead Developmental Test Organization (LDTO). The LDTO is qualified to conduct and oversee DT&E, as well as facilitate the myriad test safety review processes resident within AFMC.

3.5.1. **Alternate Lead Developmental Test and Evaluation Organization Option** . Referred to as an "alternate-Lead Developmental Test and Evaluation Organization" in AFI 99-103, this designation option is by exception and only authorized for low risk (as defined by the implementation MAJCOM) Acquisition Category or Business System Category III programs that are not on any oversight list and have proper program test representation. Alternate-LDTO nominations will be coordinated with the Program Executive Officer before submission to AFMC/A3 for approval.

3.5.1.1. An LDTO resident in the Program Management Office (PMO) is a subset of the alternate-LDTO option. A PMO LDTO option allows the program office to perform the LDTO oversight function.

3.5.2. **Execution Test Organization (ETO).** An ETO is a developmental test organization, normally at the unit level, which plans and executes test at the behest of the LDTO.

3.5.3. Neither AFOTEC nor MAJCOM operational testers may act as an LDTO, an alternate LDTO, or an ETO.

3.6. Operational Test Organization (OTO). The OTO can be AFOTEC, a MAJCOM operational test organization, or another service operational test organization.

3.7. Participating Test Organization (PTO). The 53 WG can be designated as the PTO to support a lead operational test organization or to support an LDTO. The PTO support normally includes providing specific T&E data and/or resources for a T&E program or activity. PTOs will:

3.7.1. Participate in ITTs and TIPT/TPWG as soon as they are formed and as required.

3.7.2. Assist other test organizations as described in program documentation and integrated test plans.

3.7.3. Ensure T&E training is provided for PTO personnel involved in T&E activities.

3.8. Director, Operational Test and Evaluation (DOT&E). The OSD/DOT&E maintains a list of major programs having congressional interest. Project managers owning 53 WG test projects of potential DOT&E interest should not submit any documents to or prepare any briefings for DOT&E until they have contacted wing test operations directly to confirm that DOT&E has an interest in receiving these specific planning, reporting, and/or briefing products. Any test documents or briefings going to OSD will be coordinated through the 53 WG, ACC/A5/8/9 (or AFGSC/A3 or USAFWC/CC, as applicable), and HQ AF/TE, per table **4.1** and **4.2** The following guidelines apply for 53 WG test projects on OSD Oversight where DOT&E has confirmed its interest in receiving specific products:

3.8.1. **Operational Test Concept Briefings.** The DOT&E may require a test concept briefing up to 180 days before the start of dedicated operational tests for programs on OSD OT&E Oversight. The HQ USAF/TEP will arrange for a pre-brief to AF/TE and Air Staff agencies before going to DOT&E.

3.8.2. **Operational Test Plans and Test Plan Briefings.** An operational test plan is due to DOT&E a minimum of 30 days before test start. The DOT&E may request – or the operational test organization may elect to present – a briefing to accompany the final test plan. Test projects on OSD Oversight may not start active testing until DOT&E approves the adequacy of the test plan in writing. The AF/TEP will assist with the review, coordination, and submission of this information.

3.8.3. **OSD Involvement.** Once ACC/A5T confirms the interest of OSD in a test, direct communication with OSD action officers within the ITT is authorized to determine OSD/DOT&E involvement, testing, and reporting requirements. Where OSD action officers decline participation in test planning, or the T&E forum is unable to make a determination as to OSD involvement or requirements, ACC test agencies should elevate their concerns through ACC/A5T for adjudication and resolution.

3.8.4. **Operational Test Reporting Requirements.**

3.8.4.1. **Significant Test Event Reports for OSD Oversight Projects.** The PM will submit reports via appropriate coordination channels to ACC/A5T or ACC/A8Z; and to AFGSC/A5B, as appropriate, within 24 hours of any significant test event as specified in the approved test plan. These reports will be routed by ACC/A5T to DOT&E through AF/TE.

3.8.4.2. **Interim Summary Reports.** The PM will provide an interim summary report to OSD when a test report cannot be ready in time to support the associated acquisition decision review. A formal briefing may also be required. The AF/TEP will assist with the review, coordination, and submission of this information.

3.8.4.3. **Final Reports.** All test reports are due to DOT&E not later than 30 days prior to the decision review event being supported. These reports must strike the proper balance between system capabilities versus limitations while taking into account how well the system performed mission essential tasks. As applicable, a production or fielding recommendation should be additionally documented within final OUE or FDE reports. All Category I DRs and the top 10 Category II DRs will be listed. Final report briefings will be provided to HQ USAF staff and OSD as requested. The AF/TEP will assist with the review, coordination, and submission of this information.

3.8.5. **EW Programs.** All EW programs on OSD Oversight are required to report progress annually in implementing the DoD T&E Process for EW Systems IAW Public Law (P.L.) 103-160 §220(a). Test organizations for these programs will provide T&E information to AF/TEP as required in AFI 99-103.

3.8.6. **DOT&E Access to MAJCOM Test Information.** When assisting DOT&E to fulfill its supervisory role for OSD Oversight programs, operational testers should be aware that Public Law allows DOT&E access to all operational test data and records within the DoD. Any delay in delivering test data to DOT&E must be based on practical limitations and not on concern over how the data might reflect on the program. See **attachment 3** for additional guidance.

3.9. Air Force Directorate of Test and Evaluation (AF/TE). This organization functions as the chief T&E advisor to Air Force senior leadership. It is responsible for establishing Air Force T&E policy, determining the adequacy of T&E resources required to support weapons system development, and resolving T&E issues. The AF/TE responsibilities include:

3.9.1. Acting as the final Air Force T&E review authority and signatory for TEMPs.

3.9.2. Responding to and mediating T&E issues between HQ USAF principals, MAJCOMs, Air Force testers, other services, OSD, and Congress.

3.9.3. Reviewing and/or preparing T&E information for release to OSD, and assuring timely availability of T&E results to decision makers. All 53 WG test plans, test reports, and briefings submitted to DOT&E for programs on OSD Oversight must be submitted through AF/TEP.

3.9.4. Overseeing the Air Force T&E infrastructure by ensuring adequate resources to support system acquisition activities.

3.9.5. Co-chairing the Air Staff Foreign Materiel Program Committee which provides Foreign Materiel Program management oversight and funding.

3.9.6. Providing advice on ITT charter development and membership requirements. Review ITT charters for programs on OSD Oversight.

3.9.7. Authorizing Air Force drone presentations and kills.

3.10. Air Force Operational Test and Evaluation Center (AFOTEC). The AFOTEC plans and conducts OT&E for all ACAT I and II programs and those on OSD OT&E Oversight, as required by Title 10. AFOTEC is the only Operational Test Agency (OTA) for USAF. AFOTEC is a direct reporting unit (DRU) to CSAF. The ITTs and MAJCOMs will afford AFOTEC the opportunity to review all other projects and programs to determine if an AFOTEC-conducted OT&E is warranted. AFOTEC responsibilities include:

3.10.1. Expeditiously determine its level of involvement for technology projects and acquisition programs, based on criteria specified in AFI 99-103. The ACC operational testers may solicit AFOTEC involvement in projects not meeting the AFI 99-103 involvement threshold via a request through ACC/A5T.

3.10.2. In cases of AFOTEC non-involvement, MAJCOM operational testers must assume the responsibility of acting as operational test ITT co-chair.

3.10.3. Helping prepare T&E strategies and integrated test plans and preparing the OT&E portions of the TEMP. The 53 WG units may be asked to contribute applicable FDE portions of the overall operational test plan for programs on OSD Oversight.

3.10.4. Determining the quantity of test articles required for OT&E in consultation with the MAJCOM and the systems program offices.

3.10.5. Participating in certification of readiness for dedicated OT&E according to AFMAN 63-119. In cases of AFOTEC non-involvement, MAJCOM operational testers must assume this responsibility (see **paragraph 4.4.11**).

Chapter 4

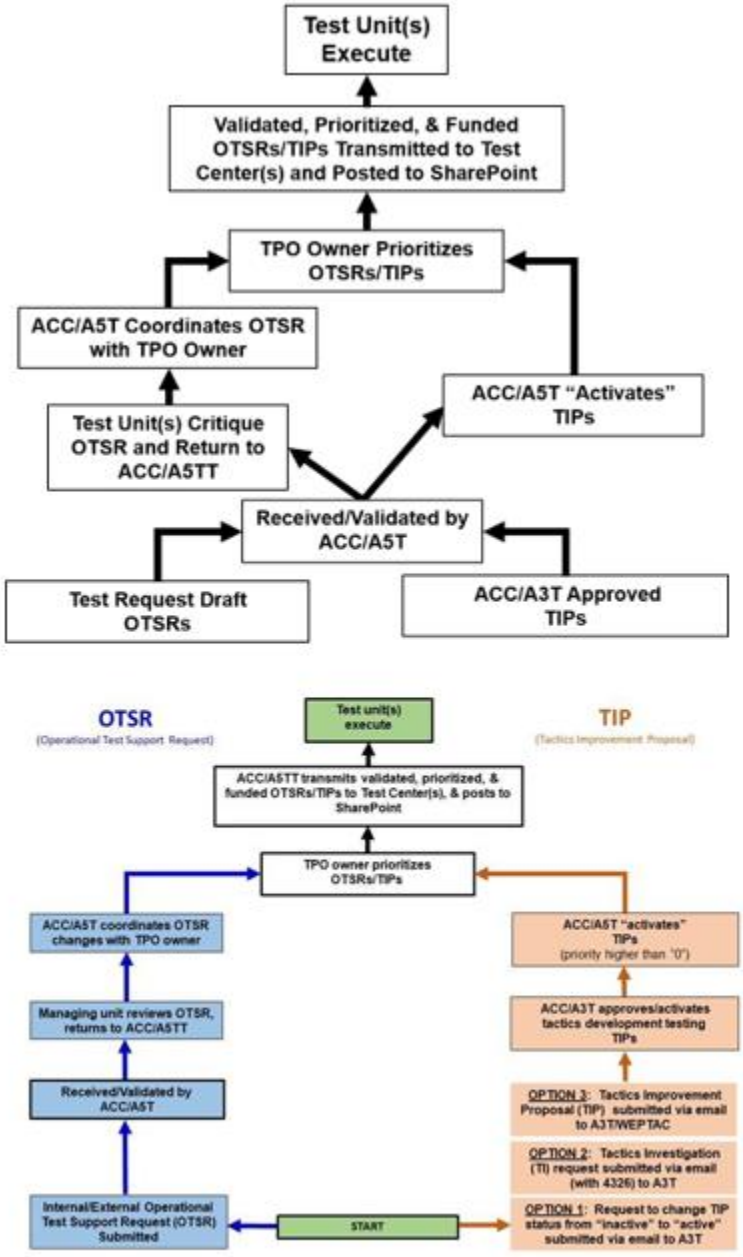
TEST PROCESS

4.1. Test Phases. The phases for most test projects assigned to the 53 WG are Project Initiation, Managing Risk, Planning, Execution, Reporting, and Close Out.

4.2. Project Initiation Phase. The ACC TPL contains all assigned projects, prioritized by the ACC, AFGSC, and AATC staffs, and approved by ACC/A5/8/9. To promote planning and effectively deal with the large quantity of CAF tests, ACC employs the TPL Process to prioritize test requests and gain HQ ACC/A5/8/9 approval.

4.2.1. **CAF TPL Process.** Test Project Order (TPO) categories are created at the HQ division level (O-6) to align with ACC, AFGSC, and AATC requirements' owners. The TPO is a category name, not a document. The ACC/A5TT bins a test request into the appropriate TPO and sends validated requests to the requirements owner for prioritization.

Figure 4.1. ACC Continuous Test Process Tasking and Execution Cycle.



4.2.2. **UON/QRC** . UON and QRC testing are in direct support of Combatant Commanders (COCOMs), and require a timely, focused effort that must be emphasized by the tasked test center. ACC gives tests supporting validated UONs and QRCs the highest priority, and expects that all necessary test center support and resources will be made available to the assigned task in deference to the prioritization.

4.2.3. **Non-UON/Non-QRC** . For other than UONs and QRCs, priorities of test projects listed in each TPO are a guide for test units and not intended for execution in sequential order. The fluid nature of test programs requires flexibility in execution management to ensure the most efficient usage of limited resources. Accordingly, tests currently in execution status will not normally be impacted as a result of reprioritization with the exception of UONs or ACC A5/8/9 direction.

4.2.4. **CAF Rapid Integrated Test** . The ACC/A8ZG and ACC/A3M are the OPR for the CAF Rapid Integrated Test TPL Process. As the OPRs, they will establish, prioritize, and maintain an annual TPL of select developmental systems that require expedited delivery by the 53 WG. ACCI 99-101, *ACC Test and Evaluation,* is supplemented to provide additional clarification and guidance on ACC/A8ZG-managed operational test activities where ACC/A5T and ACC/A3T are not directly involved.

4.2.5. **Operational Test Support Request (OTSR).** An ACC-approved OTSR is required for every 53 WG non-tactics development test project (i.e. material solutions), including AFGSC testing; an approved OTSR provides ACC's authorization to plan and execute a test. Test unit and/or operational unit commanders will not accept, execute, or support testing with assigned CAF assets without an approved OTSR.

4.2.5.1. The OTSR includes the purpose, test description and objectives, deliverables, scope, resources, funding (i.e., both program element code source and anticipated funds available), POC and any applicable OSD oversight related references. The test requestor drafts the OTSR and submits it for coordination and approval. Although there are some valid reasons for late test identification (i.e., urgent needs request, safety-of-flight, higher headquarters direction), test requests should be submitted no later than 90 days prior to the anticipated or scheduled start date. Beyond conducting research and attending meetings, ACC test units will not expend ACC resources without an approved OTSR.

4.2.5.1.1. Other documents such as TEMPs and TRPs may be required prior to test execution, but are not authorization for test execution and do not eliminate the requirement for an OTSR.

4.2.5.2. The ACC staff requirements owner with the assistance of the SPO and test center(s) will complete the OTSR and submit to ACC/A5T via email with a recommended prioritization for the corresponding Test Project Order (TPO).

4.2.5.3. A5TT will validate the draft OTSR, and transmit to the associated test unit for coordination using the A5TT SharePoint site. Once test unit coordination is completed and the OTSR is updated, it will be submitted for A5T approval and transmission as a tasking to the test unit via email. While the OTSR template is intended to be self-explanatory, additional details and examples are available on the A5TT SharePoint site.

4.2.5.4. Multi-Event OTSRs. If upon being tasked to support a test activity, a test center / organization anticipates numerous similar-type test support taskings, a Multi-Event OTSR

(ME-OTSR) may be submitted. These OTSRs are meant to cover recurrent, incremental, phased-type activities associated with one program of record (POR) or requirements owner (e.g., repetitive software updates under one major release, TEMPEST assessments, etc.). Upon ACC/A5T tasking and validation, the ME-OTSR will provide ACC with the ability to support and/or execute evaluations of related or iterative activities, procedures, or concepts.

4.2.5.5. Changes significantly altering the scope, purpose, objectives, level of funding, lead test center, or participating MAJCOM of a test require an amendment to the approved OTSR. Minor changes that do not include any of the above types of changes to a test project can be updated as required via coordination with ACC/A5T.

4.2.5.6. A validated OTSR has an initial 12-month life span based upon the tasking/review date. At the beginning of each FY, tests not in an active planning or execution status after the initial approval date are reviewed and subject to removal from the TPL. The A5TT will notify requirement owners of OTSRs identified prior to removal. Any OTSRs removed for inactivity must be resubmitted /revalidated for inclusion in current FY activity.

4.2.6. **Tactics Development** . After each calendar year's WEPTAC and TRB, ACC/A3TW will post a list of validated, prioritized Tactics Improvement Proposals (TIP) to the A3TW-managed SiPR SharePoint page:

https://intelshare.intelink.sgov.gov/sites/CAFWEPTAC/SitePages/home.aspx

OTSRs are not required for a TD&E or TI (i.e., non-material solutions) and will not be assigned an OTSR tracking number. The ACC/A3T validated TIPs are available on the A3TW-managed SiPR SharePoint site. Development of or updates to target location error (TLE) information are consider TTP for ACC tasking purposes and should be documented in a TIP.

4.2.7. **Warfighter Support** . OTSRs designated as warfighter support provide authorization to conduct the highest priority and time-sensitive operational test, tactics development, exercise and/or test support, as requested by HHQ agencies and directed by ACC. On a case-by-case basis, all normal 53 WG test management and execution support processes, reviews, and products can be tailored by 53 WG/CC, based on the time-critical nature of the tasking.

4.2.8. **Operational Test and Evaluation Management System (OTEMS).** OTEMS is the primary method for routine reporting and monitoring of all test and test support projects. The OTEMS database is managed by wing test operations and is the primary repository for test project status. It generates reports which feed numerous internal and external requests for information (RFI), to include the 53 WG quarterly and annual test priority list assessments. The PM will ensure OTEMS is current and accurate. At a minimum, bi-weekly updates are required even if the OTEMS entry is "nothing significant to report" (NSTR).

4.2.8.1. OTEMS will be updated within 24 hours of any significant test planning, execution, or reporting event.

4.2.9. **Electronic Records Management (ERM) Case Folder.** The PM is required to establish and maintain a separate case folder for each assigned project. As applicable, the case folder will hold, at the minimum, the test team assignment memorandum, the OTSR, test plan, fielding recommendation, interim/test reports, analysis results, program introduction

document/statement of capabilities (PID/SOC) documentation, environmental/safety approvals, and any amendments to these documents.

4.3. Managing Risk Phase.

4.3.1. **Technical Risk Management.** It is incumbent to reduce test technical risk through meticulous test team planning and judicious leadership oversight/reviews.

4.3.1.1. **Technical Risk.** Drawing incorrect conclusions from a test can lead to either fielding a faulty system or failing to field a capable system. Whenever practical, all 53 WG-conducted tests should be designed with statistical power and confidence, exploring as broad a spectrum of the battlespace as feasible. The principles of statistical design of experiments (DOE) – also commonly referred to in DoD as science of test (SOT) or scientific test and analysis techniques (STAT) – are explicitly endorsed as a means to these ends. Regardless of the test design methodology used, PMs should describe how they will achieve desired confidence in the results of their test programs.

4.3.1.2. **Technical Adequacy, Technical Credibility, Operational Sufficiency.**

4.3.1.2.1. Technical adequacy addresses the relevance of the technical information produced by the test in relation to the purpose of the test. A test is technically adequate if the evaluation of test data provides the acquisition customer and the user/warfighter with decision-quality information (e.g., informs decisions to accept, acquire, produce, field, employ, etc.).

