

**BY ORDER OF THE COMMANDER  
53D WING (ACC)**



**53D WING INSTRUCTION 99-101**

**10 JUNE 2014**

*Incorporating Change 1, 20 MAY 2016*

***Test and Evaluation***

**53D WG TEST AND EVALUATION**

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**COMPLIANCE WITH THIS INSTRUCTION IS MANDATORY**

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This 53 WGI implements Air Force Policy Directive (AFPD) 10-9, *Lead Command Designation and Responsibilities for Weapon Systems*; AFPD 99-1, *Test and Evaluation Process*; Air Force Instruction (AFI) 11-260, *Tactics Development Program*; AFI 36-2238, *Management of Aircrew Training Devices*; AFI 99-103, *Capabilities-Based Test and Evaluation*; Air Combat Command Instruction (ACCI) 99-101, *ACC Test and Evaluation*; and United States Air Force Warfare Center Instruction (USAFWCI) 99-103, *USAFWC Test and Evaluation*; as applicable to operational testing of combat weapons systems and the evaluation of aircrew training devices. This instruction designates the 53d Test Management Group (TMG) as 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 AFI 10-707, *Spectrum Interference Resolution Program*; AFI 63-131, *Modification Program Management*, AFI 63-125, *Nuclear Certification Program*; AFI 65-601, *Financial Management*, AFI 90-802, *Risk Management*; Air Force Space Command Instruction 99-103, *Capabilities Based Test and Evaluation of Space and Cyber Based Systems*; AFMAN 63-119, *Certification of System Readiness for Dedicated Operational Test and Evaluation*; TO 00-35D-54, *USAF Deficiency Reporting, Investigation, and Resolution System*. 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 53 TMG/TR SharePoint site. Additional supporting or clarifying directives and policies may be

found in DoDI 3200, *Major Range and Test Facility Base*; DoDI 5000.02, *Operation of the Defense Acquisition System*; AFI 61-201, *The Local Scientific and Technical Information Process*; AFI 61-202, *USAF Technical Publications Program*; AFI 63-1201, *Life Cycle Systems Engineering*; AFD 63-1/AFPD 20-1, *Acquisition and Sustainment Life Cycle Management*; AFI 10-703, *Electronic Warfare Integrated Reprogramming*; AFI 10-706, *Electronic Warfare (EW) Operations*; AFI 33-332, *Air Force Privacy and Civil Liberties Program*; AFI 63-114, *Quick Reaction Capability Process*; AFI 91-204, *Safety Investigations and Reports*; AFI 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*; ACCI 10-707, *Combat Shield*; 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*; COMACC Plan 85, *Air-to-Air Weapon System Evaluation Program*; and COMACC Plan 90, *Air-to-Ground Weapon System Evaluation Program*. See attachment 1 for a glossary of references and supporting information. Contact supporting records managers as required. Refer recommended changes and questions about this publication to the office of primary responsibility, 53 TMG/TA, 203 West D Avenue, Suite 608, Eglin AFB FL 32542-6867. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, *Management of Records*, and disposed of in accordance Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS).

## **SUMMARY OF CHANGES**

Implements fact-of-life administrative changes; modifies Applicability of this instruction; introduces rapid integrated test organization, processes, and procedures; amends test safety process guidance; adds RM program responsibility; adds leadership meeting participation responsibilities; describes combined test force concept; references MAJCOM (ACC) TPL process for rapid integration test projects; outlines a new test planning and reporting process for sustainment activities on aircrew training devices; amends some product delivery and readiness review timelines; provides minor clarifications on myriad other entries; and modifies existing Public Affairs guidance.

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## 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. AFI 99-103, describes the roles and responsibilities of the T&E community in executing this function.

#### **1.2. Traditional T&E, Technology Development, and Rapid Acquisition.**

**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 ready for dedicated operational testing according to AFMAN 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).** Operational testing includes several categories: 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) service operational test agency (OTA), the Air Force Operational Test and Evaluation Center (AFOTEC). Since AFOTEC does not possess aircraft, the 53 WG supports AFOTEC's OT&E of Combat Air Force (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 and Air Force Reserve Command Test Center (AATC). The scope of ACC, AFGSC, and AFSPC user MAJCOM testing includes force development evaluations (FDE), OAs, OUEs, 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), mission data optimization (MDO), mission planning environment (MPE), and performance characterization assessments (PCA). Definitions of these test types can be found throughout the document and in the Glossary.

**1.2.3. Test Support for Technology Transition Mechanisms.** Technology transition mechanisms include advanced technology demonstrations (ATD), joint capability technology demonstrations (JCTD), exercises, and experiments. The 53 WG is occasionally requested by ACC/A5/8/9 to support these efforts.

**1.2.4. DELETED.**

**1.2.5. Joint Test and Evaluation (JTE) and Quick Reaction Test (QRT) Support.** JTE and QRT programs are sponsored by the 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). USAFWC is the USAF agent for JTEs and QRTs. JTEs and QRTs usually do not result in the acquisition of systems.

**1.2.6. Foreign Comparative Test (FCT).** 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.

**1.2.7. 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.

**1.2.8. Simulator Certification (SIMCERT).** SIMCERT is an ACC program defined in AFI 362251, *Management of Air Force Training Systems*, and AFI 36-2248, *Operation and Management of Aircrew Training Devices*, 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 IAW procedures coordinated with HQ ACC and defined in the SIMCERT Master Plan.

**1.2.9. 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.

**1.2.10. Rapid Acquisition.** Combatant Command identified and Joint Staff or Service Component validated urgent operational needs represent the highest priority of the DoD. The defense rapid acquisition system is designed to rapidly deliver urgently needed 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 two to 24 months. DoD's Warfighter Senior Integration Group (WSIG) may designate any candidate or validated UON or critical warfighter requirement for joint action and management of its resolution by the WSIG. Otherwise, the following standard UON processes apply:

**1.2.10.1. 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. Service Components, in their own terminology, may use a different name for a UON. 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. 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.

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

1.2.10.2.1. JUONs are UONs that are identified by a Combatant Command or by DoD as inherently joint and impacting an ongoing contingency operation.

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

1.2.10.2.3. In accordance with CJCSI 3470.01, a Unified Combatant Commander (UCC) submits a JUON/JEON to the Joint Staff. Based on the potential solution and capability type, a Lead Service is assigned to fulfill the JUON/JEON.

1.2.10.2.4. 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 AFI 10-601.

**1.2.10.3. 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 (AFMC/A5C or AFSPC/A5X) for action.

**1.2.11. Quick Reaction Capability (QRC) Development and Testing Process.** Urgent need validation initiates the QRC process, signified by one of three triggers: UON, JUON/JEON, or CSAF direction. QRC programs do not operate outside of normal acquisition procedures, but rather speed up the fielding of systems and capabilities to satisfy near-term urgent warfighting needs. QRC programs accomplish this through the use of cross-functional teams, tightly scoped requirements, higher risk thresholds, concurrent activities, delegated authorities, and a standardized process. The QRC process shall not exceed 180 calendar days to initial fielding, unless endorsed and approved by proper authority. Initial fielding is the sole responsibility of the using command (requirements) and the acquisition program manager (development and test). Development work prior to initial fielding often does not incorporate dedicated operational testing; additionally, any test results available prior to initial fielding are normally documented in a Capabilities and Limitations Report. QRC programs shall meet a Capability Transition Review (CTR) to formally decide the long-term disposition of fielded solutions. The CTR shall occur not later than 180 calendar days following initial fielding. If the CTR decision is to transition the initially fielded capability to a traditional development and sustainment program, normal product development and testing processes will then pertain.

**1.3. T&E Guidance.** AFI 99-103 tasks each major command's (MAJCOM) designated test organization to establish disciplined processes for planning and executing T&E activities. This document, along with ACCI 99-101, AFSPCI 99-103, USAFWCI 99-103, 53WGI 99-104, and the 53 WG Test Team Handbook, establishes the direction and processes for conducting 53 WG testing. ACC/A5T is the ACC office responsible for testing and is responsible for ACCI 99-101. USAFWC/A3 is the USAFWC coordination agency for operational testing and is responsible for USAFWCI 99-103. The 53 WG will:

- 1.3.1. To the maximum extent possible, conduct T&E in a joint, integrated DT/OT environment.
- 1.3.2. Use dedicated test assets (as available) in accordance with (IAW) AFPD 10-9, when conducting tests.
- 1.3.3. 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.
- 1.3.4. Conduct testing in as realistic an operational environment as possible to determine system operational effectiveness and suitability.
- 1.3.5. 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.
- 1.3.6. Conduct FDE to refine estimates made during IOT&E or QOT&E, to evaluate changes and verify correction of deficiencies, to assist in tactics, techniques, and procedures (TTP) development, and to reevaluate a system to ensure it continues to meet operational needs.
- 1.3.7. Support IOT&E, MOT&E, QOT&E, and FOT&E; however, the 53 WG will not conduct these forms of operational test, unless specifically tasked by HAF/TE.
- 1.3.8. Support QRC processes as directed by ACC, AFGSC, and AFSPC.
- 1.3.9. Support service component and joint interoperability certification testing, as required.

**1.4. Integrated Testing.** Integrated testing is a concept for test design that must be intentionally 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. 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 that the operational tester must ensure integrity of the data and must also retain data assessment independence.

**1.5. Applicability.** The operational test and test support policies, processes, procedures, and products outlined 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. This publication does apply to individual AFRC or ANG personnel who are functionally (test) matrixed to a 53 WG test team.

- 1.5.1. The operational test and test support policies, processes, procedures, and products outlined in this instruction do not apply to 53 WG Weapons System Evaluation Programs or Electronic Warfare Integrated Reprogramming/Pacer Ware. They do not apply to 31st Test and Evaluation Squadron (TES) activities in support of AFOTEC operational testing.

1.5.2. This publication does not apply to Air Force Materiel Command (AFMC) units affiliated with the 53 WG as the developmental test part of integrated testing unless directly supporting 53 WG-conducted operational testing.

1.5.3. This publication does not apply to Air Force Reserve Command (AFRC) Units or Air National Guard (ANG) units unless directly supporting 53 WG-conducted operational testing.

## Chapter 2

### ROLES AND RESPONSIBILITIES

**2.1. Organization.** The 53 WG is organized into four groups and one wing-assigned rapid integration test team (15th Test Flight), each with distinct, but interrelated, missions.