4.3.1.2.2. Technical credibility addresses the depth of the technical information produced by the test. A technically credible test provides the acquisition customer and the warfighter with an indication of decision risk. Decision risk should be addressed by characterizing weapon system capabilities with the likelihood of an event occurring and the consequences of the event's occurrence.

4.3.1.2.3. Operational sufficiency addresses the breadth of the technical information produced by the test in relation to operations of new or modified capabilities within the context of representative employment and support concepts. The evaluation is considered operationally sufficient if it provides the acquisition customer and warfighter with results drawn from test events executed across sufficient operational conditions to identify the capabilities and limitations associated with employment and sustainment.

4.3.1.3. **Test Technical Risk Assessment Strategies.**

4.3.1.3.1. Risk Assessment Level of Test (RALOT). RALOT is one method to identify and tailor level of test instead of using traditional planning methods and is provided as an option for any DoD acquisition program. To apply the RALOT method to a program, a test organization should use the capabilities identified in this process and the role they play in supporting warfighter mission success to assess the operational risk to the warfighter if the capability fails to deliver. A RALOT plan may be included in the Test and Evaluation Master Plan, Test and Evaluation Strategy, Simplified Acquisition Management Plan or other planning documentation, or developed as a stand-alone document.

4.3.1.3.1.1. A completed RALOT risk assessment correlates to an associated level

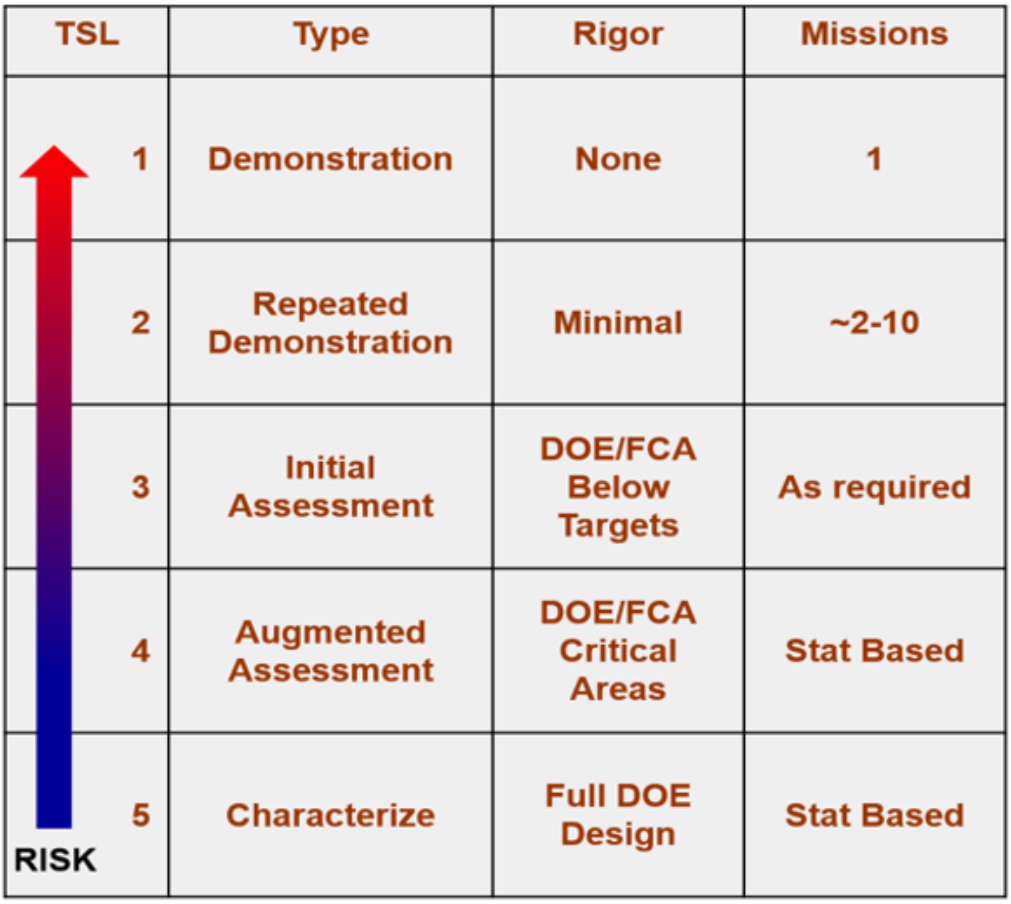
of sufficient testing and the associated rigor. Delivered capabilities, where system deficiencies pose a high risk of mission disruption if they fail to perform as expected, normally require Level III testing, the highest level of test, usually a full operational test of performance in order to comprehensively assess delivered capability and adequately inform the warfighter. Level III tests are typically for new systems delivering new capabilities or significant changes to legacy capabilities. Moderate risk capabilities may be assessed with Level II testing which include a limited operational test or less extensive live-fire testing. Level II tests are typically for modified or added capabilities to an existing system with a moderate potential for mission disruption. Low risk capabilities may be assessed with Level I testing which includes developmental test or integrated test, and does not require an independent operational test. Under approved circumstances, Level I tests can produce test data that are operationally relevant, and can be used as input to an operational test or live-fire report. Level I tests are typically for minor software upgrades or other modifications to established systems that have a low potential for mission disruption.

4.3.1.3.1.2. A program on DOT&E Oversight that is using the RALOT method to determine the level of test should coordinate with DOT&E early in the development of the risk assessment, and may not begin operational test until DOT&E has approved the RALOT proposal.

4.3.1.3.1.3. There is a variety of formally published guidance available regarding RALOT methodology. Contact 53 WG/TD for a vector.

4.3.1.3.2. Test Sufficiency Levels (TSL). TSLs can be used to explain the level of technical risk associated with a particular test approach. TSLs refer to the risk of a test reaching an erroneous conclusion. TSLs provide a 53d Wing standard risk terminology for characterizing the assumed level of risk (rigor-based) associated with the associated “type” of test chosen.

Figure 4.2. Test Sufficiency Levels Defined.



4.3.1.3.2.1. TSL 1: Demonstration. Single or limited event; illustrates the possible, no attempt at scientific rigor.

4.3.1.3.2.2. TSL 2: Multiple Demonstrations. Repeated events exercising a capability, TTP, and/or subsystem over multiple periods of time/events. Scenario and/or survey-based testing with minimal ability to independently assess critical factor correlations.

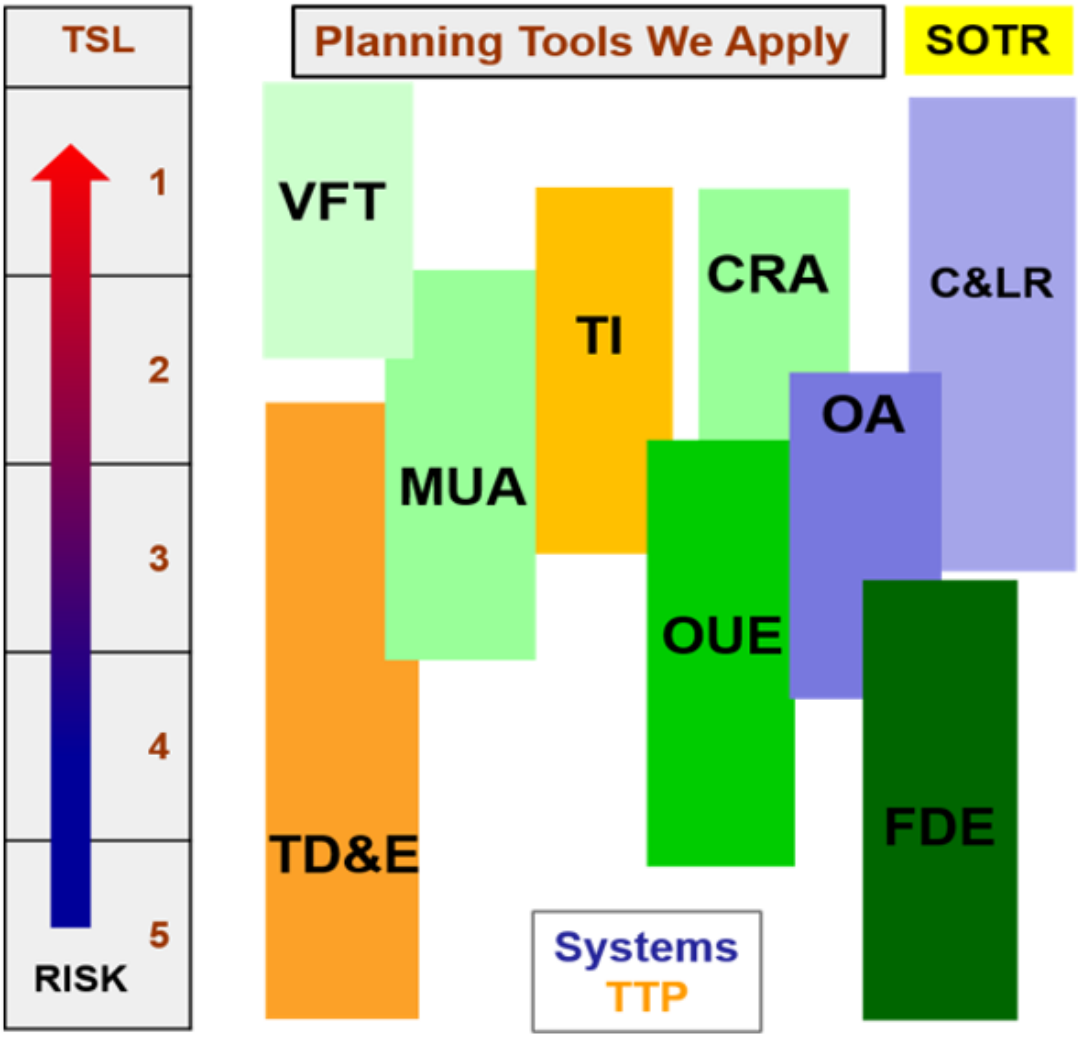
4.3.1.3.2.3. TSL 3: Limited Assessment. Descriptive statistics, confidence, power and/or combinatorial strength calculated and reported, but no specific confidence, power or strength goals are required for test completion. Often the lack of required confidence, power, and strength goals may be due to time constraints, limited number of test assets, or limited resources.

4.3.1.3.2.4. TSL 4: Assessment. Designed experiments – either design of experiment (DOE) statistical or factor covering array (FCA) combinatorial – combined with minimal confidence, power and/or strength requirements for critical areas. Leverages engineering and subject matter expertise for planning and analysis.

4.3.1.3.2.5. TSL 5: Full Characterization. Full mathematical rigor with predictive capability and robust design. Executed to achieve all planned confidence, power and/or strength goals.

4.3.1.3.2.6. **Figure 4.3** illustrates the relationship between common 53d Wing test and/or deliverable types and TSLs. In the following example, for hardware and software testing the level of test rigor is generally highest for an FDE, with slightly less test rigor for an OUE, usually a function of the size and complexity of the test. A military utility assessment (MUA) or an operational assessment (OA) have slightly more rigor than a VFT. Similarly, for non-materiel solutions, a TD&E normally has more test rigor than a TI.

Figure 4.3. How TSLs Correlate with Most 53 WG Test Methods/Deliverables.



4.3.1.3.2.7. There is a variety of informal 53WG guidance available regarding TSL methodology. Contact 53 WG/TD for a vector.

4.3.2. **Execution Risk.** It is essential to reduce execution risk through meticulous test team planning, judicious leadership oversight/reviews, and disciplined adherence to planned test profiles.

4.3.2.1. **Operational Test Mission Risk Management.** Hazards unique to operational test conduct will be identified. MRM is the test team's primary tool for assessing, clarifying, and classifying test mission risk. Pre-existing hazards associated with the weapon system safety shall be considered in the mission risk analysis. Test mishap

accountability will be clearly documented IAW AFI 91-204, *Safety Investigations and Reports*.

4.3.2.2. **Flight Test Safety Risk Beyond MRM.** The 53 WG flying support to developmental test, capability demonstrations, experimentation, as well as conduct of operational test which has not been preceded by government developmental test may involve flight test safety hazards not normally expected in the conduct of routine operational test. Project teams should be especially vigilant if tasked to support or conduct testing for systems that have not been assigned a formal USAF LDTO (i.e. alternate LDTO programs or no LDTO programs).

4.3.2.2.1. Developmental test flying safety risks are usually catalogued and assessed via an AFMC center/wing-level (e.g. AFTC, 412 TW, or 96 TW) test hazard analysis process (normally called a safety review board [SRB]), which in turn, supports an AFMC operations group-level execution safety review (often called a Test Approval Brief or TAB). If a 53 WG test team is requested to provide flying support to developmental test, AFMC test safety documentation (normally in the format of test hazard analysis [THA] worksheets, the associated safety review board recommendations, and the test approval briefing) should be thoroughly reviewed and understood by the 53 WG test team prior to executing the requested test support.

4.3.2.2.1.1. The AFMC test safety process assesses risk as negligible, low, medium, or high. Any flight test support adjudicated by an AFMC test safety process to be elevated risk (Medium Risk or High Risk) will not be agreed to, planned for, or executed by a 53 WG project teams without the specific approval of the 53d Wing Commander.

4.3.2.2.1.2. Any flight test support adjudicated by an AFMC test safety process to be elevated risk will normally require the assignment of qualified developmental test personnel to the appropriate aircraft aircrew positions for all elevated risk missions.

4.3.2.2.1.3. Any flight test support adjudicated by an AFMC test safety process to be elevated risk will normally require the assignment of qualified developmental test personnel to the appropriate aircraft aircrew positions for all elevated risk missions.

4.3.2.2.1.4. Additionally, any flight test support adjudicated by an AFMC test safety process to be high risk will normally require a temporary possession transfer of the involved ACC flying asset to AFMC, as well as the assignment of qualified developmental test personnel to the appropriate aircraft aircrew positions (to include acting as pilot in command) for all high-risk missions.

4.3.2.2.1.5. Exception: approval for 337 TES to participate in Medium risk terrain following (TF) developmental test support is delegated to the 753 TEG/CC, with the following stipulations: all 337 TES aircrew will be current on TF or will fly with a current like-specialty instructor; all DT support sorties which include Medium risk TF regression test points, will be flown with a mixed crew of OT and USAF TPS qualified DT aircrew which will include one DT pilot at a minimum; and all DT support sorties that include Medium risk TF regression test points will

be conducted under an approved 412 TW test plan, with the associated AFTC flight safety risk assessment. The 753 TEG/CC will inform 53 WG/SE, 53 WG/TD, 53 WG/CV, and 53 WG/CC on all Medium risk TF DT support activity prior to mission execution. The 53d Wing Mission Risk Management (MRM) process, as specified in 53 WGI 99-101 and as overseen by 53 WG/SE, will continue to be exercised in parallel with the AFTC SRB process. This delegation of approval does not include any test support adjudicated by AFTC to be High Risk.

4.3.2.2.2. Alternate-LDTO or no LDTO programs normally come in two broad categories – demonstrations or small sustainment improvements on acquisition programs of record (POR). For OT organizational test risk assessment purposes, the test safety risk of these projects can be roughly characterized by the following three 53 WG-defined risk "tiers:"

4.3.2.2.2.1. Tier 1: complex demonstrations of significant new capability (e.g. Long Range Anti-Ship Missile [LRASM]Demonstration, Counter Electronics High Power Microwave Advanced Missile Project [CHAMP] Demonstration, B-52 Dragon Eye Radar Demonstration, MALD-X) or inherently risky sustainment POR modifications (e.g. anti-skid or brake replacements, QF-4 drag chute replacement program, flight control system upgrades), which either should be planned and conducted by an LDTO or appear to be of sufficiently high risk so as to at least warrant a THA-based risk assessment be conducted by AFMC.

4.3.2.2.2.2. Tier 2: less complex demonstrations of significant new capability (e.g. Scorpion helmet demonstrations, Digital Joint Helmet Mounted Cueing System [JHMCS] demonstration, F-22 flare development demonstrations), where apparent risk is seemingly low enough that it may not warrant AFMC participation.

4.3.2.2.2.3. Tier 3: small sustainment/capability POR modifications or demonstrations (e.g., B-52 Combat Networks Communications Technology [CONECT] Diminishing Manufacturing Sources/Material Shortages, B-52 Digital Bomb Release Interval Control (DBRIC), B-52 Iridium Communications Technology Demonstration, B-1 Beyond Line-of-Sight/Situational Awareness Enhancement, B-52H Sniper SE Pod, HC-130J Wireless Crew Communications, F-22 Reliability and Maintainability Maturation Program [RAAMP], Cryptographic Equipment Nomenclature [KOV] Hardening), where apparent risk most likely does not warrant securing AFMC test safety advice.

4.3.2.2.3. When it becomes known that a customer may request test or test support from the 53 WG for a project that will "bypass DT" (both formal flight test safety risk assessment and DT flying), the tasked 53 WG unit will contact the applicable group technical advisor as soon as practical. The group technical advisor will work with the wing technical director to accurately recommend a test safety risk tier, based on the tier system described above. This test safety risk adjudication will be made in collaboration with ACC/A5TT and will be validated by the managing group commander and/or wing commander, as applicable. This adjudication will drive one of three probable courses of action:

4.3.2.2.3.1. A Tier 1 adjudication will be turned back to the request originator by ACC and will not be tasked to the 53 WG.

4.3.2.2.3.2. A Tier 2 adjudication will be tasked to 53 WG. The flight test portion of the MRM assessment will automatically be scored a minimum of "High Caution," and the associated test plan approval decision will be elevated to the wing commander.

4.3.2.2.3.3. A Tier 3 adjudication will be tasked to 53 WG. There will be no change to normal 53 WG test planning, risk management, and readiness review/approval processes.

4.3.2.2.4. **Paragraph 4.3.2.2** guidance does not apply to ground tests.

4.3.3. **Test Project Milestones.** Test mission risk is further mitigated through the use of detailed test plans and comprehensive leadership reviews. In general, no 53 WG testing will be conducted without an approved test plan (see exception in **paragraph 4.3.3.2**). Test plans will be prepared so as to meet defined objectives agreed to by the customer and organization conducting the test. Before conducting the test, each test plan will be scrutinized via technical and safety reviews, IAW applicable Air Force and MAJCOM directives, as well as this instruction.

4.3.3.1. **Standard Milestones.**

4.3.3.1.1. **Wing-Conducted Operational Testing.** Standard milestones for 53 WG-conducted non-OSD Oversight operational tests involving flying include a comprehensive MRM, and a test safety risk analysis; as well as an approved test plan, test report, and fielding recommendation. Standard test milestones also normally include a COTB and CRR presentation to the applicable 53 WG management and execution and/or support group commander(s), usually at a weekly consolidated test brief video teleconference.

4.3.3.1.2. **Wing-Supported Testing.** Standard milestones for 53 WG-supported tests involving flying include a comprehensive MRM, and a test safety risk analysis; as well as a test support plan (or waiver) approved by the OT managing group commander, and a post-test support MFR signed by the unit commander. Support tests involving flying also normally include an FRR presentation to the applicable 53 WG execution group commander, usually at a weekly consolidated test brief video teleconference.

4.3.3.1.3. **Wing-Conducted Ground-Only Testing.** Standard milestones for tests that do not involve 53 WG flying include a comprehensive MRM analysis; as well as a test plan, test report, and fielding or release recommendation approved by the applicable test management group commander. All technical and safety reviews are delegated to the test management unit commander (i.e. squadron or detachment) and are not normally briefed at weekly consolidated test reviews. Unit commanders retain the right to up-echelon review and/or approval authority to group or wing leadership, for any ground test they consider of special interest or risk.

4.3.3.1.4. Readiness reviews for test projects that cannot be conducted at weekly consolidated test brief VTCs due to security considerations will be coordinated on a case-by-case basis with wing test operations for 53 TEG and 753 TEG.

4.3.3.2. **Alternate Milestones for Wing-Conducted.** Alternate planning and reporting milestones only apply to 53 WG-conducted, non-OSD Oversight operational testing. Formal test plans may be waived if the testing is deemed to be "non-complex" by the applicable group commander. Reporting documentation is streamlined and accelerated. The standard milestones of MRM, a test safety risk analysis, a COTB, and a CRR for flying testing remain unchanged, unless waived by the applicable group commander (s).

4.3.3.2.1. In the case of non-complex test planning, the test team will propose using a non-complex approach at the COTB. The test team should utilize statistics-based test design (e.g. DOE) to the maximum extent possible. This test design should be pre-coordinated with the appropriate group technical staff (TA and/or/OA) at least four full weeks prior to the first test event. MRM worksheets will be pre-coordinated with 53 WG/SE at least three full weeks before the first test event. The CRR for all non-complex tests will be conducted at least two full weeks before the first test event and should include the associated test design in the CRR. Note: If the management unit requests that a VFT be classified as "non-complex," a VFT CRR will be conducted.

4.3.3.2.2. Report deliverables should be specified in the OTSR. Alternate milestones report deliverables for an FDE or an OUE are normally a capabilities and limitations report (C&LR) and a capabilities readiness assessment (CRA) final report; additionally, the test unit will generate and archive a supporting test methodology and data record (TMDR). Report deliverables for an OA or MUA is normally a C&LR; as well as a supporting TMDR, as applicable. Normally, the TD&E or TI report deliverable is an OT Bulletin.

4.3.3.2.3. Specific rapid delivery test projects, as designated by 53 WG/CC, will normally produce alternate milestone streamlined reporting deliverables for wing-conducted operational test unless directed otherwise by ACCI 99-101 or equivalent authoritative MAJCOM direction; or this wing instruction.

4.3.4. **Internal Leadership Reviews.**

4.3.4.1. **COTB.** The PM will provide a COTB to the managing group commander, or their representatives, before starting test plan development for all wing-conducted and wing-integrated tests. All PMs will use 53 WG-approved COTB briefing sample formats. If there are fewer than 45 days between formal tasking of the test and the required test start date, the CRR will fulfill the requirement for a COTB unless otherwise requested by the group commanders. The OSD may require a TCB for programs on OSD Oversight up to 180 days prior to test start.

4.3.4.2. **TRR.** A TRR is conducted before starting ground or flight testing and will assure a) system maturity is at the level required by the test, b) all technical preparations (including instrumentation) for initiating a test are adequately completed, and c) known system anomalies have not compromised successfully meeting the goals of the test. For all wing-conducted flying and space testing, the TRR is the test adequacy portion of a CRR.

4.3.4.3. **FRR.** An FRR is conducted before flight testing and will assure a) the mission risk of executing the planned flight profiles is understood, manageable, and acceptable, b) either an acceptable THA-based test safety risk analysis or an alternative 53 WG tier-adjudication analysis has been accomplished for non-LDTO projects, c) successful

execution of the plan will yield the test information desired, and c) known system anomalies will not jeopardize aircraft or aircrews. For all wing-conducted flying and space testing, the FRR is the execution adequacy portion of a CRR.

4.3.4.4. **Rapid Acquisition Testing** . Rapid acquisition testing will observe standard 53 WG risk management and review processes for wing-conducted operational test unless directed otherwise by ACCI99-101 or equivalent authoritative MAJCOM direction; or stated specifically in this wing instruction.

4.4. Test Planning Phase. Thorough planning is the key to a successful test project. While test plans are not expected to be perfect, they must provide enough detail to allow the test team and leadership to schedule and fund resources, coordinate resources provided by other units, and safely manage the project. At a minimum, PMs are required to update OTEMS with comments and milestone updates on a semi-monthly basis during the planning phase. The following section provides some of the major areas the PM must consider and comply with during this phase.

4.4.1. **Test Team Assignment.** One of the first steps a PM must accomplish is assembling the test team. Each test management unit commander will determine the process to assign unit members to the test team. For test team members outside the unit, the PM will prepare a test team assignment memorandum to be signed by all commanders providing support. The PM will designate a team member as the alternate PM in the memorandum. Following approval, the PM will file the memorandum in the project case folder.

4.4.2. **Research.** The PM must conduct pre-test research for prior testing, system design capabilities, system performance requirements, operational performance requirements, and evaluation criteria which may be referenced in the TEMP, the program management directive (PMD), the initial capabilities document (ICD), the capability development document (CDD), and the capability production document (CPD). Normally, UON requirements are documented as outlined in AFI 10-601, *Warfighter Urgent Operational Needs*. The PM must research previous DRs, open discrepancies, watch items, or software problem reports, as necessary.

4.4.3. **Test Integrated Product Teams (TIPT).** The PM should use a TIPT to plan, organize staff, provide guidance for, and manage the test team. Normally, TIPT members are experts in specialized areas; many attendees at the TIPT meeting will represent other organizations having specific requirements for test support (e.g., range scheduling, safety, resource management, execution squadron scheduling, modifications, munitions, etc.). Normally, TIPTs are chartered by the acquisition program's ITT.

4.4.4. **OTSR Amendments.** Typically, OTSR amendments are required for changes in aircraft MDS, significant changes in scope, funding, or the test item. The PMs should coordinate with wing test operations to determine if an OTSR amendment is necessary. The OTSR amendments are processed by wing test operations IAW the TTH.

4.4.5. **Test Design and Analysis Methodology** . Test design and analysis methodologies should incorporate the statistical rigor necessary to provide sufficient confidence in the results of the test. If PMs decide to use a test design methodology different from DOE, the specifics and justification must be documented in the project test plan.

4.4.6. **Test Plan and Test Support Plan.** Unless the test project is approved as a non-complex operational test (see **paragraph 4.3.3.2**) or has an approved waiver to not accomplish a test support plan (see **paragraph 4.4.7.1**), the assigned PM will produce a test plan for all

wing conducted/integrated and VFT projects, or a test support plan for wing supported test projects for the approval authorities listed in **table 4.1** Following approval, wing test operations will post the approved test plan or test support plan on the 53 WG Test Plans and Reports SIPRNET website. The PMs are responsible for disseminating the plan to appropriate ACC, AFGSC, or other interested agencies. Dissemination may entail only notification of the posting of the plan on the SIPRNET and providing the information needed to access the plan.

4.4.6.1. The test project managing group commander may waive the requirement for a test support plan. A request for waiver should be submitted by the test management unit commander through wing test operations. This request package should contain the rationale for the waiver, a copy of the supported organization's test plan, if available, and a 53 WG RM assessment based on the test events to be supported.

4.4.6.2. **Sample Formats.** The PMs will use the 53 WG-approved test plan/test support plan formats found in the "Templates" section of the TTH on the wing test training SharePoint site.

4.4.6.3. **Timelines.** The PM will submit operational test and test support plans to meet the suspense guidelines listed in **table 4.3**.

4.4.6.4. **Execution Support.** The PM will coordinate test resources with the UPO/RPO during test plan development (sortie numbers and types, ranges, special training requirements, etc.).

4.4.6.4.1. **Familiarization Sorties.** Familiarization sorties (also called "spin-up" or "orientation" sorties) may be flown anytime the program office has issued a military flight release permitting the system-under-test to be flown by OT. This program office authorization is normally informed by appropriate DT with associated written documentation (often called a Phase I recommendation) advocating for release of the test item to OT. The military flight release is often restricted to specific tail numbers or units so as to preclude use by operational wings. Because these sorties are not a part of an approved DT, test support, or OT test plan, no formal 53 WG approval is required to fly familiarization sorties. Likewise, these sorties should not be counted as fulfilling test sortie requirements documented in approved test or test support plans.

4.4.6.5. **Range Coordination.** Each range has specific requirements to support testing. The PM should contact the range(s) to be used and determine the requirements for test support. Most ranges require the PM to submit a PID to the range plans and programs office early in the planning process. Most range offices will accept draft test plans along with the PID to get a head start on the scheduling process. The range should respond with a SOC indicating the requested support can be provided and a rough order of magnitude (ROM) cost estimate. The PM must then make provisions with the range to fund expenses associated with the project. PMs will work these arrangements through the unit's RA to execute mutually acceptable funding procedures. The PM will ensure the project has final range(s) safety approval (RSA) at the CRR. Note: The Test Resource Management Center (TRMC) provides an annual list of MRTFB T&E facilities and range descriptions IAW DODI 3200.18.

4.4.6.6. **Environmental Requirements.** The PM will coordinate with the range environmental office to complete any required environmental assessments. Some ranges

require environmental assessments for every project while others may use existing environmental assessments covering the planned test activities. Long lead times may be necessary and early engagement by the PM is critical. The PM will ensure the project has final environmental approval at the CRR.

4.4.6.7. **Aircraft and Weapons Instrumentation.** The PM will ensure all instrumentation requirements for aircraft, weapons, and control room setups are identified early in the planning process. The PM must ensure data formatting is compatible with all sources and users, including development contractors (Lockheed Martin, Boeing, Raytheon, etc.), required for data analysis.

4.4.6.8. **SEEK EAGLE Requests (SER).** The PM will ensure all 53 WG aircraft SERs are submitted to wing test operations for processing. 53 WEG PMs will submit requests through 53 TSS/OS for 53 WEG assigned assets.

4.4.6.9. **Temporary Aircraft Modifications** . The PM will submit temporary modification requirements to wing test operations for assigned test assets. The 53 WEG PM will submit temporary modification requirements to 53 TSS/OS for 53 WEG assigned test assets.

4.4.6.10. **Military Flight Releases.** The PM will ensure the responsible platform systems program office has issued a military flight release (or equivalent), in writing, for all aircraft test modifications and configurations (hardware, software, stores, etc.) under test prior to flight.

4.4.6.11. **Munitions Planning.** Significant lead time may be required for munitions (both test and training) authorization, delivery or transfer, and build-up. The wing primary munitions manager is assigned to wing test operations. The wing alternate munitions manager, responsible for all Nellis-based munitions activity, is assigned to 59 TES/EAS. The 53 WEG is authorized to coordinate directly with ACC/A3TW through the TAMP process to satisfy COMBAT ARCHER air-to-air missile allocation requirements.

4.4.6.11.1. Test Munitions (Category E). To ensure munitions required for test are available, PMs will coordinate all test munitions and expendable countermeasures requests with the wing munitions manager or alternate munitions manager (Nellis-based test), and through the execution unit's munitions' manager, if applicable. The applicable PM will also ensure the specific test munition(s) configuration required is coordinated with host base "Ammo" before build-up and loading.

4.4.6.11.2. Training Munitions (Category D). To ensure munitions required for training are available, munitions managers in wing flying units will coordinate all munitions and expendable countermeasures requirements with the wing munitions manager or alternate munitions manager (Nellis-based training). The applicable flying unit will also ensure the specific training munition(s) configuration required is coordinated with host base "Ammo" before build-up and loading.

4.4.6.12. **A/A Target Requests and Kill Authorizations.** The PM will ensure appropriate target requests are submitted IAW TAMP procedures to wing test operations and AF/TE for either full-scale or sub-scale target drones. The PM will ensure the appropriate kill authorization is submitted and certified well in advance of the testing event.

4.4.6.13. **Telemetry Instrumentation Kits (TIK) and Flight Termination Systems (FTS).** The PM will determine the need for and, if necessary, ensure procurement of TIK and/or FTS for the respective A/A or A/G test weapons IAW AFI 99-120. The PM will ensure TIK compatibility with the weapon, mission profile, and range telemetry downlinks. The PM will ensure the TIK and/or FTS costs are included in OTSR cost estimates.

4.4.6.14. **Test Plan and Test Support Plan Briefings.** Normally, test plan/test support plan briefings are not required unless specifically requested by the PM or wing leadership. Exceptions to this policy may be for tests on OSD Oversight (**paragraph 3.8.2**).

4.4.7. **Test Plan and Test Support Plan Amendments.** The PM must ensure the 53 WG Test Operations is notified, in writing, of all test plan amendments. Additionally:

4.4.7.1. A test change in scope is defined as a planning change which significantly alters the size of the test; exceeds the previously approved test envelope; deletes or adds significant ground or flight test preparation events (modeling and simulation, captive carry flights, dress rehearsals, etc.); deletes or adds significant test resources; significantly alters the mission profiles, changes the planned mission test/training range(s) to a different, geographically-separated range; introduces any new test hazards; modifies the previously approved test objectives; or changes the lead operational test organization (53 WG to AFOTEC, etc.). Note: any proposed change to an approved OSD Oversight test plan is considered a change-in-scope and must be coordinated with and receive approval from DOT&E, in writing.

4.4.7.2. Amendments documenting a test change in scope must be approved by the original test plan approval authority. An amendment not changing the scope of an approved test plan may be approved by the unit commander having test management responsibility for the project.

4.4.7.3. Taking into consideration the test management unit commander's recommendation as to whether a test plan amendment changes its scope, the wing test operations will either administratively initiate additional coordination/approval action or keep the unit-approved amendment on file. The coordination/approval process for change in scope test plan amendments will mirror those accomplished for the original test plan.

4.4.7.4. The PM will use 53 WG-approved test plan amendment formats found in the "Templates" section of the TTH on the wing test training SharePoint site. Following test plan amendment approval, the wing test operations will post the approved document on the 53 WG Test Plans and Reports SIPRNET website.

4.4.8. **Operational Test Master Test Plans and Method of Test Annexes.** In an effort to reduce unit test management workload, as well as streamline approval processes, the concept of crafting a Master Test Plan (MTP) or SIMCERT MTP supported by one or more discrete event Methods of Test (MOT) serves as an option to traditional single test plan documentation.

4.4.8.1. **OT Master Test Plans** . The intent of the MTP is to aggregate information which will apply to all foreseeable future iterations of testing (as covered by individual MOTs), to include general test objectives and methodology, as well normal support "boilerplate" (e.g. purpose, background, administrative, environmental, etc.). The MTP approval process is the same as for legacy self-contained test plans.

4.4.8.2. **OT Method of Test Annex** . The intent of an MOT is to aggregate only that information unique to each discrete increment of follow-on testing. Approval authority normally resides with the unit commander responsible for management of the test, at the discretion of the managing group commander.

4.4.8.2.1. The following disclaimer should be included in each MOT: "This [test project name] Method of Test is not a stand-alone document. It must be reviewed in concert with its previously approved parent [test project name] Master Test Plan."

4.4.8.2.2. The test project managing unit will notify wing test operations of its intent to execute a new increment of testing via an electronic staff summary sheet (eSSS), with the MOT, supported MTP, and (required) updated MRM, attached. In addition to providing test notification to wing test operations and the managing group commander, the eSSS will prompt wing test operations to create a project in OTEMS; prompt wing test operations to notify ACC/A5T of MOT activity under supported TIP(s); and inform the managing group commander of the proposed FRR method (e.g. weekly consolidated test briefing, table top, paper only, or other method).

4.4.8.3. **MTP/MOT Mission Risk Management** . The preferred method for documenting mission risk management is via the MOT for each increment of testing. An alternate method for documenting mission risk management, to be approved by the managing group commander, is to address it in the MTP as a "worst case" highest risk assessment for all foreseeable MOTs and then to reassess in the MOT and/or the flight readiness review for each increment of testing.

4.4.9. **Test Plan and Test Support Plan Approval Expiration.** Authorization to execute testing under an approved 53 WG test/test support plan (to include MTP and MOT) is automatically rescinded three years after the approval authority signature date. If testing has not been completed, the test/test support plan must be re-coordinated according to **paragraph 4.4.7** of this instruction.

4.4.9.1. Approval of test plan/test support plan amendments by the original 53 WG test plan/test support plan approval authority (i.e., "out of scope" amendments) also suffices as extension/re-coordination for the original test/test support plan and any previously approved amendments and will expire three years after the most recent amendment approval authority signature date. Amendment packages submitted for approval should include all previous test plans/test support plans and amendments.

4.4.9.2. 53 WG test plans approved under OSD Oversight are not subject to the three-year re-coordination requirements of this paragraph.

4.4.10. **Test Item Deficiencies Prior to Operational Test.**

4.4.10.1. **Watch Items (WIT).** WITs are anomalies observed and documented by developmental test organizations, as described by TO 00-35D-54. WITs are contained in a central database that may be maintained by either the government or the prime contractor. Some contractors may call their anomalies something other than WITs (e.g., Test Problem Reports, Alerts, Contractor Performance Reports (CPR), SSTRs, etc.). During the planning process, it is very important for operational testers to review all WITs since they provide insight into the overall health of the test item. For test items which will be in lengthy developmental or integrated testing, the PM must establish a means to access the

WIT database (periodic hard copies are acceptable). The PM must work closely with AFMC counterparts to ensure all appropriate-severity WITs are converted to DRs IAW T.O. 00-35D-54 before starting dedicated OT&E. A DR review board will periodically review, validate, and prioritize all open DRs. All DRs should be rank-ordered, and the most critical worked first or as agreed by the user(s), operational testers, and the LDTO.

4.4.10.2. **Procedures for Handling Open Deficiency Reports.** Open DRs, as well as capabilities deferred past the start of dedicated OT&E, must be reviewed and prioritized by a DR review board and an impact analysis performed. The DRs having a high likelihood of precluding successful conduct of dedicated OT&E should not be allowed to remain unresolved. Category I DRs must be fixed and closure verified according to an agreed upon plan. Category II DRs must be fixed and closure verified, or suitable workarounds provided. For DRs that cannot be resolved before starting dedicated OT&E, a plan must exist for testing deferred capabilities and fixes after dedicated OT&E is completed. A summary of these actions should accompany the Certification of System Readiness for Operational Testing.