**2.1.1. The 53d Test Management Group (TMG).** The 53 TMG is the principal point of contact (POC) for managing wing-assigned operational test and test support projects. It acts as the wing's POC with AF/TE, OSD/DOT&E, headquarters ACC, AFMC, AFSPC, AFGSC, AFOTEC, and other Department of Defense (DoD) and contractor test organizations for integrating USAF test requirements with future and ongoing wing tests and real-world efforts. The 53 TMG is responsible for planning, coordinating/managing resources, developing support plans/agreements, monitoring execution (and in select cases, executing), gathering and analyzing data, and preparing and publishing plans, reports, fielding recommendations, roadshows, and interim documents for the majority of the 53 WG operational testing, to include most AFSPC operational test. The 53 TMG manages and executes Agile Combat Support, including chemical and biological defense systems, Aircrew Flight Equipment Systems, and MPE operational testing and evaluation for USAF and non USAF agencies. The 53 TMG is the functional manager and technical expert for testing, modification, acquisition, sustainment, and certification of all CAF aircrew training device systems. The 53 TMG provides staff functional experts to facilitate 15 TF rapid integrated test activity. The 53 TMG is responsible for training personnel in required test management skills. The 53 TMG is also the wing focal point for non-EW portions of the FME program. The 53 TMG provides communication and information systems for USAF and enhances CAF warfighting capability by operating, protecting, and maintaining computer systems critical to development and dissemination of EW software.

2.1.1.1. A memorandum of agreement (MOA) between ACC and AFGSC establishes overarching policy and defines the mutual and individual organizational roles and responsibilities between the MAJCOMs for operational test support to AFGSC. The MOA is process oriented and is intended to address those aspects of operational testing required for AFGSC lead-command assigned platforms – and associated weapons – to support the AFGSC mission. ACC Office of Primary Responsibility (OPR) for this MOA is ACC/A5T.

2.1.1.2. An MOA between ACC and AFSPC defines roles and responsibilities with regard to 53 WG operational test support to AFSPC for AFSPC lead-command assigned space weapon systems. The MOA is considered a companion document to any other approved plans, agreements, or understandings dealing with 53 TMG/17th Test Squadron (TS) and provides operational test support for AFSPC. ACC Office of Primary Responsibility (OPR) for this MOA is ACC/A5T.

**2.1.2. The 53d Electronic Warfare Group (EWG).** The 53 EWG is the CAF's focal point for operational and technical EW issues. It supports the CAF EW mission IAW AFI 10-706 and ACCI 10-707. The 53 EWG is the CAF's sole provider of mission software for jamming and detection systems to enhance aircraft survivability. It provides 24-hour contingency response reprogramming of EW systems to ensure mission effectiveness in support of the

electronic warfare integrated reprogramming (EWIR) process as outlined in AFI 10-703. Units within the group support operational test of new/modified EW systems, conduct mission data (MD) programming and optimization, and make release recommendations based on those results. The 53 EWG conducts exploitation tests of foreign threat systems in conjunction with the FME program and independently as part of their MD development role. The group also executes the Electronic Warfare Assessment Program, Combat Shield, under ACC/A3 direction as outlined in ACCI 10-707.

**2.1.3. The 53d Test and Evaluation Group (TEG).** The 53 TEG is responsible for managing the wing's flying activities, except for the USAF air-to-air (A/A) and air-to-ground (A/G) WSEPs. The 53 TEG members execute tests as assigned by HQ ACC (and AFGSC via ACC-AFGSC MOA) and managed by the 53 TMG. The group is responsible for managing and conducting NucWSEP, known as Combat Sledge Hammer, IAW COMACC Plan 001 and AFGSC/CC Plan 001, through the 49 TES and 72 TES.

2.1.3.1. The 31 TES mission is to provide direct OT&E execution and analysis support to AFOTEC test teams for IOT&E/FOT&E of ACC weapon systems as directed by ACC-approved Test Resource Plans (TRP). Most 31 TES personnel are normally assigned to AFOTEC test teams at Edwards AFB, CA. All 31 TES personnel are under the administrative control of the 53 TEG.

2.1.3.2. The 53 TEG, Detachment 2, Beale AFB, CA, mission is to conduct intelligence, surveillance, and reconnaissance testing on U-2, RQ-4, and MC-12 aircraft; this testing is managed by the 53 TMG.

**2.1.4. The 53d Weapons Evaluation Group (WEG).** The 53 WEG conducts the USAF Air-to Air WSEP COMBAT ARCHER executed by the 83 FWS, IAW COMACC Plan 85; and the USAF Air-to-Ground WSEP COMBAT HAMMER executed by the 86 FWS, IAW COMACC Plan 90. It also supports Weapons Instructor Course air-to-air formal training syllabi under COMACC Plan 92. The 82 ATRS supports DoD and international customers with air-to-air targets primarily in the Gulf Ranges at Tyndall AFB, FL, White Sands Missile Range, Holloman AFB, NM, and Utah Test and Training Range, Hill AFB, UT. In addition, two E-9A aircraft provide range sweep, telemetry relay, and communications link support for numerous DoD tests. The 53 TSS ensures realistic threat representation for the aerial targets.

**2.1.5. The 15th Test Flight (TF).** The 15 TF provides operational test management services for a specific subset of developmental systems that require expedited delivery to the warfighter. 15 TF is 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/A5/8ZG, but at the discretion and approval of the 53d Wing Commander. 15 TF leverages traditional test processes and directives to the maximum extent possible.

**2.2. 53d Wing Testing.** The 53 WG is annually assigned a variety of tests by ACC (and by AFGSC and AFSPC via MOAs with ACC). These 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, 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 electronic project order (EPO). The 53 TMG/CC may waive developing a formal test support plan if the lead test agency plan adequately delineates 53 WG execution responsibilities. A formal 53 WG-published test report is not required. However, PMs will provide a memorandum for record (MFR) to the 53 WG/CC summarizing 53 WG participation.

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, especially those participating in combined test forces (CTF), 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 Early Involvement.** Early involvement provides an opportunity for 53 WG participation – usually in the pre-Milestone B acquisition phase – in test planning activities, normally for either ACAT 3 or MAJCOM-managed acquisition programs. 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). 53 WG personnel are authorized 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.

2.2.5. **Wing Monitored.** A wing monitored test has no 53 WG flying or ground test support. The wing either monitors another agency's testing or monitors early progress or planning of a project in anticipation of a future test. A test support plan or report is not required. In some cases, 53 WG aircrews may fly these tests in non 53 WG aircraft to provide an operational perspective. A test support plan is not needed for these missions.

**2.3. T&E Funding.** Funding for wing-conducted testing may come from numerous sources. The primary sources are the ACC, AFGSC, or AFSPC budget processes which yield an initial distribution from the associated MAJCOM FM to the 53 WG and ultimately to the groups and units. AFGSC, AFSPC, and AFOTEC are responsible for funding 53 WG units directly supporting their operational test requirements. Other funding agencies 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 (AFMC, AATC, 505 CCW, etc.) normally fund all the 53 WG support required for the test except flying hours and civilian/military pay.

2.3.1. **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. Administrative costs to run each squadron or detachment (e.g. computers, office supplies, phones, et al) 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 document test-specific funding requirements in the Test Management System (TMS) EPO 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. Test units are also responsible for coordinating test-specific funding needs directly with the appropriate user-MAJCOM and implementing MAJCOM (normally AFMC or SMC) 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.

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

2.3.3. **NucWSEP.** Air Launched Cruise Missile (ALCM) and B-2 NucWSEP are AFGSC funded; dual capable aircraft (DCA) NucWSEP is ACC funded with USAFE involvement. All Nuc WSEP is managed and executed by the 53 TEG. 53 TEG will ensure 53 WG/FM has visibility on all project funding.

2.3.4. **FME.** FME budgeting and funding is a 53 EWG/53 TMG-coordinated process in conjunction with ACC/AZ and the Air Staff. A prioritized FME test list will be created by 53 EWG/TMG action officers, coordinated through the group commanders, and approved by the 53 WG/CC. The 53 WG FM will use the FME test priority list to distribute funds to the respective groups.

2.3.5. **SIMCERT.** Funding for ACC, United States Air Forces Europe (USAFE), and Pacific Air Forces (PACAF) SIMCERTs is a 53 TMG-coordinated process in conjunction with ACC/A5T through the 29th Training Systems Squadron (TSS). All other SIMCERTs will be funded by the appropriate MAJCOM IAW AFI 36-2248.

2.3.6. **Space Testing.** 17 TS will coordinate with HQ AFSPC/FM and HQ AFSPC/JA, through AFSPC/A2/3/6ZT, to ensure that draft space test Electronic Project Orders (EPO) detail an agreeable cost breakdown for each projected space test or test support activity.

**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 the test. For most operational test and test support projects, the PM will be assigned to a unit of 53 TMG. 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 2.5.9 for additional PM responsibilities.

**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. 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 EPO 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 involving flying will have a RPO assigned to the test team. RPOs will be pilots, navigators, 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).** 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). 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 53 TMG/TR 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 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.** ITs 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. ACC, through USAFWC, has delegated approval authority for all non-OSD Oversight 53 WG test plans and reports to the 53 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, Tables 4.1 and 4.2.

**2.5.1. 53 TMG/CC.**

2.5.1.1. 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 the majority of 53 WG operational testing.

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

2.5.1.3. Support testing conducted by other agencies as directed by HQ ACC EPOs.

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

2.5.1.5. Conduct a concept of test briefing (COTB) for all wing-conducted flying tests.

2.5.1.6. Conduct a test readiness review (TRR) for all wing-conducted flying and space tests which will result in a fielding recommendation or development of TTP.

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

2.5.1.8. Supervise test training for the wing.

2.5.1.9. Initiate updates to 53 WGI 99-101, 53 WGI 99-104, 53 WG Test Team Handbook, and the Mission Control Room web-based training (MCRT).

2.5.1.10. Ensure procedures are established for planning, conducting, and reporting test programs IAW AFI 99-103, AFI 63-114, AFMAN 63-119, ACCI 99-101, and USAFWCI 99-103.

2.5.1.11. Approve all certifications of readiness for operational test IAW AFMAN 63-119.

2.5.1.12. Approve all non-OSD Oversight test plans (where Flight Test portion of MRM is assessed to be Low Caution and below), test reports, and release recommendations authored by 53 WG personnel, excluding NucWSEP, WSEP, MDO, and Combat Shield. Coordinate on all fielding recommendations authored by 53 WG personnel and on OSD Oversight test plans and test reports.

2.5.1.13. Direct 53d Computer Systems Squadron (CSS) to support the 53 EWG Electronic Warfare Integrated Reprogramming (EWIR) process.

2.5.1.14. Ensure organizational compliance with the AFGSC-ACC and AFSPC-ACC test support MOAs.

2.5.1.15. Develop and populate the Test Information File (TIF) to communicate test process-related information from TMG leadership to test units in the wing.

2.5.1.16. Appoint a 53 TMG Chief, Weapons and Integration.

2.5.1.17. Designate TMG staff and assigned unit leadership acquisition coded (APDP) positions, as appropriate, to meet mission requirements. Ensure designated positions are properly coded in the wing manpower document.

2.5.1.18. Review acquisition certification achievement of TMG staff and unit leadership to ensure required certifications and continuous learning is achieved in accordance with AF policy. Appoint a group APDP Manager, as required, to oversee the program.

2.5.1.19. 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).

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

2.5.1.21. Provide 53 TMG staff assistance to 15 TF, as required.

## 2.5.2. **53 TEG/CC.**

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

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

2.5.2.3. Conduct NucWSEP IAW COMACC Plan 001 and AFGSC/CC Plan 001.

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

2.5.2.5. Conduct a flight readiness review (FRR) for all tests flown by TEG aircrews and/or aircraft.

2.5.2.6. Conduct a configuration review board (CRB) for all modifications to 53 WG assigned aircraft.

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

2.5.2.8. Provide 53 TEG staff assistance to 15 TF, as required.

### 2.5.3. 53 WEG/CC.

2.5.3.1. Conduct A/A and A/G WSEP IAW COMACC Plans 85 and 90.

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

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

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

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

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

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

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

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

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

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

2.5.3.12. Maintain and operate DoD's only full scale inventory of QF-4/QF-16.

### 2.5.4. 53 EWG/CC.

2.5.4.1. Conduct mission data reprogramming, testing, and optimization IAW the AFI 10-703 EWIR process.

2.5.4.2. Conduct EW FME testing.

2.5.4.3. Conduct Combat Shield assessments.

2.5.4.4. Conduct a TRR for all assigned EW tests.

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

2.5.4.6. Develop and maintain a set of metrics for PACER WARE and other test-related electronic warfare operations.

2.5.4.7. Provide EW technical expertise and support for all 53 WG EW test-related activities, including those required by 15 TF.

2.5.4.8. Field mission data IAW the EWIR process.

2.5.4.9. Develop and maintain EWG operating instructions (or equivalent guidance), as required, tailored to address EWG test and evaluation operations not covered by this document.

2.5.4.10. Designate EWG staff and assigned unit leadership acquisition coded (APDP) positions, as appropriate, to meet mission requirements. Ensure designated positions are properly coded in the wing manpower document.

2.5.4.11. Review acquisition certification achievement of EWG staff and unit leadership to ensure required certifications and continuous learning is achieved in accordance with AF policy. Appoint a group APDP Manager, as required, to oversee the program.

#### 2.5.5. **53 WG/SE.**

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

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

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

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

2.5.6. **53 TMG/TO.** The 53 TMG/TO is the wing focal point for all test tasking from and reporting to HQ ACC, HQ AFGSC, and HQ AFSPC, except for WSEPs. The 53 TMG/TO has direct liaison authority with ACC/A5T, AFGSC/A5B, AFSPC/A2/3/6ZT, and USAFWC Staff. The 53 TMG/TO will:

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

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

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

2.5.6.4. Act as 53 WG focal point for SEEK EAGLE requests, as directed by AFI 63-104, for all aircraft directly supporting 53 WG operational testing, except WEG-owned E-9 and drone aircraft.

2.5.6.5. Manage all wing conventional munitions' (except for 53 WEG air-to-air missiles) requests, allocations, transfers, and reporting. Submit all wing munitions requirements and reports to HQ ACC/A3TW, IAW AFI 11-212 and AFI 21-201.

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

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

2.5.6.8. Act as the 53 WG focal point for all temporary modifications and instrumentation management activities, guidelines, and procedures, IAW AFI 63-131. Forward AF Form 1067 for appropriate reviews and approvals. Manage aircraft modifications for 53 TEG-assigned test assets.

2.5.6.9. With the exception of operational testing accomplished for AFSPC, maintain and forward any published unclassified and SECRET test plans and test reports to the Defense Technical Information Center (DTIC) in accordance with the AFRIMS under Table and Rule T-99-01 R02.00.

2.5.6.10. With the exception of operational testing accomplished for AFSPC, ensure that all published unclassified and SECRET 53 WG technical documents (e.g., test plans, test reports) are assigned a document number by scientific and technical information (STINFO) procedures according to the guidance in AFI 61-201, *The Local Scientific and Technical Information Process*, and AFI 61 202, *USAF Technical Publications Program*.

2.5.6.11. Coordinate operational support for 53 WG operational testing, as required, through ACC's CAF Aviation Scheduling System (CPS).

2.5.6.12. Manage the development and sustainment of the Operational Test and Evaluation Management System (OTEMS), Test Document Tracker (TDT), and the TMG/TO SharePoint site.

2.5.6.13. Post appropriate 53 WG test documents on the 53 WG Test Plans and Reports Secret Internet Protocol Router Network (SIPRNET) website after approval.

2.5.6.14. Transmit AFSPC approved test reports to AFSPC/A2/3/6ZT for disposition.

2.5.6.15. Act as the coordinating authority for 53 WG non-standard Global Positioning System (GPS) cryptographic key handling concept of operations (CONOPs) requirements IAW National Security Telecommunications and Information Systems Security Instruction (NSTISSI) 3006, *Operational Security Doctrine for the NAVSTAR GPS User Segment*.

2.5.7. **53 TMG/TR.** The 53 TMG/TR is the wing focal point for test training and TTH. The 53 TMG/TR will:

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

2.5.7.2. Publish an annual test training schedule and provide for course registration via the 53 TMG/TR SharePoint Site.

2.5.7.3. Conduct 53 WG test team training IAW Chapter 5 of this instruction.

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

2.5.7.5. Develop and maintain the TMG/TR SharePoint site.

2.5.7.6. Maintain and update the 53 WG TTH and the MCRT.

2.5.7.7. Host the Test Information File (TIF) and Test Best Practices (TBP) folders on the 53 TMG/TR SharePoint site IAW Chapter 5 of this instruction.

2.5.7.8. Maintain a data base of all wing personnel in acquisition professional development program (APDP) coded positions and document APDP training status of each individual.

2.5.7.9. Periodically organize training seminars, as directed by 53 TMG/CC.

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

#### 2.5.8. Squadron/Detachment (Unit) Commander.

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

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

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

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

2.5.8.5. Monitor the progress of assigned tests.

2.5.8.6. 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.

2.5.8.7. 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.

2.5.8.8. Designate unit acquisition coded (APDP) positions, as appropriate, to meet mission requirements. Ensure designated positions are properly coded in the wing manpower document.

2.5.8.9. Review acquisition certification achievement of unit members to ensure required certifications and continuous learning is achieved in accordance with AF policy. Appoint a unit APDP Manager, as required, to oversee the unit program.

#### 2.5.9. Project Manager (PM). A PM will be assigned as the 53 WG's single POC for each project assigned to the wing. The PM will:

2.5.9.1. Develop an EPO, preplan activities for subsequent ACC-managed or supported T&E, and ensure (in coordination with TMG/TO) the EPO is updated with significant information.

2.5.9.2. 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.

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

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

2.5.9.5. 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.

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

2.5.9.7. 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.

2.5.9.8. 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.

2.5.9.9. If not accomplished by assigned squadron munitions manager, 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 quarterly and annual reports.

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

2.5.9.11. 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.

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

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

2.5.9.14. Ensure OTEMS is current and accurate for all assigned tests. Make OTEMS updates a minimum of semi-monthly during planning and reporting, and weekly during execution. After the project is completed, the PM will close out the project in OTEMS IAW paragraph 4.8.

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

2.5.9.16. Prepare fielding/release recommendations, when required, within 30 days after the last test event (or suspense as agreed to with 53 TMG/CC), and initiate the coordination process.

2.5.9.17. Submit TTPs to the 561st Joint Tactics Squadron (561 JTS) within 30 days (75 days for OT Bulletins) after the last test event (or suspense as agreed to with 53 TMG/CC), as applicable.

2.5.9.18. Ensure a road show brief is prepared within 30 days of the last test event (or suspense as agreed to with 53 TMG/CC) for any test which results in a fielding recommendation or provides TTPs for operational use.

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

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

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

2.5.9.22. Ensure appropriate system deficiencies are submitted as prescribed in T.O. 00 35D 54WA-1, *USAF Deficiency Reporting, Investigation, and Resolution System*. 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.

2.5.9.23. 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 sheets, safety review boards, etc.) have previously been accomplished by the product development MAJCOM (normally AFMC); or that an adjudication waiver has been agreed-to by 53 TMG/CC.

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

2.5.9.25. 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., Operational Test Readiness Reviews (OTRR), Initial Operational Capability (IOC) review – at least two days prior to the event.

2.5.9.26. 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).

#### **2.5.10. 53 TMG Chief, Weapons and Integration.**

2.5.10.1. Promote 53 WG test efficiency by judiciously combining test assets and execution, where appropriate.

2.5.10.2. Promote inclusion of ancillary multi-mission design series (MDS) participants in scheduled 53 WG testing to exploit additional opportunities for tactics development, where appropriate.

2.5.10.3. Host quarterly integration meetings between USAFWC units to mine TPL opportunities for better test planning and/or test execution integration.

2.5.10.4. Develop and maintain the test best practices and lessons learned (TBL) SharePoint site to facilitate the communication of test best practices within the 53 WG.

2.5.10.5. Cultivate opportunities to share test and combat tactics knowledge/best practices with non-53 WG-organizations including, but not limited to, USN; USA; USMC; AFGSC; AFSPC; USAF Weapons School; AATC; and the 505 CCW.

2.5.10.6. Annually, develop, submit, and maintain the 53 WG Shaping Requirements input to ACC, AFGSC, and AFSPC.

## 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, AFSPC, 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. HQ ACC may task 53 WG for inputs to the TEMP.