4.4.11. **Mission Readiness Certification.** Per DAFMAN 63-119, DAFI 99-103, and ACCI 99-101, all systems should undergo a program office analysis, acquisition decision-maker review (normally the PEO, but sometimes delegated), and a documented mission readiness decision (previously referred to as a Certification Ready for Dedicated OT Memo) before starting OT&E. To be certified ready for OT&E, the system must be mature and demonstrate stabilized performance in an operationally relevant environment; all necessary test support must be available. Changes should not be implemented during dedicated OT&E that would impact the configuration being fielded or produced. The system must have a high likelihood of a successful OT&E. Identified shortfalls will be remedied before testing starts or negotiated work-around solutions will be developed. Certification correspondence coordination/approval levels will be appropriate to the ACAT of the project being certified.

4.4.11.1. If an ACC test organization is responsible for conducting the OT&E, it will perform the same certification functions as the OTA would have performed IAW AFMAN 63-119. The ACC operational test organizations will participate in this certification process for FDEs and/or OUEs when full rate production and/or fielding decisions are planned.

4.4.11.2. The 53 WG will not normally agree to commence dedicated operational testing that will result in a fielding recommendation and/or production decision with less than certified and verified (previously called "V&Vd") preliminary technical orders. Exceptions to this policy will be approved on a case-by-case basis by OT managing group commander and may require approval, in the form of a waiver, from both the developmental and user MAJCOMs.

4.4.11.3. For 53 WG operational tests, the OT managing group commander will acknowledge, agree-to, caveat, or reject the acquisition authority's certification recommendation, in writing, before starting OT&E. This certification document exchange provides the OT&E management group commander the opportunity to review the certification official's assessment as well as address any unresolved issues.

4.4.11.4. Occasionally, the acquisition PEO will conduct a formal mission-oriented test readiness certification (MOTRC) on a developmental system to establish its degree of readiness for operational test. The OT managing group commander will normally attend as the wing representative for these MOTRC. In all cases of formal OTRRs where a senior leader from 53 WG is participating, a pre-briefing by the PM of the operational test unit to the attendee will be required at least one day prior to the OTRR, unless released from this requirement by the OT managing group commander. See **paragraph 4.4.13** for additional guidance on senior leader participation.

4.4.11.5. Due to the nature of MAJCOM operational testing, there are numerous occasions where commencing test execution prior to formal delivery of the certification ready for OT memorandum is acceptable and even encouraged. This "acceleration" does not relieve the test organization from ensuring that OT will be accomplished on a production-representative configuration, and does not relieve the responsible acquisition organization from completing its mission readiness certification obligations, to include an MOTRC and/or a signed Mission Ready certification memorandum.

4.4.12. **Pre-Test Group Readiness Reviews.**

4.4.12.1. **Combined Readiness Reviews.** A CRR is a decision briefing that combines a TRR and an FRR and is conducted just prior to the commencement of dedicated operational testing.

4.4.12.1.1. The PM will use 53 WG-approved CRR briefing templates found in the 53 WG Test Team Handbook, located at the wing test training SharePoint site, as guidelines.

4.4.12.1.2. The PM, with the assistance of the executing UPO/RPO, will normally present the CRR to the responsible test management and execution group commander(s), or their designated representative(s), after the test plan is reviewed by the approving authority and two weeks before the first test event (ground or flight). Normally, the PM will present the TRR portion of the briefing and the UPO/RPO will present the FRR portion of the briefing. A separate readiness review may be accomplished if ground testing starts significantly earlier than flight testing.

4.4.12.1.3. During the course of a test, if unexplained test results or anomalies occur which could have detrimental effects on test safety, the PM must consider prior CRR approval-to-test to be rescinded and confer with the FRR approval authority for additional direction. PMs should also consider reconvening a CRR after any unplanned, extended break in test activity (test item fixes, test item recertification, etc.).

4.4.12.1.4. A CRR fulfills both the technical and operational test mission risk management review requirements mandated in AFI 99-103 and ACCI 99-101 for an operational test organization.

4.4.12.1.5. VFTs normally do not require a CRR (see "non-complex test" exception in **paragraph 4.3.3.2.1**). Project Managers are authorized to secure FRR approval for VFTs via any process satisfactory to the flying execution group commander. VFTs are not expected to be formally briefed at the weekly Consolidated Test Brief video teleconference.

4.4.12.1.6. The TIs may not require a CRR. Readiness reviews will be accomplished in a manner appropriate to the scope and urgency of the test, and as agreed to by the OT managing group commander.

4.4.12.1.7. In the case of combined DT/OT and integrated test (IT) plans, with a projected dedicated operational test start date (as determined by the issuance of a Certification Ready for Dedicated Operational Test Memo) more than three months after the start of the test support phase (i.e. DT), the CRR should be delayed until just prior to the start of the dedicated OT phase.

4.4.12.2. **Flight Readiness Reviews.** Stand-alone FRRs are decision briefings normally used when test project TRRs are not required (e.g. test support).

4.4.12.2.1. Test Support project managers should utilize the TSP FRR briefing template in the Test Team Handbook in lieu of the CRR template.

4.4.12.2.2. An FRR fulfills the test mission risk management review requirements mandated in AFI 99-103 and ACCI 99-101 for an operational test organization.

4.4.12.2.3. The 53 WG is not required to conduct MRM or an FRR on behalf of non-53 WG flying units that are actively participating in 53 WG-led testing. Instead, the 53 WG test management unit commander should send a briefing or signed MFR to each tasked operational unit's Operations Group commander or his designated representative, describing the system-under-test and outlining execution expectations for the tasked operational unit(s). This briefing or MFR requirement does not apply to operational participants that are acting solely as adversary air or in a similar supporting role.

4.4.12.2.4. In the case of combined DT/OT and integrated test plans, with a projected dedicated operational test start date (as determined by the issuance of a Certification Ready for Dedicated Operational Test Memo) more than three months after the start of the test support phase (i.e. DT), a TSP-FRR should be presented (in lieu of a CRR) just prior to the start of DT.

4.4.13. **Senior Leader Participation.** For acquisition or test meetings requiring USAFWC and/or 53 WG senior leader attendance (e.g., OTRR, IOC Decision), the following guidance should be observed:

4.4.13.1. The USAFWC/CC or CV will normally attend whenever a 4-star/3-star or SES-equivalent chairs the meeting.

4.4.13.2. The 53 WG/CC or CV will normally attend whenever a 2-star/1-star or SES-equivalent chairs the meeting. On a case-by-case basis, attendance by the OT managing group commander may be appropriate.

4.4.13.3. The managing group commander (either CC or staff) will normally attend whenever an O-6 or below chairs the meeting, but participation may be delegated to unit leadership where appropriate.

4.4.13.4. Upon unit receipt of a test meeting notification which could require participation by USAFWC or 53 WG senior leadership, the unit will advise the OT managing group commander, who will in turn coordinate a meeting attendance plan directly with the 53 WG/CV, or as delegated.

4.4.13.5. This publication's senior leadership attendance guidance does not apply to meetings which are not primarily acquisition/test/evaluation in nature.

4.4.14. **Document Coordination Process.** The majority of test documents are handled similarly. However, there are a variety of plans and reports which require different signature/approval levels and coordination trails. As a basic guideline, except for test projects under OSD Oversight, most test/test support plans and test reports will be approved by the managing group commander. Exceptions: WEG engineering and WSEP plans and reports; and flying test plans where flight test MRM is assessed to be above Low Caution. Document coordination should be handled as specified in **table 4.1** below and processed IAW the timelines in **table 4.2** to meet the desired suspense in **table 4.3**.

4.4.14.1. Managing units will initiate test documents and unit commanders will ensure these test documents are coordinated with supporting/executing units prior to submitting the document for group commander coordination. The 53 TEG has delegated operational test and test support planning and reporting documents coordination authority to its executing unit commanders.

4.4.14.2. Rapid delivery test projects will observe standard 53 WG document coordination processes for wing-conducted operational test unless exempted by ACCI99-101 or equivalent authoritative MAJCOM direction; or this wing instruction.

4.4.15. **Special Cases for Test Tasking, Documentation, and/or Readiness Reviews.**

4.4.15.1. **Support to Rapid Acquisition** . There are occasions where traditional test planning, analysis, and reporting may not support the fielding timelines of the rapid requirements / acquisition communities (e.g., Rapid Capabilities Office, Big Safari, Middle Tier Acquisition, etc.). The purpose of the Capabilities Readiness Assessment (CRA) methodology is to streamline the test planning and the reporting paperwork. CRA is a planning and reporting tool, not a new type of test; it is not intended to replace traditional operational testing (e.g. FDE, TD&E, OUE), as delineated in DAFI99-103. The scope of CRA is collaboratively determined/agreed-to between the rapid acquisition program office, the responsible MAJCOM requirements office (e.g., ACC/A8ZG), and the lead ACC operational test organization.

4.4.15.2. **Verification Flight Testing (VFT).** To smartly use limited resources and streamline tasking processes, routine integration verification flight(s) using ACC and/or AFGSC aircraft may be requested to support the fielding decision of an aircraft subsystem or store. The purpose of VFT is to provide post-DT&E integration verification information without having to conduct formal operational test. In some cases, the 53 WG SOTR PM (see **para 4.6.5.1**) may require several integration flights beyond developmental test to conclude that sufficient testing has been accomplished on the test item in question. In other cases, one or more aircraft system program offices may require several integration flights beyond developmental test prior to certifying the developmental product in question on their specific platform(s). Requests for authorization to conduct VFTs should be made by the applicable aircraft systems program office and/or ACC program functional; or by the 53 WG SOTR PM (via the 53d managing group commander) to ACC/A5T or AFGSC/A5B. The VFT requests should be mission design series (MDS)-specific. The scope of VFT should involve no more than approximately five integration sorties per request. VFT emphasis is on platform subsystem/store integration and should contain the

absolute minimum number of stores free-flight events necessary to achieve that aim. VFTs will not normally be used in situations where no developmental flight testing has previously been accomplished.

4.4.15.3. **Tactics Investigations (TI).** TI can serve at least two unique purposes currently not accommodated by established MAJCOM TD&E processes: 1) support initial stage and/or subsequent stages of a formal TPL-TD&E in a resource-streamlined manner; or 2) provide a means to support worthy "fleeting, target of opportunity" tactics development, where formulating a traditional annual CAF TRB/WEPTAC-vetted TPL-TD&E would be either a test-timeline impossibility or would be of needless scope and/or complexity.

4.4.15.3.1. The appropriateness of using a TI for testing will be assessed in either a tailored-COTB or, in cases where the test timeline precludes a COTB, via direct communication with OT managing group commander.

4.4.15.3.2. Each TI will be specifically tasked, in writing, by ACC/A3TW via an approved TIP.

4.4.15.3.3. For TI proposals not already authorized by an existing, approved TIP:

4.4.15.3.3.1. The TI request will be submitted on the ACC/A3TW SIPR SharePoint site. The Wing/Group Weapons Officer will validate the TI, inform leadership of proposal, and coordinate required resources with A3TW.

4.4.15.3.3.2. The TI requests will also be formally documented on an AF IMT 4326, Tactic Improvement Proposal (TIP), coordinated through the OT managing group commander and routed to ACC/A3TW (or AFGSC/A3T) as an out-of-cycle TIP request; the final AF IMT 4326 block will be checked "CONCUR w/INTENT" and recommend that the test be completed as a TI.

4.4.15.3.4. The OT managing group commander is authorized to determine the AF Form 781 mission coding (O4, O5, and/or O6) appropriate for dedicated TI sorties.

4.4.15.3.5. For all TI sorties not funded by a TPL test project, the following guidelines apply: 1) ranges will not be asked to incur/absorb any costs (i.e. specialized threat systems) outside the scope of assets normally included in a training sortie; 2) use of training sorties will not normally be authorized in cases where a supporting range concludes that the scope of a proposed TI requires initiation of a formal project identification document PID/SOC process; and 3) ACC/53 WG will incur no additional costs above those ordinarily required to fund flying hours, organic manpower, and routine training range usage.

4.4.15.4. **Warfighter Support.** For projects designated Warfighter Support, test planning documentation and readiness reviews will be accomplished in a manner appropriate to the scope and urgency of the test, as agreed to by the managing group commander.

4.4.15.5. **Integrated Testing.** A 53 WG test project which consists of test support, combined testing, and dedicated operational testing phases may be very lengthy in duration and warrant special approaches to test planning and test readiness reviews.

4.4.15.5.1. If a single test plan template (i.e., integrated test plan) is used in an integrated test, it should clearly delineate and distinguish between developmental test objectives and operational test critical operational issues (COIs)/test objectives.

4.4.15.5.2. Two time-phased readiness reviews should be conducted for a lengthy integrated test. A test support FRR should be conducted prior to the commencement of developmental test support and combined testing; and a CRR should be conducted prior to the start of dedicated operational testing phase.

4.4.15.5.3. As long as the appropriate planning, FRR, and associated MRM are accomplished, 53 WG execution of the DT support portion of an integrated test may commence with only the DT authority's signature/approval of the integrated test plan. The OT authority must approve/sign the integrated test plan prior to commencement of dedicated OT.

4.4.15.6. **Other Supported Testing.** Some 53 WG flying test support involves either using 53 WG technical personnel to assist in data collection on flying assets not assigned to or routinely employed by the 53 WG; or the "loan" of a test asset to a supported organization without the direct involvement of either 53 WG technical or aircrew personnel. Questions about 53 WG test planning documentation and test safety review requirements for flying tests that do not involve 53 WG aircraft and/or aircrews should be directed to the applicable group technical staff or 53 WG/TD for adjudication.

4.4.15.7. **Aircrew Training Device Testing** . Many of the regularly occurring 29 TES non-SIMCERT test efforts support SPO development and MAJCOM system maturity inquiries. These periodic test events provide valuable data on the status of the supported program, but do not rise to the level of complexity and visibility of SIMCERT test planning. Due to the frequency, abbreviated notification time, short duration, and "low-threat" nature of these test events, the following process will be used to request delegation of review and approval authority for Simulator Capability Assessment Plans (SCAP) from 753 TEG/CC to 29 TES/CC.

4.4.15.7.1. The 29 TES will provide a SCAP delegation request to its managing group commander via e-mail for his/her specific, documented approval. Upon receipt of group commander delegation approval, 29 TES/CC is authorized to review and approve the associated SCAP.

4.4.15.7.2. The 753 TEG/CC retains the authority for review and approval of any SCAP.

Table 4.1. Test Document Coordination Matrix.

Document	Support Unit	Managing Group CC[1]	Support Group CC (as applicable)	WG/ SE	WG/ CC/CV/ TD	AWC/ CC/A5/8	ACC/A5/8/9 or AFGSC/A5
OTSR	C	I	I	N/A	I	I	A
Rapid Capabilities Delivery OTSR	As prescribed by 753 TEG/CC and agreed to by ACC/A8ZG[4]						
Test Concept Brief (TCB) for OSD Oversight	C	C	I	N/A	I	I	I[2]
Verification Flight Test (VFT) Test Plan	C	A	I	C	I	N/A	N/A
Capabilities Readiness Assessment (CRA) Test Plan	C	C	I	C	I	N/A	N/A
Mission Readiness Certification Memo Endorsement (DAFMAN 63-119 process)	N/A	A	N/A	N/A	I	N/A	N/A
Operational Test Plan (to include Master Test Plans) [flight test portion of MRM assessed at Low Caution or below]	C	A	I	C	I	N/A	N/A
Operational Test Plan (to include Master Test Plans) [flight test portion of MRM assessed above Low Caution]	C	C	I	C	A	N/A	N/A

Document	Support Unit	Managing Group CC[1]	Support Group CC (as applicable)	WG/ SE	WG/ CC/CV/ TD	AWC/ CC/A5/8	ACC/A5/8/9 or AFGSC/A5
Operational Test Plan on OSD Oversight	C	C	I	C	C	I	S[2]
Rapid Capabilities Delivery Test Plan	As prescribed by 753 TEG/CC and agreed to by ACC/A8ZG[5]						
SIMCERT Test Plan	C	A	N/A	N/A	I	N/A	N/A
Simulator Capability Assessment Plan (SCAP)	N/A	I	N/A	N/A	N/A	N/A	N/A
Test Support Plan (TSP)	C	A	I	C	I	N/A	N/A
Method of Test (MOT) Annex for Master Test Plans	C	C[5]	I	C	I	N/A	N/A
TSP (flight test MRM assessed above Low Caution)	C	I	I	C	A	N/A	N/A
TSP (NucWSEP)	C	A	N/A	C	I	I	N/A
TSP Waiver	C	A	I	C	I	N/A	N/A
Pause Test Msg	C	I	I	N/A	N/A	N/A	N/A
Stop Test Msg (non-Oversight)	C	A	I	N/A	I	I	I
Stop Test Msg OSD Oversight	C	C	I	N/A	A	I	C[1]
Mission Report (MR)	I	I[4]	I	N/A	N/A	N/A	N/A
VFT Memo For Record (MFR)	C	A	I	N/A	I	N/A	N/A
Operational Test Report	C	A	I	N/A	I	N/A	N/A

Document	Support Unit	Managing Group CC[1]	Support Group CC (as applicable)	WG/ SE	WG/ CC/CV/ TD	AWC/ CC/A5/8	ACC/A5/8/9 or AFGSC/A5
Operational Test Report for OSD Oversight	C	C	I	N/A	C	I	A[2]
Rapid Capabilities Delivery Test Report	As prescribed by 753 TEG/CC and agreed to by ACC/A8ZG[4]						
SIMCERT Report	C	A	C	N/A	I	N/A	N/A
Simulator Capability Assessment Report (SCAR)	N/A	I	N/A	N/A	N/A	N/A	N/A
Test Support MFR[8]	C	I	I	N/A	I	N/A	N/A
Fielding Recommendation	C	C	I	N/A	S[3]	A	Action
Software Release Recommendation	N/A	A	N/A	N/A	I	N/A	Action
Rapid Capabilities Delivery Fielding or Release Recommendation	As prescribed by 753 TEG/CC and agreed to by ACC/A8ZG[4]						
Sufficiency of Test Review (SOTR)	C	A	I	N/A	I	N/A	Action
Capabilities and Limitations Report (C&LR)	C	A	I	N/A	I	N/A	Action
Capabilities Readiness Assessment (CRA) Report	C	A	I	N/A	I	N/A	Action
Road Show Briefing	C	I	I	N/A	N/A	N/A	N/A

Document	Support Unit	Managing Group CC[1]	Support Group CC (as applicable)	WG/ SE	WG/ CC/CV/ TD	AWC/ CC/A5/8	ACC/A5/8/9 or AFGSC/A5
Flash Bulletin, Tactics Bulletin,	C	C	I	N/A	I[7]	I[7]	I[7]
OT Bulletin	C	A	I	N/A	I[7]	I[7]	I[7]
Nuclear ALMAGs	C	C	N/A	C	I	A	Action
ALCM/DCA Planning Factors	C	A	N/A	N/A	I	N/A	I
Nuclear Reliability Scoring Panels (RSP)	C	A	N/A	N/A	N/A	N/A	N/A
NucWSEP Quick Look Report	C	A	N/A	N/A	I	N/A	I
NucWSEP Final Report	C	A	I	N/A	I	N/A	N/A
A/A & A/G WSEP Deployment Report	C	N/A	A	N/A	I	N/A	N/A
A/A & A/G WSEP, and NucWSEP Annual Reports	C	C	N/A	N/A	A	I	I
STRATCOM Annual Nuclear Planning Factors Report	C	C	C	N/A	C	I	A[9]
Combat Evaluations Family of Briefings	C	C	C	N/A	C	C	A[9]
Test Resource Plan (TRP)	C	A[6]	I	N/A	N/A	N/A	Action
Test and Evaluation Master Plan (TEMP) for OSD Approval	C	C	I	N/A	C	I	S[2]

Document	Support Unit	Managing Group CC[1]	Support Group CC (as applicable)	WG/ SE	WG/ CC/CV/ TD	AWC/ CC/A5/8	ACC/A5/8/9 or AFGSC/A5
TEMP for AF PEO Approval	C	S	I	N/A	I	I	N/A
Integrated Test Team (ITT) Charter	C	S	I	N/A	I	N/A	N/A

LEGEND:
A-Approve (final approval authority; signature may or may not be required)
S-Sign (signature required, but is not the final approval authority)
C-Coordination (coordinates on the document; no signature required)
I-Information (no action required)
N/A-Not applicable to that office
NOTES:
[1]Document approval may be delegated below group commander with the written endorsement of 53 WG/CC
[2]Coordination continues thru AF/TE to OSD
[3]In addition to 53 WG/CC, signature authority for fielding recommendations is delegated to 53 WG/CV or to 53 WG/TD. Controversial content should be brought to the attention of 53 WG/CC prior to signature
[4]Distribution at discretion of OT managing group commander
[5]MOT may be approved by test project managing unit commander
[6]Group CC only needs to approve if Critical Comments
[7]FB/TB/OTB processing managed by 561 WPS after group CC coordination
[8]Test Support MFR only required if directed by the managing group commander
[9]COMACC or AFGSC/CC approved

Table 4.2. Coordination Timeline Guidance.