**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. HQ ACC/A5T is the focal point for the ACC TRP coordination process. 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. 53 TMG/CC 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 53 TMG/CC 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. In general, a CTF cannot achieve effective collaboration if stakeholders operate in a totally independent manner. 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. Neither AFOTEC nor MAJCOM operational testers may be the LDTO.

**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. 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).** 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 53 TMG/TO 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 USAF/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.** 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. HQ USAF/TEP will arrange for a pre-brief to HQ USAF/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 60 days before test start. 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. HQ USAF/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 in OSD Oversight Projects.** The PM will submit reports via appropriate coordination channels to ACC/A5T; and to AFGSC/A5B or AFSPC/A3T, 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 HQ USAF/TE.

**3.8.4.2. 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 documented within final OUE or FDE reports. All Category I deficiency reports (DR) and the top 10 Category II DRs will be listed. Final report briefings will be provided to HQ USAF staff and OSD as requested. HQ USAF/TEP will assist with the review, coordination, and submission of this information.

**3.8.4.3. 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. HQ USAF/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 HQ USAF/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. HQ, US 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. HQ USAF/TE responsibilities include:

- 3.9.1. Acting as the final Air Force T&E review authority and signatory for TEMPAs.
- 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 HQ USAF/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).** 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. 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. 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 63119. In cases of AFOTEC non-involvement, MAJCOM operational testers must assume this responsibility (see paragraph 4.4.11).

## Chapter 4

### TEST PROCESS

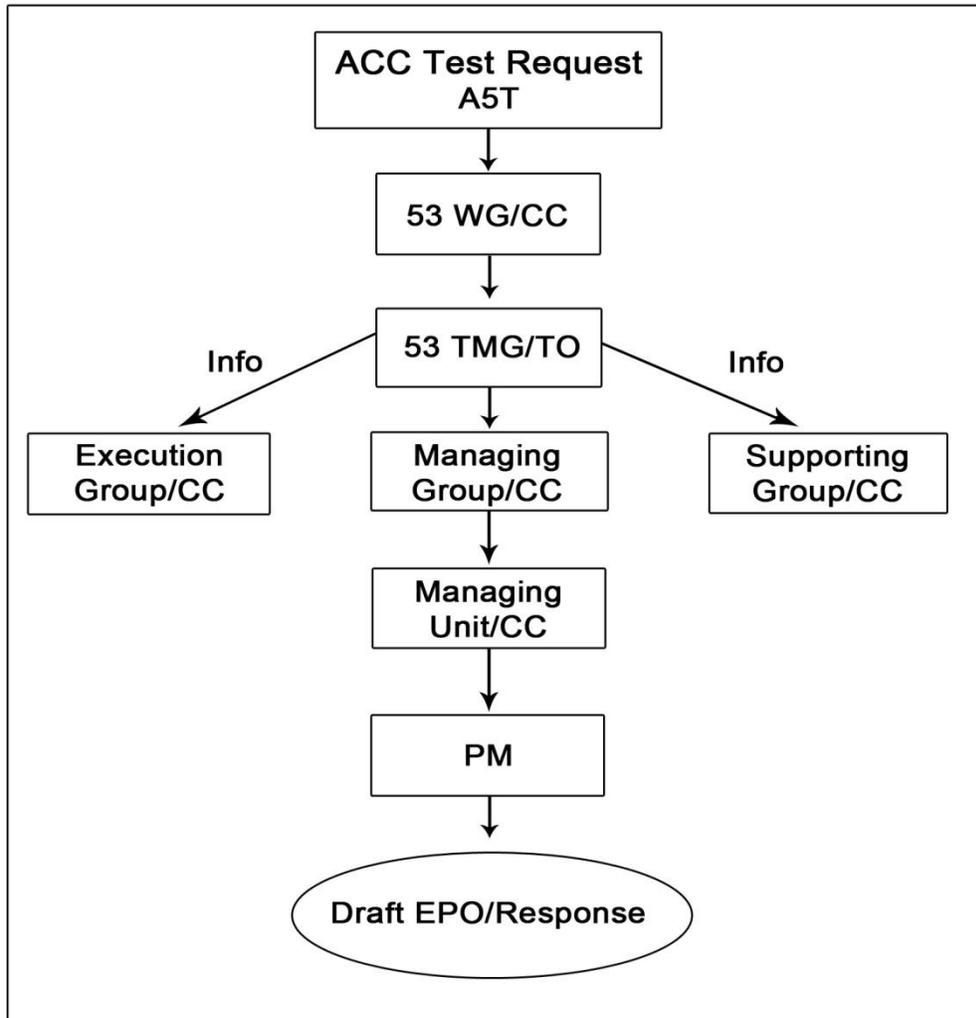
**4.1. Test Phases.** The phases for most test projects assigned to the 53 WG are project Initiation, Managing Risk, Planning, Execution, Reporting, and Close Out.

**4.2. Project Initiation.** The ACC TPL (and the adjunct AFSPC TPL for 17 TS testing), contain all assigned projects for the current fiscal year, prioritized by the ACC and AFSPC staffs, and approved by ACC/A5/8/9. Note: the AFSPC TPL (authorizing and prioritizing 17 TS test efforts) is developed independently of the ACC TPL process and is a companion, two-fiscal year document which is annually appended to the ACC TPL for completeness.

**4.2.1. CAF TPL Process.** ACC begins drafting the next fiscal year's TPL in February as part of ACC's preparation of the "in-cycle" process. Test projects are submitted to ACC/A5TT during its annual call-for-tests by the ACC staff, AFMC, AFOTEC, AFGSC, AFSPC, other services, and other agencies requiring ACC testing or test support. ACC compiles the list of tests and submits it to the ACC test agencies for validation. EPOs are then drafted by the test agency and submitted to ACC to meet the required suspense date for TPL coordination and approval. Projects not identified during this "in-cycle" process are handled individually during the year as "out-of-cycle" tests. ACC/A5T sends a message to the responsible test agency describing the test and requesting the agency prepare an EPO. The process is outlined in figure 4.1. 17 TS will work directly with AFSPC/A3TW to ensure all applicable space operational test projects are forwarded to ACC/A5T.

**4.2.1.1. CAF Rapid Integrated Test TPL Process.** ACC/A5/8ZG is the OPR for test and evaluation projects tasked to 15 TF. As the OPR, A5/8ZG 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/A5/8ZG-managed operational test activities where ACC/A5T and ACC/A3T are not directly involved.

Figure 4.1. ACC Process for Out-of-Cycle EPOs.



4.2.2. **Electronic Project Order (EPO).** An ACC-approved EPO is required for every 53 WG test project, including AFGSC and AFSPC testing; an approved EPO provides ACC's authorization to plan and execute a test. The PM drafts an EPO and submits it for coordination and approval, as described in tables 4.1 and 4.2. Beyond conducting research and attending meetings, ACC test units will not expend ACC resources without an approved EPO.

4.2.2.1. **Blanket EPO.** To avoid the administrative burden of writing multiple EPOs on a discrete, but related, family of test projects, a "blanket" EPO (a.k.a. "umbrella" EPO) is ACC authorization to accomplish an unspecified number of these related test projects throughout the duration of the approved EPO. A blanket EPO is not a blanket tasking to plan and execute any of the individual test projects covered by the EPO. ACC/A5T must first provide written tasking via 53 TMG/TO for each new specific test project to be conducted under the EPO. Additionally, ACC specifies that in the body of the blanket EPO, it will be stipulated that all test support and test execution activities to be

accomplished under the authority of that EPO must be first coordinated through ACC/A5T for oversight and formal individual project tasking.

4.2.3. **End-of-Year Rollovers.** Assigned projects which continue or are deferred into the next fiscal year will be automatically “rolled over” to the new TPL, retaining the original project order number. The 53 TMG/TO will add roll-over projects to the new TPL using the test milestones dates in OTEMS extending into the new fiscal year.

4.2.4. **Electronics Records Management (ERM) Case Folder.** The PM is required to establish and maintain a separate case folder for each assigned project. The case folder will hold, at the minimum, the test team assignment memorandum, the EPO, 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 Test Project Risk.

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. 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.** 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.

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

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. **Test Safety Risk Beyond MRM.** 53 WG flying support to developmental test, capability demonstrations, or 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 USAF LDTO (efforts informally called "bypassing DT").

4.3.2.2.1. Developmental test flying safety risks are usually catalogued and assessed via an AFMC center-level (normally, AF Test Center – AFTC) test hazard analysis process (often called a risk management board [RMB]), which in turn, normally supports an AFMC operations group-level execution safety review (often called a safety review board [SRB]). 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) 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. Any flight test support adjudicated by an AFMC test safety process to be elevated risk (Medium 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 Medium or High Risk (a.k.a. "elevated 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 pilot in command, as applicable) for all elevated risk missions.

4.3.2.2.1.3. Non-LDTO programs normally come in two broad categories – demonstrations, or small sustainment improvements on an acquisition programs of record (POR). For operational test organizational purposes, these categories roughly align with the following three hypothetical test safety risk "tiers:"

4.3.2.2.1.3.1. Tier 1 (complex demonstrations of significant new capability [e.g. Long Range Anti-Ship Missile Demonstration, Counter Electronics High Power Microwave Advanced Missile Project Demonstration, B-52 Dragon Eye Radar Demonstration, QF-4 drag chute replacement program, MALD-X]), which either should be planned and conducted by an LDTO or appear to be of sufficiently high risk to at least warrant a THA-based risk assessment by AFMC prior to proceeding with 53 WG flying.

4.3.2.2.1.3.2. Tier 2 (less complex demonstrations of significant new capability [e.g. Scorpion helmet demonstrations, Digital JHMCS demonstration, F-22 Flare demonstration]), where apparent risk is seemingly low enough that it may not warrant AFTC participation.

4.3.2.2.1.3.3. Tier 3 (small sustainment/capability POR modifications or demonstrations [e.g., B-52 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.

4.3.2.2.1.3.4. When it becomes known that a customer may request test or test support from 53 WG for a project that will "bypass DT, the tasked 53 WG unit will contact the 53 TMG/TA as soon as practical to solicit help in accurately assigning a test safety risk, based on the tier system described above. This test safety risk adjudication will be made in collaboration with ACC/A5TT. This adjudication will drive one of three probable courses of action, as follows:

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

4.3.2.2.1.3.4.2. A Tier 2 adjudication will be tasked to 53 WG and progress as if it had been assigned to an LDTO. 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.

4.3.2.2.1.3.4.3. A Tier 3 adjudication will be tasked to 53 WG and progress as if it had been assigned to an LDTO. There will be no change to normal 53 WG test planning, risk management, and Readiness Review processes.

4.3.2.2.1.3.5. Paragraph 4.3.2.2.1.3. guidance does not apply to ground tests, including all space test projects.

**4.3.3. Test Project Milestones, Leadership Reviews, and Documentation.** Test mission risk is further mitigated through the use of detailed test plans and comprehensive leadership reviews. No 53 WG testing will be conducted without an approved plan. 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, in accordance with applicable Air Force and MAJCOM directives, as well as this instruction.

#### 4.3.3.1. Milestones.

**4.3.3.1.1. Wing-Conducted Operational Flight and Space Testing.** Standard milestones for 53 WG-conducted non-OSD Oversight operational tests involving

flying or space include a comprehensive MRM and a test safety risk analysis for flight tests; as well as an approved test plan, test report, and fielding recommendation. Tests also normally include a COTB and CRR presentation to the applicable 53 WG management and/or execution group commander(s), usually at a weekly (Thursdays, 1300 Central Time) consolidated test brief video teleconference.

4.3.3.1.1.1. 15 TF test projects will observe standard 53 WG milestones for wing-conducted operational test unless exempted by ACCI99-101 or equivalent authoritative MAJCOM direction; or this wing instruction.

4.3.3.1.2. **Wing-Supported Flight or Space Testing.** Standard milestones for 53 WG-supported tests involving flying or space include a comprehensive MRM and a test safety risk analysis for flight tests; as well as a test support plan (or waiver) approved by the 53 TMG commander, and a post-test support MFR signed by the unit commander. Support tests involving flying or space also normally include an FRR presentation to the applicable 53 WG execution group commander, usually at a weekly (Thursday, 1300 Central Time) 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/release recommendation approved by the applicable test management group commander (normally, 53 TMG or EWG commanders). All technical and safety reviews are delegated to the test management unit commander (i.e. squadron or detachment) and are not normally briefed at the Thursday group 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 of test projects that cannot be conducted at the weekly consolidated test brief VTCs due to security considerations will be coordinated on a case-by-case basis with the appropriate 53 TMG staff office point of contact (normally, 53 TMG/TO or 53 TMG/CW).

#### 4.3.3.2. **Leadership Reviews.**

4.3.3.2.1. **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.

4.3.3.2.2. **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.

4.3.3.2.3. 15 TF test projects will observe standard 53 WG review processes for wing-conducted operational test unless exempted by ACCI99-101 or equivalent authoritative MAJCOM direction; or this wing instruction.

4.3.3.2.4. **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:

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

4.3.3.2.4.2. 53 WG/CC or CV will normally attend whenever a 2-star/SES-equivalent chairs the meeting. On a case-by-case basis, 53 WG/CC or CV may be appropriate.

4.3.3.2.4.3. 53 TMG (either CC or staff) will normally attend whenever an O-6 or below chairs the meeting, but participation may be delegated to TMG unit leadership when appropriate.

4.3.3.2.4.4. Upon unit receipt of a test meeting notification which could require participation by USAFWC or 53 WG senior leadership, the unit will advise 53 TMG/CC, who will in turn coordinate a meeting attendance plan directly with 53 WG/CV.

4.3.3.2.4.5. This senior leadership attendance guidance does not apply to meetings which are not primarily acquisition/test in nature.

4.3.3.3. **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 53 TMG/CC. Exceptions: WEG engineering and WSEP plans and reports; mission data optimization plans and reports; and flying test plans where flight test MRM is assessed to be above Low Caution; or space test plans requiring a Counterspace Activity Approval Package (CAAP) and/or having a High safety risk. Document coordination should be handled as specified in tables 4.1 and 4.2 below and processed IAW the timelines in table 4.3 to meet the desired suspenses in table 4.4.

4.3.3.3.1. 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. 53 TEG has delegated operational test and test support planning and reporting documents coordination authority to its executing unit commanders.

4.3.3.3.2. 15 TF test projects will observe standard 53 WG document coordination processes for wing-conducted operational test unless exempted by ACCI99-101 or this wing instruction.

#### 4.3.4. **Special Cases of Test Planning Documents and Readiness Reviews.**

4.3.4.1. **Space Testing.** HQ AFSPC may require an independent test document and safety review of space operational test projects. 17 TS is authorized to work directly with HQ AFSPC/A3TW to determine and satisfy these additional assessment requirements.

4.3.4.2. **Tactics Investigations.** TI test planning documentation and readiness reviews will be accomplished in a manner appropriate to the scope and urgency of the test, and as agreed to by 53 TMG/CC.

4.3.4.3. **Warfighter Support.** For projects tasked against the blanket Warfighter Support EPO, test planning documentation and readiness reviews will be accomplished in a manner appropriate to the scope and urgency of the test, and as agreed to by 53 TMG/CC.

4.3.4.4. **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.

4.3.4.4.1. 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.

4.3.4.4.2. 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.

4.3.4.5. **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 53 TMG/TA for adjudication.

4.3.4.6. **Aircrew Training Device Testing.** Many of the regularly occurring 29th Training Systems Squadron (29 TSS) non-SIMCERT test efforts support System Program Office (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 53 TMG/CC to 29 TSS/CC.

4.3.4.6.1. 29 TSS will provide a SCAP delegation request to 53 TMG/CC via e-mail for his/her specific, documented approval. Upon receipt of 53 TMG/CC delegation approval, 29 TSS/CC is authorized to review and approve the associated SCAP.

4.3.4.6.2. 53 TMG/CC retains the authority for review and approval of any SCAP.

**Table 4.1. Coordination Matrix (53 WG units other than 17th Test Squadron).**

<b>Document</b>	<b>Exec/ Spt Unit</b>	<b>TMG/ CC</b>	<b>Exec/ Spt Group</b>	<b>WG/ SE</b>	<b>WG/ CC</b>	<b>AWC/ CC/A5</b>	<b>ACC/A5/8/9/A 3 or AFGSC/A3/A5</b>
EPO	C	I	I	N/A	I	I	A
Concept of Test Brief (COTB) for OSD Oversight	C	C	I	N/A	I	I	C <sup>1</sup>
Verification Flight Test (VFT) Test Plan	C	A	I	C	I	N/A	N/A
Operational Test Plan	C	A	I <sup>2</sup>	C	I	N/A	N/A
Operational Test Plan (flight test portion of MRM assessed above Low Caution)	C	C	I <sup>2</sup>	C	A	N/A	N/A
Operational Test Plan on OSD Oversight	C	C	I	C	C	I	S <sup>1</sup>
15 TF Test Plan	As prescribed by ACC/A5/8ZG <sup>3</sup>						
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
TSP (flight test MRM assessed above Low Caution)	C	I	I	C	A	N/A	N/A
TSP (NucWSEP)	C	I	A	C	I	I	N/A

<b>Document</b>	<b>Exec/ Spt Unit</b>	<b>TMG/ CC</b>	<b>Exec/ Spt Group</b>	<b>WG/ SE</b>	<b>WG/ CC</b>	<b>AWC/ CC/A5</b>	<b>ACC/A5/8/9/A 3 or AFGSC/A3/A5</b>
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 <sup>1</sup>
VFT Memo For Record (MFR)	C	A	I	N/A	I	N/A	N/A
Operational Test Report	C	A	I <sup>2</sup>	N/A	I	N/A	N/A
Operational Test Report for OSD Oversight	C	C	I <sup>2</sup>	N/A	C	I	A
15 TF Test Report	As prescribed by ACC/A5/8ZG <sup>3</sup>						
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	C	C	I	N/A	I	N/A	N/A
Fielding Recommendation	C	C	I <sup>2</sup>	N/A	S	A	Action
Software Release Recommendation	N/A	A	N/A	N/A	I	N/A	Action
15 TF Fielding or Release Recommendation	As prescribed by ACC/A5/8ZG <sup>3</sup>						

<b>Document</b>	<b>Exec/ Spt Unit</b>	<b>TMG/ CC</b>	<b>Exec/ Spt Group</b>	<b>WG/ SE</b>	<b>WG/ CC</b>	<b>AWC/ CC/A5</b>	<b>ACC/A5/8/9/A 3 or AFGSC/A3/A5</b>
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
Road Show Briefing	C	I	I	N/A	N/A	N/A	N/A
Flash Bulletin, Tactics Bulletin, OT Bulletin	C	I	I	N/A	N/A	N/A	N/A
Combat Shield Quarterly and Annual Reports	C	I	C	N/A	A	N/A	I
NucWSEP Quick look Report	C	I	A	N/A	I	N/A	I
NucWSEP Final Report	C	I	C	N/A	A	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 Report	C	C	C	N/A	S	A	I
Test Resource Plan (TRP)	C	A	I	N/A	I	I	Action
Test and Evaluation Master Plan (TEMP) for OSD Approval	C	C	I	N/A	C	I	S <sup>1</sup>
TEMP for AF PEO Approval	C	S	I	N/A	I	I	N/A

Document	Exec/ Spt Unit	TMG/ CC	Exec/ Spt Group	WG/ SE	WG/ CC	AWC/ CC/A5	ACC/A5/8/9/A 3 or AFGSC/A3/A5
Integrated Test Team (ITT) Charter	C	S	I	N/A	I	N/A	N/A
<p>A-Approve (final approval authority; signature may or may not be required)</p> <p>S-Sign (signature required, but is not the final approval authority)</p> <p>C-Coordination (coordinates on the document; no signature required)</p> <p>I-Information (no action required)</p> <p>N/A-Not applicable to that office</p> <p><sup>1</sup>Coordination continues thru AF/TE to OSD</p> <p><sup>2</sup>Documents involving assessment of EW systems, to include passive or active warning sensors/systems and countermeasures (fixed-based or expendables) will be coordinated with both the 28 TES and the appropriate 53 EWG SME unit(s); these documents will also be Info to EWG/CC.</p> <p><sup>3</sup>At discretion of 53 WG/CC</p>							