These following are goals set to expedite document processing and to provide managing units a guideline on when documents need to be submitted to wing test operations to begin the upper-level review process.

Managing Unit	30 Calendar Days after PM submits to Div Chief/Flt Commander to submit to Group
Exec/Supt Unit	Five Workdays for Execution Squadron or Detachment/10 Work Days for Support Squadron (worked concurrently with above)
Managing Group	10 Workdays
WG/SE	Two Workdays
Outside Organizations	10 Workdays (if required)

Table 4.3. Suspense Guidelines.

Document or Review Event	Submittal Suspense	Comments
Operational Test Support Requests (OTSR)	As directed	Approved by ACC prior to start of test
Test Concept Brief for OSD Oversight Test Projects	180 days prior to Test Start (or as agreed-to by DOT&E)	Briefed to DOT&E
Operational Test Plan under OSD Oversight	30 days prior to Test Start (or as agreed to by DOT&E)	Submitted to DOT&E
Operational Test Report under OSD Oversight	30 days prior to the Supported Acquisition Decision Review (or as agreed to by DOT&E)	Submitted to DOT&E
Concept of Test Brief (COTB)	Greater than 45 days prior to Test Start	Reviewed by OT managing group commander
SIMCERT 30-day Notification Message	30 days prior to Test Start	Signed by 753 TEG/CC
Operational Test Plan, to include Master Test Plans (flying)	Two weeks prior to Test Start (or as agreed to by OT managing group commander)	Submitted to OT managing group commander
Operational Test Plan, to include Master Test Plans (ground)	One week prior to Test Start	Signed by OT managing group commander
SIMCERT Test Plan, to include Master Test Plans	Two weeks prior to Test Start	Signed by OT managing group commander
Method of Test (MOT) Annex for Master Test Plans	One week prior to Test Start (or as agreed to by OT managing group commander)	Signed by managing unit commander, as delegated by the managing group commander
Test Plan (WEG engineering test flights and confidence flights)	Five days prior to Test Start	Signed by WEG/CC
Simulator Capability Assessment Plan	Test Start	Approved by 29 TES/CC
Test Support Plan (fly)	Two weeks prior to Test Start (or as agreed to by OT managing group commander)	Submitted to OT managing group commander
Test Support Plan (ground)	One week prior to Test Start	Signed by OT managing group commander
Test Support Plan (NucWSEP)	One week prior to Test Start (or as agreed to by OT managing group commander)	Signed by OT managing group commander

Document or Review Event	Submittal Suspense	Comments
Test Support Plan Waiver Request	Two weeks prior to Test Start	Submitted to OT managing group commander
Combined Readiness Review (CRR)	One week prior to Test Start	Presented to OT managing group commander
Flight Readiness Review (FRR)	One week prior to Test Start	Presented to OT managing and execution group commander(s)
Operational Test Report (fly or space)	150 days after last test event (or as agreed to by OT managing group commander)	Submitted to OT managing group commander
Capabilities Readiness Assessment (CRA) Report in support of designated rapid acquisition projects	As agreed-to with requestor	Submitted to OT managing group commander
CRA Report alternative milestones deliverable in lieu of Operational Test Report	60 days after last test event (or as agreed to by OT managing group commander)	Submitted to OT managing group commander
Sufficiency of Test Review	30 days after last test event (or as agreed to by OT managing group commander)	Submitted to OT managing group commander
Capabilities and Limitations Report (C&LR)	As agreed-to with requestor	Submitted to OT managing group commander
C&LR alternative milestones deliverable in lieu of a Fielding Recommendation	10 days after last test event (or as agreed to by OT managing group commander)	Submitted to OT managing group commander
SIMCERT Report	150 days after last test event (or as agreed to by 753 TEG/CC)	Signed by 753 TEG/CC
Simulator Capability Assessment Report	60 days after last test event (or as agreed to by 29 TES/CC)	Signed by 29 TES/CC
VFT MFR	30 days after last test event (or as agreed to by OT managing group commander)	Signed by OT managing group commander
Mission Report	As Required	Submitted to OT managing group commander
End of Test Support MFR	30 days after last test event	Submitted to managing group commander, if directed

Document or Review Event	Submittal Suspense	Comments
Fielding Recommendation (FREC)	30 days after last test event (or as agreed to by OT managing group commander)	Submitted to OT managing group commander
Road Show Briefing	30 days after last test event (or as agreed to by OT managing group commander)	Ready for delivery
Flash Bulletin/Tactics Bulletin	30 days after last test event (or as agreed to by OT managing group commander)	Submitted to OT managing group commander, and subsequently to 561 WPS by 53 WG/TEO when 53 WG coordination complete
OT Bulletin	60 days after last test event (or as agreed to by OT managing group commander)	Submitted to OT managing group commander, and subsequently to 561 WPS by 53 WG/TEO when 53 WG coordination complete
Software Release Recommendation	30 days after last test event	Submitted to OT managing group commander
NucWSEP Quick Look Report	Within 24-hours of mission completion	Signed by OT managing group commander and sent to AFGSC/A3
NucWSEP Final Report	150 days after Last Test Event	Submitted to OT managing group commander
A/A & A/G WSEP Deployment Report	IAW CSAF Plan 53	Submitted to WEG/CC
A/A & A/G WSEP, and NucWSEP Annual Reports	As required by HHQ	Submitted to WG/CC
NOTE: All days are calendar days unless annotated otherwise		

4.5. Test Execution Phase. The PM will manage the test team to ensure test events are executed IAW the plan and the test item configurations are correct. Testing will not begin without an approved OTSR, a signed test/test support plan, and an approved test safety review. Test team operations analysts, suitability analysts, and data collection personnel must play lead roles in test monitoring to resolve issues and to ensure correct data are being collected. Analysts will analyze test data throughout the Execution Phase using DOE principles of test, pause, and analysis to the maximum extent possible. They will determine if additional or different testing is required. The PM will begin drafting any required test reports during the Execution Phase and update OTEMS with comments and milestone updates on a weekly basis as a minimum.

4.5.1. **Test Item Deficiencies During Operational Test.**

4.5.1.1. **Watch Items (WIT).** During extended integrated testing, particularly where there is significant overlap between developmental and operational test, 53 WG testers have the latitude to enter deficiencies as WITs (e.g. Test Problem Reports, Alerts, System Software Trouble Reports, etc.) instead of DRs in the interest of getting rapid turnaround of fixes (particularly operational flight program [OFP] software) to the test item before it

goes into dedicated OT&E. When using the WIT system to enter potential deficiencies, all testers should include as much information as possible. If instrumentation was used to collect data, the data should be preserved for the contractor's use in defining and remedying the problem. Unconfirmed anomalies may be tracked during testing as WITs until the WIT is closed or until it is reported to the appropriate system program office in DR format.

4.5.1.2. **Deficiency Reporting.** All 53 WG testers should use the Joint Deficiency Reporting System (JDRS) to report confirmed anomalies once dedicated OT&E begins. When a reportable condition exists, a DR will be submitted via JDRS IAW T.O. 00-35D-54 definitions and procedures. Mission planning DRs will use the appropriate mission planning database as directed by the mission planning TEMP. A project team member who encounters a situation warranting a DR will document the conditions. The PM will originate/review the submission to ensure it is properly categorized, valid, accurate, and complete. If the DR condition is discovered at a deployed location and the PM is unavailable, the detachment commander will act as the DR originator. The maintenance quality control organization at the deployed location will screen and release the DR when category time constraints require immediate action. The releaser will be instructed to include the support wing, if applicable, as an information addressee.

4.5.1.3. **Stop Test, Decertification, and Recertification.** If a system fails to perform adequately in operational test, and continuing dedicated OT&E is not in the best interests of the government, the managing group commander should declare a project "Stop Test" and issue formal notification to the original acquisition authority/certifying official, recommending system decertification. When this recommendation is accepted, the certifying official will issue a decertification message. After appropriate corrective actions have been taken, but before the system resumes OT&E, the certifying official must re-certify, in writing to the OT managing group commander, that the system is ready to successfully resume OT.

4.5.1.4. **Pause Test Alternative to Decertification.** For test concerns of a less serious or temporary nature (non-flight safety related), the managing OT&E unit may declare a "Pause Test" to allow time to deliberate and remedy these concerns. The OT managing group commander should be notified of this Pause Test action via any appropriate written means. Managing OT&E unit commanders may resume testing when sufficiently assured that the concern was explained or the test item performance discrepancy was resolved. Any anomaly resulting in a concern for flight safety, or a significant anomaly of a chronic nature, will immediately be elevated to "Stop Test" with an associated recommendation to decertify the test item or configuration. A series of "pauses" may indicate more serious problems requiring system decertification.

4.5.1.5. **Enhancement Reporting.** When a condition exists that is not a deficiency but identifies a recommended change to improve the system's operational effectiveness or suitability, it should be submitted as an enhancement IAW TO 00-35D-54. Enhancements are not absolutely required for successful mission accomplishment. System DRs should not be categorized as enhancements simply because they are "out-of-scope" of the original contractor design.

4.5.2. **Test Information and Material Protection.**

4.5.2.1. **Classifying Test Information.** All information associated with a test shall be classified IAW DoDM 5200.01V1, *DoD Information Security Program*: *Overview, Classification, and Declassification*, and the appropriate program Security Classification Guides. For collateral classified test projects, information, media, and equipment shall be marked as specified in the Guidelines for Controlled Access Program Coordination Office (CAPCO) Markings, HQ USAF/A7SI. All unclassified information generated by a test will be treated as Controlled Unclassified Information (formerly, For Official Use Only), as a minimum.

4.5.2.2. **Protecting Classified Test Project Materials.** Physical security requirements applying to test project materials will be addressed as instructed in AFI 31-101, *Integrated Defense*.

4.5.2.3. **Disseminating Test Information and Data.** See attachments **2** and **3** for detailed test information and data release guidance.

4.5.2.4. **Protecting Personally Identifiable Information.** PII is information which can be linked to a specific individual's identity, such as name, social security number, date of birth, place of birth, mother's maiden name, or biometric records.

4.5.2.4.1. The PM will not collect PII in conjunction with testing, through surveys or otherwise, unless necessary to accomplish the mission. When data collection includes PII, PMs will ensure the information collected is maintained and stored in a secure manner. Data or assessments containing PII will not be released outside of the 53 WG.

4.6. Test Reporting Phase.

4.6.1. **Operational Test and Verification Flight Test Reporting.** The assigned PM will produce a test report or MFR for coordination and approval for all wing conducted, integrated, and VFT projects IAW **table 4.1**.

4.6.1.1. The reporting phase starts after the last operational test or VFT event, which is normally the last data collection opportunity. The PM should update OTEMS with comments and milestone changes on a semi-monthly basis during the reporting phase.

4.6.1.2. PMs are responsible for disseminating operational test results to the appropriate MAJCOM or other interested organizations. Dissemination may only entail providing notification-of-posting of the test report on the 53 WG Test Plans and Reports SIPRNET website, along with the information needed to access the report.

4.6.1.3. **Sample Formats.** PMs will normally use the 53 WG-approved test reports/MFR reports sample formats found in the “Templates” section of the TTH on the wing test training SharePoint site. Any deviations in test plan format will be coordinated with the managing group’s technical staff.

4.6.1.3.1. The TI test reports will be accomplished in a manner appropriate to the scope and urgency of the test, and as agreed to by the managing group commander.

4.6.1.3.2. For projects identified as Warfighter Support, report format will be tailored in a manner appropriate to the scope and urgency of the test, and as agreed to by the managing group commander.

4.6.1.3.3. There is no provision for an integrated test report. The 53 WG test reports should only address the results and recommendations derived from operational test COIs and associated operational test objectives.

4.6.2. **Interim Reports.** As tasked, the PM will produce interim reports during the Execution Phase (usually at the end of test phases or periodically for long-duration projects). Formats for interim reports will adhere to 53 WG test report formats. Any deviations in test report format will be coordinated with the managing group's technical staff. The title will be adjusted to indicate the document is an interim report. To avoid multiple documents for a single project, the PM will consolidate any interim report information into the project's test report.

4.6.3. **Fielding Recommendations.** A fielding recommendation (or, alternatively a C&LR as discussed in **paragraph 4.3.3.2**) is normally delivered to ACC/A5/8/9, ACC/A8Z, or AFGSC/A5, shortly after the execution phase of an operational test is complete, with the goal being submittal to the OT managing group commander for coordination no later than 30 days (10 days for a C&LR) after the last test event. However, the PM will not initiate coordination on a fielding recommendation (positive or negative) until test results and the associated analysis are sufficient to support the recommendation. Fielding recommendations will be signed by the wing commander and endorsed by the USAFWC commander, unless otherwise specified by ACC. The two basic characterizations of a fielding recommendation are "field" or "do not field." Variations in the overall characterization of a fielding recommendation are "restricted," "interim," and "conditional."

4.6.3.1. **Restricted.** A restricted fielding recommendation will be issued if the planned operational testing is complete and there are known constraints or deficiencies to using the system. The system may be restricted to certain employment regimes, restricted to training use only, employed only by certain aircraft types, employed only by selected aircrews, or have other restrictions as deemed appropriate until corrective actions are taken. These specific restrictions should be enumerated in the restricted fielding recommendation document. An amended fielding recommendation will be issued if additional testing confirms the constraints on the system no longer apply.

4.6.3.2. **Interim.** An interim fielding recommendation will be issued if a fielding recommendation is requested before planned operational testing is fully completed. An interim fielding recommendation is normally used to expedite a system's deployment to the field (UON) or to meet an acquisition or initial operational capability (IOC) milestone. The interim fielding recommendation should address all areas where adequate operational testing was not accomplished. As in a restricted fielding recommendation, specific restrictions to operations should be enumerated. A final fielding recommendation will be issued when all required testing is completed.

4.6.3.3. **Conditional.** A conditional fielding recommendation should be issued in cases where the poor quality of a new capability (effectiveness and/or suitability) is a) operationally impactful enough to warrant remediation before fielding; and b) can be expected to be remedied in a reasonably timely manner.

4.6.4. **Release Recommendations.** Software intensive ground tests (e.g. mission planning) require the PM to produce a release recommendation to ACC staff for action. However, the PM will not initiate a release recommendation (positive or negative) until test results are

sufficient to support the recommendation. Release recommendations will be signed by the OT managing group commander, unless otherwise specified by ACC.

4.6.5. **Alternatives to Traditional Operational Test and/or Test Reporting.**

4.6.5.1. **Sufficiency of Test Review.** In certain cases where there are minor hardware/software system changes, and, in concert with the applicable system program office, operational testing is not deemed by ACC or AFGSC as warranted, the applicable user MAJCOM functional will initiate a request to ACC/A5T to conduct a SOTR. If ACC/A5T approves the request, 53 WG will be tasked to conduct a SOTR in lieu of operational testing. The assigned 53 WG PM will research all relevant development, ground test, and flight test activity to determine whether the breadth and depth of information and analysis available is sufficient for a decision-maker to make an informed fielding decision. SOTRs should specifically recommend whether the risk to the decision-maker of proceeding to a fielding decision *without additional testing* is advisable. If additional testing is warranted, the type (DT and/or OT) and extent of testing should also be recommended. SOTRs *should not directly recommend fielding or not fielding* the capability in question. SOTR assessments will be released to ACC/A5T, ACC/A8ZG, or AFGSC/A5B by the OT managing group commander.

4.6.5.2. **Capabilities and Limitations Report.** With an intent by ACC or AFGSC to release hardware and/or software before completing planned formal testing (DT&E and/or OT&E), ACC/A5T may task the 53 WG to perform a C&LR of the developmental item in question during any phase of testing. After C&LR tasking, the assigned 53 WG PM will research all relevant development, ground test, and flight test activity. This information will be provided to ACC and AFGSC and will include all known system-under-test shortcomings; as well as the scope of planned testing which has been accomplished, the scope of planned testing which has not yet been accomplished; and any deficiencies which warrant restricting system employment. C&LRs should make no recommendation as to the overall advisability of releasing this item to the field – i.e., ACC or AFGSC assumes all fielding decision risk. C&LRs will be released to ACC/A5T, ACC/A8ZG, or AFGSC/A5B by the OT managing group commander. C&LRs may be used in lieu of fielding recommendations (see **paragraph 4.3.3.2**).

4.6.5.3. **Capabilities Readiness Assessment Report. A** CRA report is intended to be a hybrid product, with scope of deliverable content somewhere between a capabilities and limitations report (C&LR) and a fielding recommendation / traditional final report. CRAs may or may not make a specific recommendation to field or produce the capability under test. As a minimum, a CRA report will give a decision-maker information about how the item is performing, how mature it is, what the performance/maturity deficiency impacts are to the intended mission, as well as risk-based recommendations.

4.6.5.4. **Employment Tactics, Techniques, and Procedures Reporting.** In addition to inclusion in a test report, TTP should be documented in Flash Bulletins (FB), Tactics Bulletins (TB), or OT Bulletins (OTB), as appropriate. Coordination, approval, and submittal suspense guidelines are found in tables **4.1** and **4.3**.

4.6.5.4.1. **Flash Bulletins/Tactics Bulletins.** While it is the responsibility of the 561st Weapons Squadron (WPS) to formally document TTP, new information normally comes from a variety of operators in the combat, mobility, and space communities,

including operational test. The content, purpose, and urgency of the submittal determines whether the product should be a Flash Bulletin (FB), Tactics Bulletin (TB), or Operational Test Bulletin (OTB). AFTTP 3-1, General Purpose, Attachment 4; and AFI 11-260 address both the FB and the TB.

4.6.5.4.1.1. **Flash Bulletins.** FB are time-critical TTP or lessons learned that need to be passed directly to the warfighter community without delay. Draft FBs are vetted by appropriate 561 WPS SMEs, approved for release by the USAFWC, and posted to the 561 WPS tactics web site. FBs are interim in nature and are not a substitute for more permanent TB/AFTTP 3-1 guidance.

4.6.5.4.1.2. **Tactics Bulletins.** TB are documented updates to AFTTP 3-1 between formal rewrites. Draft TBs are vetted by 561 WPS SMEs and an extended, applicable weapons system SME network. This extended review network may include local- and MAJCOM-level SMEs, weapons officers, and personnel from field unit weapons & tactics shops. For CAF TTP, the SME-vetted draft TB is coordinated through the 561 WPS/CC, 57 WG/CC, approved by USAFWC/CC, and posted to the 561 WPS web site.

4.6.5.5. **Operational Test Bulletins.** OTB are 53 WG internally-crafted and test team-vetted information documents that address a variety of hardware/software capabilities and limitations; and/or operational employment considerations with respect to the weapons system under test. OTB are normally much more detailed in nature than FBs or TBs and are not reviewed or sanctioned by the 561 WPS as "direct feed" updates into the AFTTP 3-1 rewrite process. In addition to informal CAF-wide distribution by the operational test unit generating the document, OTB are also posted in a special OT Bulletins folder on the 561 WPS tactics web site.

4.6.6. **Aircrew Training Device Test Reporting** . If a SCAP delegation request has been approved by OT managing group commander (see **paragraph 4.4.15.6**), that approval also constitutes delegation of approval for the associated Simulator Capabilities Assessment Report (SCAR) to the 29 TES/CC.

4.6.7. **Exemption from the Requirement to Accomplish a Test Report (EXFREP).** In cases where a unit commander concludes that accomplishing an operational test report would duplicate information already documented in a companion fielding or release recommendation, the commander is encouraged to submit, with rationale, a "Request for Exemption from Accomplishing a Final Report" to the OT managing group commander for exemption approval. Note: If an OTSR specifies that no final report is required, that suffices for EXFREP approval.

4.6.8. **Report Posting** . 53 WG/TEO is responsible for posting all materiel solution unclassified and SECRET 53 WG-generated test plans and test reports on the SiPR Intelink SharePoint site, named 53WG OT&E,

https://intelshare.intelink.sgov.gov/sites/53WG-TE/_layouts/15/start.aspx#/SitePages/Home.aspx

Additionally, all appropriately classified reports will be posted to the Defense Technical Information Center (DTIC). 561 WPS is responsible for posting all USAF non-materiel (i.e. employment TTP) on its tactics development web site.

4.6.9. **Test Support Reporting.**

4.6.9.1. When directed by the managing group commander, the PM will provide a test support MFR detailing the support provided, IAW the suspense guidelines in **table 4.3** The PM will use the 53 WG-approved test support MFR sample format in the "Templates" section of the TTH found on the wing test training office SharePoint site. In the MFR, PMs need not include specific test results or judgments, but should limit the report to general information regarding timeline and resources expended.

4.6.9.2. By exception, wing-supported tests may also require a test report or data package, as agreed to by the 53 WG PM and the supported customer, and as documented in the TPL OTSR.

4.6.10. **Mission Reports (MR)** . Occasionally, there will be value in documenting system-under-test performance and maturity information on a mission-by-mission basis. Although the TTH contains a suggested MR template, use of this template to document mission findings is optional. Additionally, when choosing to use the TTH template, MR layout and content should be tailored to what works best for the specific system-under-test. Documenting test mission/sortie findings via mission reports is also optional, unless specifically directed by the unit commander, by the unit's OT managing group commander or by higher wing authority.

4.6.11. **Test Report Briefings.** Normally, operational test report briefings are not required unless specifically requested by leadership. Two exceptions to this are when the test project is on OSD Oversight (see **paragraph 3.8**).

4.6.12. **Road Shows/Field Training.** PMs will budget for and include test results road shows in the OTSR and project test plan. Content of test results road shows should provide comprehensive capability information on new hardware, software, support equipment, and technical orders, as well as weapons system employment (TTP), as applicable; and may include initial training for operational and/or maintenance personnel.

4.7. Project Close Out Phase. After the project is completed (final report deliverable signed), the PM will make final updates in OTEMS and advise wing test operations to place the project in "Complete" status.

4.7.1. **Case Folder Disposition.** Following a project's close out, the PM will review the ERM based project case folder and delete non-essential correspondence and documentation. Data analysis results will remain in the ERM case folder along with a copy of the OTSR, test/test support plan with all amendments, and all reports. The PM will maintain documentation IAW guidance found in AFRIMS Table T99-02, Rule 2.03 (accessed through the AF Portal).

4.7.1.1. **Personally Identifiable Information** . Test data and/or assessments containing PII (e.g., surveys) will be destroyed or sanitized of all PII at project close out.

Chapter 5

TRAINING

5.1. General. Unit commanders are responsible for ensuring test team personnel are fully trained before assuming unsupervised duties in their test specialty. If it is necessary for a test team member to perform duties before that individual's requisite training is complete, supervision may be conducted by anyone considered trained and qualified by the unit commander and the project manager. **Table 5.1** lists the mandatory minimum Requirements. Unit commanders may add to these requirements as necessary.

Table 5.1. Test Team Training Requirements.

Course	PM	UPO/ RPO	OA	OSA	TE/ FTE	Aircrew	TD/TC	SIMCERT
SYS-154 (CBT)	R	R		R		R	R	R
TTT Intro (CBT)	X	X	X	X	X	X	X	X
TTT	X	R	X	X	X		X	X
OS			X	X	R			X
53d Wing Intro to SOT/DOE		X		X		X		
WKSP 0686/ DOE: Foundational Concepts or SOT 210/ Intro to Experimental Design and Analysis	X	R		R				X
SOT 310/ DOE I			X		X			
SOT 410/ DOE II			X		X			
DOE III			X		X			
DOE IV			R		R			
MCRT[1,2] (CBT)	X	R	R		R		X	
SYS-153 (CBT)	X	R	R	R	R			R

X—Mandatory **R**—Recommended

NOTES:
[1] 53 WEG units responsible for executing WSEP missions; and wing units responsible for executing NucWSEP missions are authorized to use locally developed control room training courseware to fulfill MCRT requirements.
[2] 29 TES personnel are exempt from taking MCRT training.

5.2. Test Training Courseware. Wing test training is responsible for developing and managing the following wing-mandated test training courses:

5.2.1. **Test Planning, Execution, and Reporting (SYS 154).** This two-hour AFIT on-line course provides test team members with basic test knowledge. It introduces the planning, execution, and reporting phases of the test and evaluation process for Developmental Test and Evaluation (DT&E) and Operational Test and Evaluation (OT&E). It is intended for and most useful to all new 53d Wing personnel occupying non-technical positions (i.e., not TE/FTE or OA), who have no prior experience in ground and flight test. It is most useful if taken prior to the Test Team Training (TTT) Intro course. The training preference is to take the Sys 154 CBT through the AU Portal CANVAS website, but courseware is also available via the wing test training office SharePoint site.

5.2.2. **Test Team Training (TTT) Intro.** This two-hour on-line course is intended primarily for new 53 WG personnel. It describes the relationship of the 53 WG to the T&E community, where individual team members fit in the testing/evaluation process, and how they support a 53 WG PM in planning, executing, and reporting tests/evaluations.

5.2.3. **TTT.** The focus of this two-day course is managing wing-conducted and supported tests/evaluations. The TTT course is designed to immediately follow the TTT Intro (pre-requisite for TTT) course where PMs, TEs, OAs, OSAs, SIMCERT directors, and other test team members receive baseline information related to operational testing. This course goes into greater detail on the test and evaluation process and provides specific tools for effective test management.

5.2.4. **Operational Suitability (OS).** This one-day course prepares OSAs, OAs, and TE/FTEs to test and evaluate suitability of systems under test. The course provides detailed operational testing instruction on the 14 suitability areas including the major areas of reliability, maintainability, and availability.

5.2.5. **53 WG Introduction to Science of Test (SOT)/Design of Experiments (DOE).** This three-hour course is intended for aircrew, RPOs/UPOs, and OSAs. It provides an overview of common suitability analysis techniques and describes the process and principles of test design from an aircrew/execution perspective to promote effective test team interaction and understanding.

5.2.6. **Design of Experiments Foundational Concepts (WKSP 0686)/Science of Test (SOT) 210/Introduction to Experimental Design and Analysis** . The 7-hour virtual course spans for 5 days and is designed for all DoD personnel. The course provides foundational understanding of essential DOE techniques with emphasis on both statistical and non-quantitative elements. Participants will gain immediate skills for increased engagement within test planning teams, whose ultimate goal is an efficient and effective approach for understanding system performance and delivering quality information to decision makers.

5.2.7. DELETED.

5.2.8. **Science of Test (SOT) 310/Experimental Design and Analysis I/DOE I.** This one-week course provides OAs and TEs a disciplined approach to clearly define test objectives, measures of effectiveness (MOE)/performance (MOP), and appropriate input factors that impact the MOE/MOP. Students design powerful tests through appropriate sample size computations, construct efficient test run matrices, develop statistical models, test models for

assumptions, and quantify the uncertainty of test results. Practical concepts of basic statistics are covered including the problem of experimental variation, graphical exploratory data analysis (histograms, box-plots), confidence intervals, type I and II errors, two-level full and fractional factorial designs, and hypothesis testing.

5.2.9. **Science of Test (SOT) 410/Experimental Design and Analysis II/DOE II.** During the one-week course, OAs and TE/FTEs will learn additional design approaches for realistic Air Force test issues building upon student knowledge (from SOT 310) on factorials, power, fractional factorials, mixed level, and response surface designs. Advanced material on fractional factorial designs for screening are addressed with additional focus on response surface methods to model nonlinear behavior. The course covers topics including multiple response optimization, design optimality (with an introduction to robust screening and alias optimal designs), and split-plot designs for hard-to-change factors.

5.2.10. **Design of Experiments (DOE) III.** This one-week applied statistics course extends the concepts learned in SOT 310 and SOT 410 into the full complement of test matrix alternatives to handle many variables over multiple testing/evaluation periods (missions, days, and sessions). The course goes in depth into topics including response surface methodology, split plot designs, and factor covering arrays, while introducing students to random effects, robust product designs, and constrained designs.

5.2.11. **Design of Experiments (DOE) IV.** This optional one-week course in advanced topics in DOE covers methods seasoned practitioners require to handle test and evaluation aberrations. The course equips the OA and TE with tools for attacking more challenging problems where either the variable composition or underlying response surface is complex, or violations of standard assumptions and principles occur.

5.2.12. **Mission Control Room Training (MCRT).** A mission control room provides two-way communication with the aircrew and real-time telemetry capability to monitor safety of flight and/or test data. This 30-minute web-based course located on the 53 WG/TEU SharePoint at 53 WG/TEU Test Training and Information - Home (dps.mil) provides a foundation of mission control room procedures and communication and fulfills the training course requirement of the 53 WGI 99-104 test director/conductor checkout program.

5.2.13. **Early Tester Involvement (SYS 153).** This 16-hour, on-line AFIT class provides test team members knowledge on how to successfully integrate T&E into the early phases of an Air Force acquisition program. The goal is to begin preparing T&E personnel to effectively engage throughout a program's life cycle starting with early involvement. Students will be introduced to the concepts of testable requirements, Integrated Test Teams (ITT), and test capabilities.

5.3. Training Courses Management . Course registration, schedules, and status of test training reports are located on the wing test training office SharePoint site and status of training is located on the wing life cycle management program (LCMP) site Test University tile. Supplementary documents and information may be found on the wing test training office SharePoint site at 53 WG/TEU Test Training and Information - Home (dps.mil) .

5.4. Other Training . The Wing test training office does not manage auxiliary training courseware, but can facilitate obtaining a variety of test-specific additional training, including securing funding.

5.4.1. Other training courses/resources are available to test and evaluation team personnel through the Defense Acquisition University, Air Force Institute of Technology, and the Air Force Test Center (AFTC).

5.4.2. Continuation training classes will be offered on select topics as changes are incorporated to test processes. Continuation training events will be posted on the Test University site and videos of continuation training classes will be available after the event. In addition, videos of the latest Test Team Training classes are available on the wing test training office SharePoint Site at 53 WG/TEU Test Training and Information - Home (dps.mil) .

5.5. Test Training Information and Databases. The Wing test training office will establish and maintain electronic TIF and TBP libraries on the wing test training office SharePoint site at 53 WG/TEU Test Training and Information - Home (dps.mil) .

5.5.1. **Test Information File.** Analogous to a flight crew information file (FCIF) for aircrew, the TIF, managed by 53 WG/TD, is a formal means to communicate test process-related information from 53 WG leadership to the test units of the wing. Its purpose is to convey mission direction or guidance, policy changes or clarifications, and procedural emphasis areas to test units and individual test team members. The OPR for TIF is 53 WG/TD.

5.5.2. **Test Best Practices (TBP) SharePoint Site.** TBP is a 53 WG strategic initiative to document testing best practices and lessons learned. Regular involvement by all 53 WG units is essential in identifying these best practices and sharing them, with the goal of improving test processes. The TBP site contains the TBP Template; the TBP Inputs Folder; and the Reviewed Inputs folder. Test teams should submit inputs to the TBP Inputs Folder in the template format provided. The OPR for TBP is the 53 WG/TD.

5.6. Test Training Waivers.

5.6.1. Mandatory course requirements may be waived based on an individual's qualification equivalency through prior experience, education, and/or training. The requesting unit commander will send a waiver request, with justification, via the applicable group staff to the wing test training office for approval by 53 WG/TD. An approved waiver request will be filed in the exempted individual's training record.

5.6.1.1. If a 53 WG member accomplished requisite test training during a previous assignment, they must re-accomplish that training unless granted a waiver by 53 WG/TD via the process detailed in **paragraph 5.6.1**.

5.6.1.2. Blanket organizational waivers for required test training will not be approved unless otherwise specified in 53 WGI 99-101. Waivers will be requested on an individual, case-by-case basis.

5.6.2. Due to unique WSEP training requirements, the 53 WEG/CC is delegated responsibility to approve any wing test training waiver requests for all 53 WEG personnel and to develop tailored 53 WEG courseware to ensure that personnel are fully trained before assuming unsupervised duties.

5.6.3. AFOTEC-equivalent courses meet 53 WG test training requirements for 31 TES test personnel and no waiver requests are required.