**Table 4.2. Coordination Matrix (17th Test Squadron).**

Document	SPC Staff	TMG/ CC	SPC/ SE	WG/ CC	AWC CC	ACC/ A5/8/9	SPC/ HHQ <sup>1</sup>
EPO	C	I	N/A	I	I	A	N/A
Test Asset Support Request (TASR) Reply	C	I	N/A	N/A	N/A	N/A	N/A
Concept of Test Brief (COTB) for OSD Oversight	T	C	N/A	I	C <sup>2</sup>	N/A	N/A
Operational Asset Use Request (OAUR)	C	I	N/A	I	I	I	A
Counterspace Activity Approval Package (CAAP)	C	C	N/A	I	I	N/A	A <sup>3</sup>
Operational Test Plan	T	A	C	I	N/A	N/A	N/A
Operational Test Plan (CAAP and/or safety risk High)	T	C	C	A	N/A	N/A	N/A
Operational Test Plan under OSD Oversight	T	C	C	C	S <sup>2</sup>	I	I

Document	SPC Staff	TMG/ CC	SPC/ SE	WG/ CC	AWC CC	ACC/ A5/8/9	SPC/ HHQ <sup>1</sup>
Operational Test Readiness Review Board (TRRB)	C	I	N/A	N/A	N/A	N/A	N/A
Start Test Msg	I	I	N/A	N/A	N/A	N/A	N/A
Pause Test Msg	I	I	N/A	I	N/A	N/A	N/A
Stop Test Msg (non-Oversight)	T	A	N/A	I	I	I	N/A
Stop Test Msg OSD Oversight	C	A	N/A	C	C <sup>2</sup>	I	I
Crescent Edge	C	I	I	I	I Action 4	I	A <sup>3</sup>
Test Complete Msg	I	I	N/A	N/A	N/A	N/A	N/A
Operational Test Report	I	A	N/A	I	N/A	N/A	N/A
Operational Test Report under OSD Oversight	I	C	N/A	C	A <sup>2</sup>	I	N/A
Fielding Recommendation	I	C	N/A	S	A	I	Action
Final Results Brief (FRB)	I	I	N/A	N/A	N/A	N/A	Action
Sufficiency of Test Review (SOTR)	I	A	N/A	I	I	I	Action
Capabilities and Limitations Report (C&LR)	I	A	N/A	I	I	I	Action
Road Show Briefing	T	I	N/A	N/A	N/A	N/A	T
Flash Bulletin, Tactics Bulletin, OT Bulletin	T	I	N/A	N/A	N/A	N/A	T
Test Resource Plan (TRP)	T	A	N/A	N/A	N/A	C	A
Test and Evaluation Master Plan (TEMP) for OSD Approval	T	C	N/A	C	A <sup>2</sup>	I	I

<b>Document</b>	<b>SPC Staff</b>	<b>TMG/ CC</b>	<b>SPC/ SE</b>	<b>WG/ CC</b>	<b>AWC CC</b>	<b>ACC/ A5/8/9</b>	<b>SPC/ HHQ<sup>1</sup></b>
TEMP for AF PEO Approval	T	S	N/A	I	I	N/A	N/A
Integrated Test Team (ITT) Charter	T	S	N/A	I	N/A	N/A	N/A
<p>A-Approve (final approval authority; signature may or may not be required)</p> <p>S-Sign (signature required, but is not the final approval authority)</p> <p>C-Coordination (coordinates on the document; no signature required)</p> <p>T-To be determined by AFSPC/A3T and 17 TS (internal AFSPC process not required by ACC/53 WG)</p> <p>I-Information (no action required)</p> <p>N/A-Not applicable to that office</p> <p><sup>1</sup>As dictated by AFSPC directives or AFSPC/A2/3/6</p> <p><sup>2</sup>Coordination continues thru AF/TE to OSD</p> <p><sup>3</sup>Coordination continues through Air Staff and DoD Staff, as required</p> <p><sup>4</sup>USAFWC responsible for informing COMACC and ACC/A5/8/9</p>							

**Table 4.3. Coordination Timeline Guidance.**

<b>Managing Unit</b>	30 Calendar Days after PM submits to Div Chief/Flt Commander to submit to Group
<b>Exec/Supt Unit</b>	Five Work Days for Execution Squadron or Detachment/10 Work Days for Support Squadron (worked concurrently with above)
<b>Test Management Group</b>	10 Work Days
<b>WG/SE</b>	Two Work Days
<b>Outside Organizations</b>	10 Work Days (if required)
These are goals set to expedite document processing and to provide managing units a guideline on when documents need to be submitted to 53 TMG/TO to begin the upper-level review process.	

**Table 4.4. Suspense Guidelines.**

<b>Document or Review Event</b>	<b>Submittal Suspense</b>	<b>Comments</b>
Electronic Project Orders (EPO)	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
Concept of Test Brief (COTB)	60 days prior to Test Start	Reviewed by TMG/CC
SIMCERT 30-day Notification Message	30 days prior to Test Start	Signed by 53 TMG/CC
Operational Test Plan (flying)	Two weeks prior to Test Start (or as agreed to by TMG/CC)	Submitted to TMG/CC
Operational Test Plan (ground)	One week prior to Test Start	Signed by Managing Group/CC
Operational Test Plan under OSD Oversight	60 days prior to Test Start (or as agreed to by DOT&E)	Submitted to DOT&E
Test Plan (WEG engineering test flights and confidence flights)	Five days prior to Test Start	Signed by WEG/CC
SIMCERT Test Plan	Two weeks prior to Test Start	Submitted to TMG/CC
Simulator Capability Assessment Plan	Test Start	Approved by 29 TSS/CC

<b>Document or Review Event</b>	<b>Submittal Suspense</b>	<b>Comments</b>
Test Support Plan (fly)	Two weeks prior to Test Start (or as agreed to by TMG/CC)	Submitted to TMG/CC
Test Support Plan (ground)	One week prior to Test Start	Signed by Managing Group CC
Test Support Plan (NucWSEP)	One week prior to Test Start (or as agreed to by TEG/CC)	Signed by TEG/CC
Test Support Plan Waiver Request	Two weeks prior to Test Start	Submitted to TMG/CC
Combined Readiness Review (CRR)	One week prior to Test Start	Presented to TMG/CC and TEG/CC
Flight Readiness Review (FRR)	One week prior to Test Start	Presented to both TMG/CC and TEG/CC (or as otherwise agreed to)
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
Operational Test Report (fly or space)	150 days after last test event (or as agreed to by TMG/CC)	Submitted to TMG/CC
Sufficiency of Test Review	30 days after last test event (or as agreed to by TMG/CC)	Submitted to TMG/CC
Capabilities and Limitations Report (C&LR)	15 days prior to supported organization need date	Submitted to TMG/CC
SIMCERT Report	150 days after last test event (or as agreed to by TMG/CC)	Signed by TMG/CC
Simulator Capability Assessment Report	As Required	Signed by 29 TSS/CC
VFT MFR	30 days after last test event (or as agreed to by TMG/CC)	Signed by TMG/CC
End of Test Support MFR	30 days after last test	Submitted to WG/CC

Document or Review Event	Submittal Suspense	Comments
	event	
Fielding Recommendation	30 days after last test event (or as agreed to by TMG/CC)	Submitted to TMG/CC
Road Show Briefing	30 days after last test event (or as agreed to by TMG/CC)	Ready for delivery
Flash Bulletin/Tactics Bulletin	30 days after last test event (or as agreed to by TMG/CC)	Ready for submittal to 561st Joint Tactics Squadron
OT Bulletin	60 days after last test event (or as agreed to by TMG/CC)	Ready for posting on the 561st Joint Tactics Squadron website
Software Release Recommendation	30 days after last test event	Submitted to managing group CC
Combat Shield Quarterly and Annual Reports	As required by HHQ	Submitted to EWG/CC
NucWSEP Quick look Report	Two days after test team returns from mission	Signed by TEG/CC and sent to AFGSC/A3
NucWSEP Final Report	150 days after Last Test Event	Submitted to WG/CC
A/A & A/G WSEP Deployment Report	IAW COMACC Plans 85/90	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		

**4.4. Planning.** 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 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). Urgent operational need (UON) requirements are documented via AFI 10-601, Attachment 3A, *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. TIPT members are normally 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.). TIPTs are normally chartered by the acquisition program's ITT.

**4.4.4. EPO Amendments.** Typically, EPO amendments are required for changes in aircraft MDS, significant changes in scope, funding, or the test item. PMs should coordinate with 53 TMG/TO to determine if an EPO amendment is necessary. EPO amendments are processed by 53 TMG/TO IAW the Test Team Handbook.

**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. Concept of Test Briefing.** The PM will provide a COTB to the managing and executing group commanders, or their representatives, before starting test plan development for all wing-conducted and wing-integrated tests. PMs will use 53 WG-approved COTB briefing sample formats. If there are fewer than 60 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. OSD may request a COTB for programs on OSD Oversight.

**4.4.7. Test Plan and Test Support Plan.** The assigned PM will produce a test plan for all wing conducted/integrated and verification flight test projects, or a test support plan for wing supported test projects – including support under a blanket EPO – for the coordination and approval authorities listed in tables 4.1 and 4.2. Following approval, 53 TMG/TO will post the approved test plan or test support plan on the 53 WG Test Plans and Reports SIPRNET website. PMs are responsible for disseminating the plan to appropriate ACC, AFGSC, AFSPC 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.

4.4.7.1. The 53 WG test management 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 53 TMG/TO. This request should contain the rationale for the waiver, as well as a copy of the supported organization's test plan, if applicable.

4.4.7.2. **Sample Formats.** PMs will use the 53 WG-approved test plan/test support plan formats found in the “Templates” section of the TTH on the 53 TMG/TR SharePoint site.

4.4.7.3. **Timelines.** The PM will submit operational test and test support plans to meet the suspense guidelines listed in table 4.4.

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

4.4.7.4.1. **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, DT 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.

4.4.7.5. **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.

4.4.7.6. **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.

4.4.7.7. **Aircraft and Weapons Instrumentation.** PMs 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.

4.4.7.8. **Aircraft Modifications.**

4.4.7.8.1. **SEEK EAGLE Requests (SER).** 53 TMG PMs will ensure all 53 WG aircraft SERs are submitted to 53 TMG/TO for processing. 53 WEG PMs will submit requests through 53 TSS/OS for 53 WEG assigned assets.

4.4.7.8.2. **Temporary Aircraft Modifications.** 53 WG PMs will ensure temporary modification proposals are submitted to 53 TMG/TO for 53 TEG assigned test assets and 53 TSS/OS for 53 WEG assigned test assets. Submit AF Form 1067 for appropriate reviews and approvals.