R. RYAN MESSER, Colonel, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

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Abbreviations and Acronyms

A/A—air-to-air

A/G—air-to ground

AATC—Air National Guard Air Force Reserve Command Test Center

AC—Active Component

ACAT—Acquisition Category

ACC—Air Combat Command

ACCI—Air Combat Command Instruction

ACS—Aerial Control Squadron

ADOS—Active Duty Operational Support

AdTD—Advanced Technology Demonstration

AFF—adaptive acquisition framework

AFGM—Air Force Guidance Memorandum

AFGSC—Air Force Global Strike Command

AFI—Air Force Instruction

AFIT—Air Force Institute of Technology

AFMAN—Air Force Manual

AFMC—Air Force Materiel Command

AFOTEC—Air Force Operational Test and Evaluation Center

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFRIMS—Air Force Records Information Management System

AFRL—Air Force Research Laboratory

AFTC—Air Force Test Center

AFTCI—Air Force Task Center Instruction

AFWIC—Air Force Warfighting Integration Capability

ALCM—air launched cruise missile

ALMAG—Air Launched Munitions Analysis Group

AMAC—Aircraft Monitor and Control

ANG—Air National Guard

AO—Authorizing Official

APDP—Acquisition Professional Development Program

APM—Assistant Project Managers

ARC—Air Reserve Component

ASD—agile software development

ATD—Aircrew training device

AdTD—Advanced Technology Demonstration

ATRS—Aerial Targets Squadron

ATEC—Army Test and Evaluation Command

C2ISR—command, control, intelligence, surveillance, reconnaissance

CA—Combat Archer

C&LR—Capabilities and Limitations Report

CAF—Combat Air Forces

CAG—Commander's Action Group

CAPCO—Controlled Access Program Coordination Office

CCW—Command and Control Wing

CDD—Capability Development Document

CJCSI—Chairman, Joint Chiefs of Staff Instruction

CJT—Collaborative Joint Test

CLP—Continuous Learning Points

CNSSI—Committee on National Security Systems

COCOM—Combatant Commander

COI—Critical Operational Issue

COMACC—Commander, Air Combat Command

COMAFFOR—Commander, Air Force Forces

CONOP—Concept of Operations

COTB—Concept of Test Briefing

CPD—Capability Production Document

COTS—commercial-off-the-shelf

CPR—Contractor Performance Reports

CRA—Capabilities Readiness Assessment

CRR—Combined Readiness Review

CSAF—Chief of Staff of the Air Force

CSAR—combat search and rescue

CTF—Combined Test Force

CTR—Capability Transition Review

CW—Cyber Wing

DAU—Defense Acquisition University

DAWIA—Defense Acquisition Workforce Improvement Act

DCA—dual capable aircraft

DE—executive director

DET—Detachment

DoD—Department of Defense

DOE—Design of Experiments

DOT&E—Director, Operational Test and Evaluation

DR—Deficiency Report

DRAS—Defense Rapid Acquisition System

DRU—direct reporting unit

DT&E—developmental test and evaluation

DTIC—Defense Technical Information Center

EMCON—Emissions Control

ERM—Electronic Records Management

eSSS—electronic staff summary sheet

ETO—execution test organization

EW—electronic warfare

EWG—Electronic Warfare Group

EWIR—Electronic Warfare Integrated Reprogramming

EXFREP—exemption from accomplishing a final report

FB—Flash Bulletins

FCA—Factor Covering Array

FCT—Foreign Comparative Test

FDE—Force Development Evaluation

FDO—foreign disclosure office

FLTS—Flight Test Squadron

FM—financial management

FMA—Foreign Materiel Acquisition

FMB—Financial Management Board

FME—Foreign Materiel Exploitation

FOT&E—Follow-on Test and Evaluation

FOIA—Freedom of Information Act

FRB—Final Results Brief

FREC—Fielding Recommendation

FRD—formerly restricted data

FRR—Flight Readiness Review

FTE—flight test engineer

FTS—flight termination systems

FWG—financial working group

FWS—fighter weapons squadron

GA—Guardian Angel

GFE—Government Furnished Equipment

GPS—Global Positioning System

GSU—geographically separated unit

HPT—High Performance Team

HHQ—higher headquarters

HQ—headquarters

IAW—in accordance with

ICD—Initial Capabilities Document

IM—integration meeting

IO—intelligence oversight

IOC—Initial Operational Capability

IOT&E—Initial Operational Test and Evaluation

IPT—Integrated Product Team

IR—infrared

ITT—Integrated Test Team

JCIDS—Joint Capabilities Integration and Development System

JCTD—Joint Capability Technology Demonstration

JDRS—Joint Deficiency Reporting System

JEFX—Joint Expeditionary Force Experiment

JEON—Joint Emerging Operational Need

JRAC—Joint Rapid Acquisition Cell

JRMET—Joint Reliability and Maintainability Evaluation Team

JROC—Joint Requirements Oversight Council

JT—Joint Test

JT&E—Joint Test and Evaluation

JTTP—joint tactics, techniques, and procedures

JUON—Joint Urgent Operational Need

LDTO—Lead Developmental Test Organization

LFE—large force exercise

LFTE—large force test event

LNO—liaison officer

MAJCOM—Major Command

MCOTEA—Marine Corps Operational Test and Evaluation Agency

MCRT—mission control room training

MDA—Milestone Decision Authority

MDAP—Major Defense Acquisition Program

MDS—Mission Design Series

ME-OTSR—multi-event OTSR

MFR—memorandum for record

MICT—management internal control toolset

MOA—memorandum for agreement

MOE—measures of effectiveness

MOP—measures of performance

MOS—measures of suitability

MOT—Method of Test

MOT&E—Multi-Service Operational Test and Evaluation

MPA—Military Personnel Appropriation

MPE—Mission Planning Environment

MR—mission report

MRM—mission risk management

MUA—military utility assessment

NDI—non-developmental item

NSTISSI—National Security Telecommunications and Information Systems Security Instruction

NUCWSEP—Nuclear Weapon System Evaluation Program

OA—operations analyst (53 WG)

OA—Operational Assessments (AF/TE)

OBAN—operating budget account number

OCR—Office of Collateral Responsibility

OFP—operational flight program

OPR—Office of Primary Responsibility

OPTEVFOR—operational test and evaluation force

OS—operational suitability

OSA—operational suitability analyst

OSD—Office of the Secretary of Defense

OT—operational test

OT&E—operational test and evaluation

OTA—Operational Test Agency

OTB—Operational Test Bulletin

OTEMS—Operational Test and Evaluation Management System

OTO—operational test organization

OTRR—Operational Test Readiness Review

OTSR—Operational Test Support Request

OUE—Operational Utility Evaluation

PA—public affairs

PACAF—Pacific Air Forces

PCA—Performance Characterization Assessment

PEO—program executive officer

PID—program introduction document

PII—personally identifiable information

PM—program manager (acquisition)

PM—project manager (53 WG)

PMD—Program Management Directive

PMO—program management office

PMT—Project Manager Training

POC—point of contact

POM—program objective memorandum

POR—program of record

PPS—precise positioning service

PTO—participating test organization

QOT&E—Qualification Operational Test and Evaluation

QRC—quick reaction capability

QRT—Quick Reaction Test

RA—resource advisor

RAA—rapid acquisition authorities

RALOT—risk assessment level of test

RAM—reliability, availability, maintainability

RCO—Rapid Capability Office

RD—restricted data

RDS—records disposition schedule

RF—radar frequency

RMB—Risk Management Board

ROM—rough order of magnitude

RPO—rated project officer

RREC—Release Recommendation

RSA—range safety approval

RTT—readiness to test

SCAP—Simulator Capability Assessment Plan

SCAR—Simulator Capability Assessment Report

SDPE—Strategic Development Planning and Experimentation

SE—safety

SOT—science of test

SER—SEEK EAGLE Request

SIMCERT—Simulator Certification

SIMVAL—Simulator Validation

SIO—Senior Intelligence Officer

SIP—special interest profile

SIPRNET—Secret Internet Protocol Router Network

SME—subject matter expert

SOC—Statement of Capability

SOTR—Sufficiency of Test Review

SPD—systems program director

SPO—systems program office

SRB—Safety Review Board

STAT—scientific test and analysis techniques

STINFO—scientific and technical information

SUT—system-under-test

TA—technical advisor

TAB—Test Approval Brief

T&E—test and evaluation

TAMP—Tactical Air Missile Program

TB—Tactics Bulletins

TBP—test best practices

TC—test conductor

TD—test director

TD&E—Tactics Development and Evaluation

TDRB—Test Data Review Board

TDT—Test Document Tracker

TE—test engineer

TEG—Test and Evaluation Group

TEMP—Test and Evaluation Master Plan

TES—Test and Evaluation Squadron (operational test unit designator)

TES—Test and Evaluation Strategy (OSD)

TF—test flight

TFI—Total Force Integration

THA—Test Hazard Analysis

TI—tactics investigation

TIF—Test Information File

TIK—telemetry instrumentation kit

TIP—tactics improvement proposal

TIPT—test integrated product team

TLE—target location error

TMDR—test methodology and data record

TMG—Test Management Group

TO—test operations

TP—test plan

TPL—Test Priority List

TPO—Test Project Order

TPWG—test plan working group

TR—test training

TRB—Tactics Review Board

TRMC—Test Resources Management Center

TRP—Test Resource Plan

TRR—Test Readiness Review

TS—test squadron

TSP—test support plan

TSL—test sufficiency level

TSS—Training Systems Squadron (53 TMG)

TSS—Test Support Squadron (53 WEG)

TTF—test task force

TTH—Test Team Handbook

TTP—tactics, techniques, and procedures

TTT—Test Team Training

UE—user equipment

UON—Urgent Operational Need

UPAR—unit public affairs representative

UPO—unit project officer

USAF—United States Air Force

USAFE—United States Air Forces Europe

USAFWC—United States Air Force Warfare Center

USAFWCI—United States Air Force Warfare Center Instruction

USSF—United States Space Force

VFT—Verification Flight Test

V&V—validated and verified

VV&A—verification, validation, and accreditation

WEG—Weapons Evaluation Group

WEPTAC—Weapons and Tactics Conference

WG—wing

WIT—watch item

WPS—weapons squadron

WSEP—Weapons System Evaluation Program

WSIG—Warfighter Senior Integration Group

WW—Weather Wing

Terms

Acquisition Category (ACAT)—acquisition categories determine the level of review, decision authority, and applicable T&E policies and procedures. They facilitate decentralized decision making and execution, and compliance with statutorily imposed requirements. See DoDI 5000.02, enclosure 3 for details.

Advanced Technology Demonstrations (AdTD)—these are advanced development efforts used to meet the needs of employment concepts and capability requirements through "proof of principle" demonstrations in operationally realistic environments.

Availability—the degree to which an item is in an operable state and can be committed at the start of a mission. As measured by the user, a function of how often failures occur and corrective maintenance is required.

Capabilities and Limitations Report (C&LR)—warfighter operational needs may require rapid and/or early fielding of new capabilities before operational testing is completed. The C&LR provides the most current operational test perspective on developmental system capabilities and limitations based on testing done to date. C&LRs will be based on existing, verifiable T&E data (contractor, developmental, and operational) derived from all available system development, ground, and flight test activities. A C&LR tasking does not necessarily obviate the requirement for dedicated OT&E.

Capabilities Readiness Assessment (CRA)—an approach to support rapid integrated testing which takes advantage of streamlined versions of legacy test policy, processes, and products.

Combined Test Force (CTF)—a combined test force is an integrated test team that includes system developers, developmental testers, and user operational testers. It may also include service OTA testers, as applicable to the system-under-test.

Critical Operational Issue (COI)—operational effectiveness and operational suitability issues (not parameters, objectives, or thresholds) that must be examined during operational testing to determine the system's capability to perform its mission; a key question that must be examined in operational test and evaluation to determine the system's capability to perform its mission. Testers normally phrase a COI as a question, seeking a "yes" or "no" answer in evaluating a system's operational effectiveness or suitability.

Dedicated Operational Testing—operational test and evaluation conducted independently from contractors, developers, and operators and used to support production or fielding decisions.

Deficiency Report (DR)—the report used to identify, document, and track system deficiency or enhancement data while a system is in advanced development, operational test, or operational transition.

1) Category I DRs are those which could cause death, severe injury, severe occupational illness, major loss or damage, or directly restrict combat or operational readiness if left uncorrected. There is normally no acceptable mitigating mission workaround.

2) Category II DRs are those which do not meet the criteria of a Cat I DR. They are attributable to errors in workmanship, nonconformance to specifications, drawing standards, or other technical requirements and normally have a mitigating mission workaround.
3) Enhancements are a type of Category II DR which identifies conditions that complement, but are not absolutely required for successful mission accomplishment. The recommended condition, if incorporated, will improve a system's operational effectiveness or suitability.

Developmental Test and Evaluation (DT&E)—test and evaluation conducted to evaluate design approaches, validate analytical models, quantify contract technical performance and manufacturing quality, measure progress in system engineering design and development, minimize design risks, predict integrated system operational performance (effectiveness and suitability) in the intended environment, and identify system problems (or deficiencies) to allow for early and timely resolution. DT&E includes contractor testing and is conducted over the life of the system to support acquisition and sustainment efforts.

Evaluation—see Test and Evaluation.

Follow-on Operational Test and Evaluations (FOT&E)—the continuation of IOT&E or QOT&E activities past the full-rate production decision. FOT&E answers specific questions about unresolved COIs or completes areas not finished during the IOT&E or QOT&E. It ensures the initial system acquisition process is complete.

Force Development Evaluation (FDE)—the operational test and evaluation of fielded, operational systems during the sustainment portion of the system life cycle after acceptance for operational use. The focus is on maintaining or upgrading operational systems after the initial acquisition process is complete. An FDE also supports acquisition of MAJCOM-managed systems.

Foreign Comparative Test (FCT)—a T&E program centrally managed by OSD which provides funding for U.S. T&E of selected equipment items and technologies developed by allied or friendly countries when such items or technologies are identified as having good potential to satisfy valid DoD requirements.

Foreign Materiel Exploitation (FME)—projects used to examine weapon systems used by foreign countries and testing is generally focused on determining capabilities and countermeasures.

High Performance Team (HPT)—an AF/A5RD-facilitated team used to develop capabilities-based requirements documents. An HPT consists of a lead (normally the sponsor), core team (ideally 7 to 11 members, consisting of SMEs from the Air Force, government agencies, and other Services as required) and support team members. The HPT accelerates the documentation process and increases the potential for a quality document. Its overarching objective is to capture, articulate, and document the operator's requirements in minimum time, while achieving stakeholder buy-in. The HPT leverages the expertise of all stakeholders by inviting them to participate in the development of the document.

Initial Operational Test and Evaluation (IOT&E)—see Operational Test and Evaluation.

Integrated Test Team (ITT)—a cross-functional team of empowered representatives from multiple disciplines and organizations and co-chaired by operational testers and the program manager. The ITT is responsible for developing the T&E strategy and TEMP, assisting the acquisition community with T&E matters, and guiding the development of integrated test plans. There is one ITT for each acquisition program.

Integrated Testing (IT)—any combination of two or more types of testing used to achieve greater test efficiency, reduced cost, and schedule savings without compromising the objectives and needs of the participating test organizations.

Joint Capability Technology Demonstration (JCTD)—a demonstration of the military utility of a significant new technology and an assessment to clearly establish operational utility and system integrity.

Joint Test and Evaluation (JT&E)—an OSD-sponsored T&E program conducted among more than one military service to provide T&E information on combat operations issues and concepts for the purpose of writing and publishing joint tactics, techniques, and procedures (JTTP). JT&E does not support system acquisition.

Large Force Test Event (LFTE) —A recurring, 53d Wing-led focused and MAJCOM-resourced environment to integrate and test the suitability and effectiveness of both fielded and un-fielded capabilities and tactics in multi-domain, multi-service, operationally realistic scenarios with the goal of maturing capability, informing fielding and/or production decisions, optimizing employment, and enlightening COCOM planning.

Lead Developmental Test Organization (LDTO)—the lead government developmental test organization that is qualified to conduct and is responsible for overseeing DT&E.

Logistics Supportability—the degree to which the planned logistics support allows the system to meet its availability and wartime usage requirements. Planned logistics support includes the following: test, measurement, and diagnostic equipment; spare and repair parts; technical data; support facilities; transportation requirements; training; manpower; and software.

Maintainability—the ability of an item to be retained in or restored to a specified condition when maintenance is performed by personnel having specified skill levels, using prescribed procedures and routines, at each prescribed level of maintenance and repair.

Managing Organization—that organization (group and associated unit) that is tasked to lead the test and responsible for the planning, analysis, reporting; and in most cases, the execution.

Measurable—having qualitative or quantitative attributes (e.g., dimensions, velocity, capabilities) that can be ascertained and compared to known standards. (See Testable)

Measure of Effectiveness (MOE)—a qualitative or quantitative measure of a system's performance or a characteristic that indicates the degree to which it performs the task or meets a requirement under specified conditions. A MOE should be established to measure the system's capability to produce or accomplish the desired result.

Measure of Performance (MOP)—a quantitative measure of a system's capability to accomplish a task, typically in the area of physical performance (e.g., range, velocity, throughput, payload)

Measure of Suitability (MOS)—a qualitative or quantitative measure of a system's readiness to be placed and sustained satisfactorily in the field, with primary areas of interest being reliability, availability, and maintainability.

Multi-Service Operational Test and Evaluation (MOT&E)—OT&E conducted by two or more Service OTAs for systems acquired by more than one Service. MOT&E is conducted according to the T&E directives of the lead OTA, or as agreed in a memorandum of agreement between the participants.

Objective (acquisition)—an operationally significant increment above the threshold. An objective value may be the same as the threshold when an operationally significant increment above the threshold is not significant or useful.

Objective (test)—a critical element of the mission or an operational warfighter goal that must be accomplished to satisfy a COI.

Operational Assessment (OA)—an analysis of potential operational effectiveness and suitability made by an independent operational test activity, with operator support as required, on other than production systems. The focus of an operational assessment is on significant trends noted in development efforts, programmatic voids, areas of risk, adequacy of requirements, and the ability of the program to support adequate operational testing. Operational assessments may be made at any time using technology demonstrators, prototypes, mockups, engineering development models, or simulations, but will not substitute for the dedicated OT&E necessary to support full production decisions.

Operational Capability—see Objective (test).

Operational Effectiveness—measure of the overall ability to accomplish a mission when used by representative personnel in the environment planned or expected for operational employment of the system considering organization, doctrine, tactics, supportability, survivability, vulnerability and threat.

Operational Suitability—the degree to which a system can be placed and sustained satisfactorily in field use with consideration given to availability, compatibility, transportability, interoperability, reliability, wartime usage rates, maintainability, safety, human factors, habitability, manpower, logistics, supportability, logistics supportability, natural environmental effects and impacts, documentation, and training requirements.

Operational Test and Evaluation (OT&E)—1) the field test, under realistic combat conditions, of any item of (or key component of) weapons, equipment, or munitions for the purpose of determining the effectiveness and suitability of the weapons, equipment, or munitions for use in combat by typical military users; and the evaluation of the results of such test (Title 10 §139(a)(2)); 2) testing and evaluation conducted in as realistic an operational environment as possible to estimate the prospective system's operational effectiveness and operational suitability. In addition, OT&E provides information on organization, personnel requirements, doctrine, and tactics. It may also provide data to support or verify material in operating instructions, publications, and handbooks.

Operational Test Agency (OTA)—an independent agency reporting directly to the Service Chief that plans and conducts operational tests, reports results, and provides evaluations of effectiveness and suitability on new systems. NOTE. Each Service has one designated OTA: The Air Force has the Air Force Operational Test and Evaluation Center (AFOTEC). The Navy has the Operational Test and Evaluation Force (OPTEVFOR). The Army has the Army Test and Evaluation Command (ATEC). The Marine Corps has the Marine Corps Operational Test and Evaluation Agency (MCOTEA).

Operational Test Organization (OTO)—operational test organization that has the responsibility to plan, execute, and report on a test. There may be other operational test organizations from within the USAF or other services that support the test, or may conduct specific phases of the test.

Operational Utility Evaluation (OUE)—a highly streamlined, tailored OT&E activity designed to obtain a quick-look assessment of military capabilities and limitations. OUEs are specifically limited in time and scope and will not afford the same rigor as an IOT&E or FDE. OUEs cannot be used when an IOT&E, QOT&E, FOT&E, or FDE is more appropriate. Both AFOTEC and user MAJCOM OTOs may conduct OUEs.

Operator—generally applies to those primary operational commands or organizations designated by Headquarters, US Air Force, to conduct or participate in operations or operational testing – interchangeable with the term “using command” or “user.” “Operator” may also refer to an individual user of the equipment.

Oversight—senior executive-level monitoring and review of programs to ensure compliance with policy and attainment of broad program goals.

Oversight Program—a program on the OSD T&E Oversight List for DT&E, LFT&E, and/or OT&E. The list includes all ACAT I (MDAP) programs, ACAT II (major system) programs, and any other “special interest” programs selected for OSD T&E Oversight. These programs require additional documentation and have additional review, reporting, and approval requirements.

Participating Test Organization (PTO)—any test organization required to support a lead test organization by providing specific T&E data or resources for a T&E program or activity.

Performance Characterization Assessments (PCA)—scientific assessments to determine and quantify the capabilities and vulnerabilities of the threat system for the purpose of jammer technique development and/or emitter identification development.