4.4.7.9. **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.

4.4.7.10. **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 53 TMG/TO. 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.

4.4.7.10.1. 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.

4.4.7.10.2. Training Munitions (Category D). To ensure munitions required for training are available, munitions managers in wing flying units (53 TEG) 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.

4.4.7.11. **A/A Target Requests and Kill Authorizations.** The PM will ensure appropriate target requests are submitted IAW Tactical Air Missile Program (TAMP) procedures to 53 TMG/TO 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.

4.4.7.12. **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 through 53 TMG/TO. 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 the EPO cost estimates.

4.4.7.13. **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) or for space tests (paragraph 4.3.4.1)

4.4.8. **Test Plan and Test Support Plan Amendments.** PM's must ensure the 53 TMG/TO is notified, in writing, of all test plan amendments.

4.4.8.1. 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. Amendments requiring a change in scope must be approved by the original test plan approval authority.

4.4.8.2. A change in scope amendment 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.

4.4.8.3. Taking into consideration the test management unit commander's recommendation as to whether a test plan amendment changes its scope, the 53 TMG/TO 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.

4.4.8.4. PMs will use 53 WG-approved test plan amendment formats found in the "Templates" section of the TTH on the 53 TMG/TR SharePoint site. Following test plan amendment approval, the 53 TMG/TO will post the approved document on the 53 WG Test Plans and Reports SIPRNET website.

**4.4.9. Test Plan and Test Support Plan Approval Expiration.** Authorization to execute testing under an approved 53 WG test/test support plan 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 re-coordination for the original test/test support plan and any previously approved amendments, and will expire three years after the most recent 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 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, CPRs, 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, PMs must establish a means to access the WIT database (periodic hard copies are acceptable). PMs must work closely with their 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. 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. 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 which 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. Certification of System Readiness for Operational Testing.** Per AFMAN 63-119, AFI 99103, and ACCI 99-101, all systems should undergo some form of review and certification of readiness, in writing, 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 and all necessary test support must be available as planned. 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 in accordance with AFMAN 63-119. 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. 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 53 TMG/CC 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 53 TMG/CC 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 Program Executive Officer (PEO) will conduct a formal Operational Test Readiness Review (OTRR) on a developmental system to establish its degree of readiness for operational test. The 53 TMG/CC will normally

attend as the wing representative for these OTRRs. 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 53 TMG/CC. See paragraph 4.3.3.2.4. for additional guidance on senior leader participation.

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

4.4.12.1. **Combined Readiness Reviews.** CRR is a decision briefing that combines a TRR and an FRR.

4.4.12.1.1. PMs will use 53 WG-approved CRR briefing templates found in the 53 WG Test Team Handbook, located at the 53 TMG/TR SharePoint site.

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 TRR and FRR 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 a 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 AFI99-103 and ACCI 99-101 for an operational test organization.

4.4.12.1.5. VFTs do not require a CRR. 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 (Thurs, 1300 Central Time) Consolidated Test Brief video teleconference.

4.4.12.1.6. 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 53 TMG/CC.

4.4.12.2. **Flight Readiness Reviews.** Stand-alone FRRs are decision briefings normally used when test project technical reviews (TRR) 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 AFI99-103 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.

**4.5. Test Execution.** 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 EPO, 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 (instead of DRs) in the interest of getting rapid turnaround of fixes (particularly 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 TO 0035D54 definitions and procedures. AFMPS DRs will use the 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 53 TMG/CC 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 53 TMG/CC, 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. 53 TMG/CC 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. 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. 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.

**4.5.3. Fielding Recommendations.** A fielding recommendation is normally delivered to ACC/A5/8/9, AFGSC/A5/8, or AFSPC/A2/3/6 shortly after the execution phase is complete, with the goal being submittal to the 53 TMG/CC no later than 30 days after the last test event. However, the PM will not initiate 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.

**4.5.3.1. 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.

**4.5.3.2. 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.

**4.5.4. 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 53 TMG/CC, unless otherwise specified by ACC.

#### **4.5.5. Alternatives to Traditional Operational Testing.**

**4.5.5.1. Sufficiency of Test Review.** In certain cases where there are minor hardware / software system changes and operational testing is not deemed by ACC, AFGSC, or AFSPC as warranted, the applicable 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 then research all relevant development, ground test, and flight test activity to determine whether the risk to field the system-in-question without additional testing is acceptable. SOTRs should recommend whether or not additional testing (DT&E and/or OT&E) is advisable prior to fielding. SOTR assessments will be released to ACC/A5T, AFGSC/A5B, or AFSPC/A2/3/6ZT by 53 TMG/CC.

**4.5.5.2. Capabilities and Limitations Report.** With an intent by ACC, AFGSC, or AFSPC 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. 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, AFGSC, or AFSPC 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, AFGSC, or AFSPC assumes all fielding decision risk. C&LRs will be released to ACC/A5T, AFGSC/A5B, or AFSPC/A2/3/6ZT by 53 TMG/CC.

**4.5.5.3. Verification Flight Testing.** 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 4.5.8.1) 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 53 TMG/CC) to ACC/A5T or AFGSC/A5B. VFT requests should be mission design series (MDS)-specific. 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 be used in situations where no developmental flight testing has previously been accomplished.

4.5.5.4. **Tactics Investigations.** TIs 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 Tactics Review Board (TRB)/Weapons and Tactics Conference (WEPTAC)-vetted TPL-TD&E would be either a test-timeline impossibility or would be of needless scope and/or complexity.

4.5.5.4.1. 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 53 TMG/CC.

4.5.5.4.2. Each TI will be specifically tasked, in writing, by ACC/A5T against the blanket TI EPO, unless it falls under an existing TPL-TD&E authorization.

4.5.5.4.2.1. In cases where it makes sense to execute a TPL-approved TD&E as either a single or multiple discrete TIs, ACC/A5T and ACC/A3T will be notified, in writing, of this intent.

4.5.5.4.3. For TI proposals not already authorized by an existing, approved TPL-TD&E:

4.5.5.4.3.1. The ACC EPO/tasking process will be initiated by a TI request from any 53 WG O-6 directly to ACC/A5T. This request will include both a TI description and scope.

4.5.5.4.3.2. TI requests will also be formally documented on an AF IMT 4326, Tactic Improvement Proposal (TIP), coordinated through the 53 TMG/CC 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.

4.5.5.4.4. 53 TEG is authorized to determine the AF Form 781 mission coding (O4, O5, and/or O6) appropriate for dedicated TI sorties.

4.5.5.4.5. 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.

#### 4.5.6. **Test Information and Material Protection.**

4.5.6.1. **Classifying Test Information.** All information associated with a test shall be classified in accordance with DoD 5200.1-R, *Information Security Program*, January

1997, 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 For Official Use Only, as a minimum.

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

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

4.5.6.4. **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.

4.5.6.4.1. PMs 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 Reports, Briefings, and Road Shows.

4.6.1. **Operational 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 verification flight test projects IAW tables 4.1 and 4.2.

4.6.1.1. The reporting phase starts after the last operational test or verification flight test event, which is normally the last data collection opportunity. PMs 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 use the 53 WG-approved test reports/VFT MFR sample formats found in the "Templates" section of the TTH on the 53 TMG/TR SharePoint site.

4.6.1.3.1. TI test reports will be accomplished in a manner appropriate to the scope and urgency of the test, and as agreed to by 53 TMG/CC.

4.6.1.3.2. For projects tasked against the blanket Warfighter Support EPO, report format will be accomplished in a manner appropriate to the scope and urgency of the test, and as agreed to by 53 TMG/CC.

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

4.6.1.4. **Timelines.** The PM will submit operational test and VFT reports to meet the suspense guidelines listed in table 4.4.

4.6.1.5. **Posting.** Following test report/VFT MFR approval, the 53 TMG/TO will post the signed document on the 53 WG Test Plans and Reports SIPRNET website. Exception: 53 WG operational test reports supporting AFSPC programs will not be posted to the 53 WG SIPRNET website. They will be distributed by 53 TMG/TO directly to AFSPC/A2/3/6ZT for further dissemination.

4.6.1.5.1. With the exception of test reports supporting AFSPC programs, 53 TMG/TO is responsible for transmission of all unclassified and SECRET 53 WG-generated test plan and test report documents to the Defense Technical Information Center.

4.6.1.6. HQ AFSPC may require additional space operational test project reports, variations on standard 53 WG operational test report formats, or require additional, independent reviews of draft space test reports. 17 TS is authorized to work directly with HQ AFSPC/A2/3/6ZT to determine and satisfy these additional requirements.

4.6.1.7. **Exemption from 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 53 TMG/CC for exemption approval.

4.6.1.8. **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); and for space operational test projects where an FRB is used to inform space stakeholders.

#### 4.6.2. Test Support Reporting.

4.6.2.1. The PM will provide a test support MFR to the wing commander detailing the support provided, IAW the suspense guidelines in table 4.4. PMs will use the 53 WG-approved test support MFR sample format in the "Templates" section of the TTH found on the 53 TMG/TR 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.

4.6.2.2. 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 EPO.

4.6.3. **Road Shows/Field Training.** PMs will budget for and include test results road shows in the EPO 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.

4.6.4. **Aircrew Training Device Test Reporting.** If a SCAP delegation request has been approved by 53 TMG/CC (see paragraph 4.3.4.6.), that approval also constitutes delegation

of approval for the associated Simulator Capabilities Assessment Report (SCAR) to the 29 TSS/CC.

**4.7. Documentation of Employment Tactics, Techniques, and Procedures.** In addition to inclusion in a test report, TTP should be documented in Flash Bulletins, Tactics Bulletins, or OT Bulletins, as appropriate. Coordination, approval, and submittal suspense guidelines are found in tables 4.1, 4.2, and 4.4.

**4.7.1. Flash Bulletins/Tactics Bulletins.** While it is the responsibility of the 561st Joint Tactics Squadron (JTS) 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 (OT Bulletin). AFTTP 3-1.General Purpose, Attachment 4; and AFI 11-260 address both the FB and the TB.

**4.7.1.1. Flash Bulletins.** FBs 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 JTS SMEs, approved for release by the 561 JTS/CC, and posted to the 561 JTS tactics web site. FBs are interim in nature and are not a substitute for more permanent TB/AFTTP 3-1 guidance.