Qualification Operational Test and Evaluation (QOT&E)—a tailored type of IOT&E performed on systems for which there is little to no RDT&E-funded development effort.

Commercial-off-the-shelf (COTS), non-developmental items (NDI), and government furnished equipment (GFE) are tested in this manner.

Reliability—probability of an item to perform a required function under stated conditions for a specified period of time.

Simulator Certification (SIMCERT)—the process of ensuring, through validation of hardware and software baselines, that an aircrew training device and its components provide accurate and credible training. The process also makes sure the device continues to perform to the delivered specifications, performance criteria, and configuration levels. It will also set up an audit trail regarding specification and baseline data for compliance and subsequent contract solicitation or device modification.

Simulator Validation (SIMVAL)—SIMVAL is the process for comparing a training device's operating parameters and performance to the current intelligence assessment of a prime mission system, threat and interaction between the prime mission system and threat

Sufficiency of Test Review (SOTR)—for some programs of limited scope and complexity, system development testing or integrated developmental and operational test events may provide adequate operational test data to support MAJCOM fielding decisions. In these situations, the lowest appropriate level of required MAJCOM operational testing may consist of a review of existing data rather than a separate, dedicated operational test event. The SOTR may only be used to inform MAJCOM or user system fielding decisions. It may not be used as the sole source of operational test information for any type of acquisition milestone or production decisions. The SOTR may not be used for acquisition milestone decisions associated with OSD OT&E Oversight programs unless approved by DOT&E.

Survivability—the capability of a system and crew to avoid or withstand a man-made hostile environment without suffering an abortive impairment of its ability to accomplish its designated mission. Survivability consists of susceptibility, vulnerability, and recoverability.

Sustainment—1) the provision of personnel, logistic, and other support required to maintain and prolong operations or combat until successful accomplishment or revision of the mission or of the national objective; 2) the Service's ability to maintain operations once forces are engaged; 3) activities that sustain systems during the operations and support phases of the system life cycle. Such activities include any investigative test and evaluation that extends the useful military life of systems or expands the current performance envelope or capabilities of fielded systems. Sustainment activities also include T&E for modifications and upgrade programs and may disclose system or product deficiencies and enhancements that make further acquisitions necessary.

Tactics Development and Evaluation (TD&E)—a tailored type of FDE specifically designed to further exploit doctrine, system capabilities, tactics, techniques, and procedures during the sustainment portion of the system life cycle. TD&Es identify non-materiel solutions to tactical problems or evaluate better ways to use new or existing systems.

Tactics Investigation (TI)—a MAJCOM-tailored TD&E that 1) can support the initial stage and/or subsequent stages of a formal TPL-TD&E in a resource-streamlined manner; or 2) can provide a means to support worthy "fleeting, target of opportunity" tactics development, where a traditional annual CAF TRB/WEPTAC vetting process would be either a timeline-impossibility or would be of needless scope and/or complexity.

Test—see Test and Evaluation.

Testable—the attribute of being measurable with available test instrumentation and resources. NOTE. Testability is a broader concept indicating whether T&E infrastructure capabilities are available and capable of measuring the parameter. The difference between testable and measurable may indicate a test limitation. Some requirements may be measurable but not testable due to T&E infrastructure shortfalls, insufficient funding, safety, or statutory or regulatory prohibitions.

Test and Evaluation (T&E)—the processes of 1) systematically collecting empirical data during the research, development, or sustainment of systems to create information through analysis that is useful to technical personnel, operators, and decision makers for reducing design and acquisition risks and/or improving system performance and employment practices; and 2) the subsequent process by which systems are measured against requirements, specifications, and employment manuals and the results analyzed so as to gauge progress and provide decision-maker quality feedback.

Test and Evaluation Master Plan (TEMP)—documents the overall structure and objectives of the T&E program. It provides a framework within which to generate detailed T&E plans and documents schedule and resource implications associated with the T&E program. The TEMP identifies the necessary developmental, operational, and live-fire test activities. It relates program schedule, test management strategy and structure, and required resources to: COIs; critical technical parameters; objectives and thresholds documented in the requirements document; and milestone decision points.

Test and Evaluation Organization—any organization whose designated mission includes test and evaluation.

Test and Evaluation Strategy (TES)—the overarching integrated T&E plan for the entire acquisition program that describes how operational capability requirements will be tested and evaluated in support of the acquisition strategy. Developed prior to Milestone A, the T&E strategy addresses modeling and simulation, risk and risk mitigation, development of support equipment, and identifies how system concepts will be evaluated against mission requirements, among other things. The T&E strategy is a precursor to the test and evaluation master plan.

Test Event—any flight or ground event designed to collect data for the purpose of determining effectiveness, suitability, or TTP in a formal test environment. All test events should be defined in the test plan.

Test Integrated Product Team (TIPT)—any temporary group consisting of testers and other experts who are focused on a specific test issue or problem. There may be multiple TIPTs for each acquisition program.

Test Limitation—any condition that hampers but does not preclude adequate test and/or evaluation of a critical technical parameter, operational requirement, or COI during a T&E program.

Test Team—a group of testers and other experts who carry out integrated testing according to a specific test plan.

Threshold—the minimum acceptable operational value below which the utility of the system becomes questionable.

User—see operator.

Waiver—decision-maker approval for not following processes and/or not producing deliverables normally required by statute or policy.

Attachment 2

TEST INFORMATION RELEASE (GENERAL)

A2.1. Test Support Information/Data. For 53 WG tests supporting outside agencies (AFOTEC, AFMC, etc.), test results and data should only be released to the test director of the primary test agency. The 53 WG personnel will not make value judgments, written or oral, or discuss test data, findings, conclusions, or results outside the test team without specific written approval from that test agency. In cases where data collected is used by both the supported organization and the 53 WG to fulfill individual test plan requirements, test results and data release by the 53 WG should be pre-coordinated with the supported agency.

A2.2. 53 WG Information Release to Entities Outside DoD. Generally, 53 WG personnel do not have the authority to release information to any organization outside the DoD (see routine test data exception in **paragraph A2.3.3.1**). To secure release of 53 WG/CC approved test reports, the requesting non-DoD organization must submit a written request to the DTIC (DTIC Form 55). For all other 53 WG test products not normally archived at DTIC (e.g. fielding recommendations, draft reports, preliminary assessments) or for final test reports not yet archived at DTIC, requests for release should be submitted directly to ACC/A5T (or ACC/A3T in the case of a TD&E) and AFGSC/A5B (or AFGSC/A3T in the case of a TD&E) for tests sponsored by AFGSC.

A2.3. 53 WG Information Release to Entities Within DoD. For 53 WG conducted tests, no 53 WG personnel will make value judgments, written or oral, or discuss findings, conclusions, or results outside of ACC or AFGSC (as applicable) without approval from the 53 WG/CC (or the cognizant 53d group commander in cases of mission planning). The PM should ensure 53 WG leadership is aware of any potentially unfavorable test results before discussing or distributing to ACC or AFGSC staff or other government organizations. Note: See **attachment 3** for additional guidance on releasing information to DOT&E.

A2.3.1. **Fielding/Release Recommendations and Test Reports.** A signed fielding or release recommendation constitutes 53 WG/CC consent to discuss the contents of that fielding or release recommendation within the DoD. If a DoD organization wants a copy of a fielding or release recommendation, a request should be submitted by that organization directly to ACC/A5T, and to AFGSC/A5B, for tests sponsored by AFGSC. A signed test report constitutes 53 WG/CC consent to release that report and all associated test data within the DoD.

A2.3.2. Preliminary assessments/findings will not be presented or released to DoD organizations outside ACC/AFGSC without the written approval of the 53 WG/CC (or the appropriate 53d group commander for mission planning). If preliminary assessments/findings are released outside the 53 WG, the document should be clearly marked "DRAFT / PREDECISIONAL." Note: The 29 TES simulator certification teams are authorized to out brief preliminary results to the commander (or his designated representative) of the inspected organization (within or outside of ACC) upon completion of SIMCERT, without specific approval from the 53 WG/CC.

A2.3.2.1. Although Mission Reports are considered preliminary assessments, release authority outside ACC or AFGSC is delegated to the appropriate 53d OT managing group commander. If mission reports are released outside the 53 WG, the document should be clearly marked "DRAFT/PREDECISIONAL."

A2.3.3. **Test Data.**

A2.3.3.1. **Routine Test Data Requests.** Routine test data is information collected via data or video recording systems onboard or off board (via telemetry) the weapons system under test. Any routine data collected during the course of a weapons system platform test required by the prime contractor to remedy deficiencies and/or validate system performance may be delivered to the acquisition systems program office and/or system prime contractor at the discretion of the test PM. It is desirable, but not mandatory, to deliver this data to the prime contractor via the responsible systems program office. Care must be taken to not deliver the subsystem proprietary information of another contractor (e.g. munitions) to the weapons system platform prime contractor.

A2.3.3.1.1. On-board video or still camera products (photo chase aircraft, HUD, EO/IR pod, etc.) which document weapons' impact/effects are considered special test data products for data release purposes (see **paragraph A2.3.3.2**) and cannot be directly released to a prime contractor.

A2.3.3.2. **Special Test Data Requests.** Special test data is data collected external to the weapons system platform under test (i.e., munitions telemetry, range weapons impact scores, weapons impact camera video, etc.). This data is often proprietary information owned by a contractor other than the platform prime contractor. Release of special test data always requires the approval of the 53 WG/CC (or the cognizant 53 WG group commander for mission planning) and should only be released to a DoD agency, normally the acquisition systems program office having programmatic cognizance over the specific item under test (e.g., Joint Direct Attack Munition (JDAM) data would be released only to the JDAM acquisition systems program office). The appropriate DoD agency (to include ACC or AFGSC staff) has the authority, in turn, to release this data to the test item contractor(s) without additional approval from the 53 WG/CC. Note: In cases where sensitive and/or controversial test findings/data/assessments may have a major negative impact on an acquisition program, 53 WG personnel should not transmit or discuss any information outside of the 53 WG (including with ACC or AFGSC staff) without first discussing ramifications of test results with and securing release approval from the 53 WG/CC.

A2.3.3.3. **Tactics, Techniques, and Procedures.** After ensuring coordination with and consensus of all 53 WG execution unit commanders using the weapons system in question (e.g., 85 TES and 422 TES commanders for F-16 TTP), the originating TTP unit commander will submit the TTP in the appropriate format (i.e., Tactics Bulletins [TB], Flash Bulletins [FB], Operational Test Bulletins [OTB]) to 53 WG/TEO for additional internal, group-level coordination. Following this coordination, 53 WG/TEO will submit the final TTP product to the 561 WPS for internal USAFWC coordination and approval, as required. Note: OTB do not require additional USAFWC coordination and are published by 561 WPS upon receipt from 53 WG/TEO. Direct dissemination of TTP to joint organizations and/or other service components must be approved by the 53 WG/CC prior to transmittal. Target Location Error (TLE) findings from 53 WG operational testing are considered TTP for test information release purposes.

A2.3.3.4. Tactics and system performance "road shows" will be provided to field units as directed by the test plan.

A2.4. Release of Test Information to Foreign Nationals. HAF/CVAII, through the foreign disclosure office (FDO), must review all requests and approve release of all technical information prior to providing to foreign nationals, governments, or agencies.

A2.5. Freedom of Information Act (FOIA). The 53 WG Commanders Action Group (CAG), DSN 872-0053 or (850) 882-0053, will process written FOIA requests as specified in DoD 5400.7. Note: In accordance with DoD Directive 5230.25, *Withholding of Unclassified Technical Data from Public Disclosure*, test plans and test reports are exempt from release under FOIA.

A2.6. Public Release of Information. One of the most important tools to showcase the 53 WG is an aggressive and proactive public affairs (PA) program. Unit-generated information that has the potential for wing public release includes ongoing morale and welfare topics; human interest stories; incidents and accidents; and test activity/results, to include any associated conference/symposium test results briefings. The 53 WG/PA will work directly with 96 TW/PA at Eglin AFB, and with other host base PAs for all other 53 WG geographically separated units (GSU) to determine specific release authorities.

A2.6.1. For technical text and imagery generated using source data from a single 53 WG unit's test project(s), the applicable unit technical advisor will review the product for technical and capabilities public release and make a recommendation to 53 WG/PA. For technical text and imagery generated using source data from more than a single unit's test project(s), the units' and the applicable group technical advisor(s) will review the product for technical and capabilities public release and make a recommendation to 53 WG/PA.

A2.6.2. The 53 WG/PA will provide the final security and policy review of any text and imagery proposed for public release, and will act as primary public release authority for the product.

A2.6.3. The 53 WG/TD will be advised by applicable units of any technical media items approved for public release by 53 WG/PA prior to public presentation. In collaboration with 53 WG/PA and 53 WG/TD, the 53 WG/CV will determine if HHQ(s) – USAFWC, MAJCOM, Air Staff, etc. – also need to review any potentially controversial media items prior to public release.

Attachment 3

TEST INFORMATION RELEASE TO DIRECTOR, OPERATIONAL TEST & EVALUATION

A3.1. The 53 WG continues to play a key role in assessing several programs on the OSD Test and Evaluation Oversight list.

A3.2. As required by Public Law, Title 10, DOT&E formulates independent assessments of new combat capability for major defense acquisition programs (MDAP) or other special interest programs. To make its assessments, DOT&E relies heavily on AFOTEC's and ACC's operational test data and results. There are several items to keep in mind when assisting DOT&E to fulfill its mandate.

A3.2.1. AFI 99-103 explains the Air Force process for delivering formal operational test documents (Concept of Test Briefings, Test Plans, Test Reports, etc.) to DOT&E.

A3.2.2. Regarding test data and information, Public Law grants DOT&E access to all test data and records within DoD to facilitate fulfilling its charter of oversight of operational testing. Any delay in presenting operational test data to DOT&E must be based on practical limitations and not on concern over how that data might reflect on the particular program.

A3.2.3. Before delivering test data and information – particularly preliminary aircrew or test team assessments – to any outside agency, including DOT&E, it must be reviewed and validated. Passing inaccurate information could result in flawed conclusions, faulty assertions and recommendations, and ultimately, misinformed leadership decisions. Review and release of effectiveness data for ACC or AFGSC projects on OSD Oversight is normally accomplished by the OT managing group commander. Review and release of suitability data for projects on OSD Oversight is normally accomplished by the cognizant program office in ACC/A5/8/9 or AFGSC/A5. Government generated WITs that have not been adjudicated and selected for inclusion in the USAF JDRS are not considered reviewed and validated information.

A3.2.4. All information should be presented to DOT&E in an objective manner. AF/TE, AFOTEC, ACC, AFGSC, as well as the affected acquisition program leadership should be advised, ahead-of-time, of the specifics of any release that could potentially result in an unfavorable DOT&E assessment.

A3.3. The following guidance applies to all 53 WG members queried directly by DOT&E to deliver program/test information or data products:

A3.3.1. Queried 53 WG members should refer the DOT&E requestor to the managing group commander.

A3.3.2. For 53 WG operational testing on OSD Oversight, 53 WG intent is to provide data products in the form of complete "mission packages." These packages will normally include applicable third party data and analysis (frequently referred to as "PTO data"), validated pilot questionnaires, and validated engineer/analyst notes. Decision authority as to the specific composition of mission packages, as well as the delivery medium, normally resides with the OT managing group commander. All 53 WG products provided to DOT&E will also be made available to AFOTEC, as requested.

A3.3.3. Depending on the nature of the test, these mission packages may also include cockpit video as well as other distinctive electronic presentation products generated by the 53 WG. Due to the size of these files, the unique application software often required to view them, and/or wing manpower limitations; the 53 WG preference is to provide DOT&E representatives access to these storage-intensive products on-site at the applicable 53 WG location (see **paragraph A3.4** for guidance).

A3.3.4. Since third party data and/or analysis will potentially not be delivered to the 53 WG on a schedule which permits adequate time for DOT&E assessment, the managing group commander will consider DOT&E requests for delivery of specific subsets of mission package products on a case-by-case basis. For the reasons mentioned in **paragraph A3.3.3**, the 53 WG preference is to normally provide DOT&E representatives access to partial mission packages on-site at the applicable 53 WG location (see **paragraph A3.4** for guidance), in lieu of transmitting partial mission packages to OSD. If mission package products are released to DOT&E prior to receipt of the requisite third party data and/or analysis, these products will be marked "DRAFT / PREDECISIONAL."

A3.3.5. When an IOT&E/FOT&E is in progress, all government-generated items for USAF Deficiency Report consideration, as well as all suitability data collected are controlled and adjudicated by AFOTEC. DOT&E requests to review IOT&E/FOT&E generated deficiency and suitability data should be referred to the applicable AFOTEC detachment. At the completion of IOT&E/FOT&E, control of suitability data will normally revert to the 53 WG.

A3.4. The following guidance applies to DOT&E on-site visits to 53 WG locations.

A3.4.1. For specific 53 WG test projects on OSD Oversight, DOT&E representatives are permitted supervised access to all applicable 53 WG facilities to which they are security-cleared. Government DOT&E representative visits will be hosted by a 53 WG O-4/GS-13 or higher, as appropriate. DOT&E contractor (IDA) representative visits will be hosted by an appropriate level 53 WG government technical expert.

A3.4.2. Visit hosts will honor all DOT&E requests to see OSD Oversight program information/data generated by 53 WG testing, with the following exception: deficiency and suitability data generated by IOT&E/FOT&E are controlled and adjudicated by AFOTEC. DOT&E requests to review IOT&E/FOT&E-generated deficiency and suitability data should be referred to the applicable AFOTEC detachment.

A3.4.3. DOT&E visitors shall be advised that all working papers/records, to include WITs, post-mission pilot questionnaires, and engineers'/analysts' notes, are preliminary in nature, and are not considered valid until officially released by the 53 WG. DOT&E visitors must also be reminded that preliminary information is potentially inaccurate and could lead to the drawing of faulty conclusions with respect to assessment of operational effectiveness and/or suitability of the test item. Preliminary information is not suitable for inclusion in DOT&E's annual report to congress. Confirmation that this verbal caveat has been delivered to each visiting DOT&E representative should be annotated in the host's visit summary.

A3.4.4. All 53 WG DOT&E visit hosts will e-mail a "visit summary" to the appropriate 53 WG project manager within 24 hours of completion of the DOT&E representative's visit. This visit summary should include the name(s) of the DOT&E/IDA visitor(s), date(s) of visit, topic(s) covered, data/information reviewed, and items the DOT&E representative(s) took particular interest in. The 53 WG project managers should forward DOT&E visit summaries to the cognizant test management unit commander, who in turn will forward to the OT managing group commander, as well as the appropriate AFOTEC detachment commander, if applicable.