**4.7.1.2. Tactics Bulletins.** TBs are documented updates to AFTTP 3-1 between formal rewrites. Draft TBs are vetted by 561 JTS 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 JTS/CC, 57 WG/CC, USAFWC/CC, approved by the applicable MAJCOM/A3, and posted to the 561 JTS web site.

**4.7.2. Operational Test Bulletins.** OT Bulletins 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. OT Bulletins are normally much more detailed in nature than FBs or TBs and are not reviewed or sanctioned by the 561 JTS 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, OT Bulletins are also posted in a special OT Bulletins folder on the 561 JTS tactics web site.

**4.8. Project Close Out.** After the project is completed (test report or MFR report signed), the PM will make final updates in OTEMS and advise 53 TMG/TO to place the project in “Complete” status.

**4.8.1. 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 EPO, test/test support plan with all amendments, and all reports. Maintain documentation IAW guidance found in AFRIMS Table T99-02, Rule 2.03 (accessed through the AF Portal).

**4.8.1.1. 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. Course requirements may be waived based on an individual's experience. The unit will send a waiver request (e-mail memorandum) with justification to the 53 TMG/TR for applicable coordination. The response from 53 TMG/TR will be filed in individual's training record. Due to unique WSEP training requirements, the WEG/CC is delegated responsibility for developing WEG team training requirements to ensure that personnel are fully trained before assuming unsupervised duties. This does not release responsibility of the WEG/CC for meeting the intent of this instruction's training guidelines.

**Table 5.1. Test Team Training Requirements.**

	PM	UPO	OA	OSA	TE/FTE	AIRCREW	TD/TC	SIMCERT
<b>TTT</b>	<b>X</b>							
<b>PMT</b>	<b>X</b>							<b>X</b>
<b>OS</b>				<b>X</b>				
<b>OSPM</b>	<b>X</b>							
<b>SOT 210/Intro to DOE</b>	<b>X</b>			<b>X</b>				<b>X</b>
<b>DOE for Aircrew</b>		<b>X</b>				<b>X</b>		
<b>SOT 310/DOE I</b>			<b>X</b>		<b>X</b>			
<b>SOT 410/DOE II</b>			<b>X</b>		<b>X</b>			
<b>DOE III</b>			<b>X</b>		<b>X</b>			
<b>DOE IV</b>			<b>R</b>		<b>R</b>			
<b>MCRT</b>	<b>R</b>	<b>R</b>	<b>R</b>		<b>R</b>		<b>X</b>	

X—Mandatory R—Recommended

Note 1: AFOTEC-equivalent courses meet training requirements for 31 TES test personnel.

Note 2: Aircrew Training Device (ATD) PMs are required to take ATD suitability training in lieu of wing suitability training.

Note 3: DOE III is not mandatory for EWG engineers, but is highly encouraged.

Note 4: 53 WEG units responsible for executing WSEP missions; 53 TEG units responsible for executing NucWSEP missions; and the 17 TS, responsible for executing AFSPC operational test missions are authorized to use locally-developed control room training courseware to fulfill MCRT requirements.

Note 5: 17 TS may have additional test team training requirements not reflected in this table.

Note 6: For individual TE/FTEs or OAs, whose jobs do not entail attaining SOT/DOE expertise, units may submit a training waiver request, per paragraph 5.1, for exemption from attending any or all SOT/DOE I, II, and III training courses. If waiver is granted, SOT 210/Intro to DOE must be attended in lieu of these other preferred courses.

**5.2. Test Training Courseware.** The 53 TMG is responsible for developing and managing the following wing-mandated test training courses:

**5.2.1. Test Team Training (TTT).** This four-hour 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.

**5.2.2. Project Manager Training (PMT).** The focus of this three-day course is managing wing-conducted and supported tests/evaluations. The PMT course is designed to immediately follow the TTT course where PMs/SIMCERT directors receive baseline

information related to operational testing. This course goes into greater detail of the test and evaluation process and provides specific tools for effective management.

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

**5.2.4. Operational Suitability for Project Managers (OSPM).** This four-hour course provides an overview to PMs on the principles and process of implementing the 14 suitability areas involving test evaluation and execution.

**5.2.5. Design of Experiments (DOE) for Aircrew.** This four-hour course is intended for aircrew and UPOs. It describes the process and principles of test design from an aircrew/execution perspective to promote effective test team interaction and understanding.

**5.2.6. Science of Test (SOT) 210/Introduction to Experimental Design and Analysis/Introduction to Design of Experiments.** This two-day course is designed for PMs, OSAs, and SIMCERT directors. It provides an overview of the DOE process to understand factors affecting test results. This course explores the importance of efficient test and evaluation design to ensure maximum confidence in results with minimum resource expenditure.

**5.2.7. Science of Test (SOT) 310/Experimental Design and Analysis I/Design of Experiments 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 MOEs/MOPs. 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, types I and II error, two- level full and fractional factorial designs, and hypothesis testing.

**5.2.8. Science of Test (SOT) 410/Experimental Design and Analysis II/Design of Experiments 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 cover 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.

**5.2.9. 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.

**5.2.10. 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.

**5.2.11. 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 TMG/TR SharePoint provides a foundation of mission control room procedures and communication, and fulfills the Test Control and Conduct Training academic requirement of the 53 WGI 99-104 test director/conductor checkout program.

**5.3. Training Courses Management.** Course registration, schedules, and status of test training reports are located on the 53 TMG/TR SharePoint site.

**5.4. Other Training.** Other training courses/resources are available to test and evaluation team personnel through the Defense Acquisition University, Eglin Academy, and Air Force Institute of Technology.

**5.5. Test Training Information and Databases.** 53 TMG/TR will establish and maintain electronic TIF and TBP libraries on the 53 TMG/TR SharePoint site.

**5.5.1. Test Information File.** Analogous to a flight crew information file (FCIF) for aircrew, the TIF, managed by 53 TMG, is a formal means to communicate test process-related information from TMG 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. OPR for TIF is 53 TMG/TA.

**5.5.1.1. Test Best Practices SharePoint Site.** TBP is a 53 TMG strategic initiative to document testing best practices and lessons learned. Regular involvement by all TMG 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. TMG units should submit inputs to the TBP Inputs Folder in the template format provided. OPR for TBP is the 53 TMG Chief of Weapons Integration.

ALEXUS G. GRYNKEWICH, Colonel, USAF  
Commander

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

10 United States Code (U.S.C.), *Armed Forces*, § 139; § 139 b, c, d; § 2302 (5); § 2366; § 2399; § 2400; § 2350a(g)

P.L. 103-160 § 220, *National Defense Authorization Act for 1994*

CJCSI 3170.01H, *Joint Capabilities Integration and Development System*, 10 Jan 2012

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DoDD 5000.1, *The Defense Acquisition System*, 12 May 2003

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DoDD 8500.01, *Information Assurance*, 24 Oct 2002

DoDI 3216.02, *Protection of Human Subjects and Adherence to Ethical Standards in DoD-Supported Research*, 8 Nov 2011

DoDI 4630.8, *Procedures for Interoperability and Supportability of Information Technology and National Security Systems (NSS)*, 30 Jun 2004

DoDI 5200.1-R, *Information Security Program*, 24 Feb 2012

DoDI 5000.02, *Operation of the Defense Acquisition System*, 8 Dec 2008

DoDI 5010.41, *Joint Test and Evaluation (JTE) Program*, 12 Sep 2005

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### ***Abbreviations and Acronyms***

**A/A**—air-to-air

**A/G**—air-to ground

**AATC**—Air National Guard and Air Force Reserve Command Test Center

**ACAT**—acquisition category

**ACC**—Air Combat Command

**ACCI**—Air Combat Command Instruction

**AFC2IC**—Air Force Command and Control Integration Center

**AFGSC**—Air Force Global Strike Command

**AFI**—Air Force Instruction

**AFMAN**—Air Force Manual

**AFMC**—Air Force Materiel Command

**AFOTEC**—Air Force Operational Test and Evaluation Center

**AFPD**—Air Force Policy Directive

**AFRIMS**—Air Force Records Information Management System

**AFRL**—Air Force Research Laboratory

**AFSPC**—Air Force Space Command

**ATD**—aircrew training device

**ATD**—Advanced Technology Demonstration  
**ATEC**—Army Test and Evaluation Command  
**C&LR**—Capabilities and Limitations Report  
**CAF**—Combat Air Force  
**CAPCO**—Controlled Access Program Coordination Office  
**CCW**—Command and Control Wing  
**CDD**—Capability Development Document  
**CJCSI**—Chairman, Joint Chiefs of Staff Instruction  
**COI**—Critical Operational Issue  
**COMACC**—Commander, Air Combat Command  
**CONOP**—Concept of Operations  
**COTB**—Concept of Test Briefing  
**CPD**—Capability Production Document  
**COTS**—commercial-off-the-shelf  
**CPR**—Contractor Performance Reports  
**CRR**—Combined Readiness Review  
**CSAF**—Chief of Staff of the Air Force  
**CTF**—Combined Test Force  
**CTR**—Capability Transition Review  
**DAA**—Designated Approval Authority  
**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  
**DT&E**—developmental test and evaluation  
**DTIC**—Defense Technical Information Center  
**EPO**—Electronic Project Order  
**ERM**—electronic records management  
**EW**—electronic warfare  
**EWG**—Electronic Warfare Group

**EWIR**—Electronic Warfare Integrated Reprogramming  
**EXFREP**—exemption from accomplishing a final report  
**FB**—Flash Bulletins  
**FCT**—foreign comparative test  
**FDE**—Force Development Evaluation  
**FLTS**—flight test squadron  
**FMB**—financial management board  
**FME**—foreign materiel exploitation  
**FOT&E**—Follow-on Test and Evaluation  
**FOIA**—Freedom of Information Act  
**FRB**—Final Results Brief  
**FRR**—Flight Readiness Review  
**FTE**—flight test engineer  
**FTS**—flight termination systems  
**FWG**—financial working group  
**GA**—Guardian Angel  
**GFE**—government furnished equipment  
**GPS**—Global Positioning System  
**HPT**—high performance team  
**HHQ**—higher headquarters  
**HQ**—headquarters  
**IAW**—in accordance with  
**ICD**—Initial Capabilities Document  
**IOC**—Initial Operational Capability  
**IOT&E**—Initial Operational Test and Evaluation  
**IPT**—integrated product team  
**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

**JUON**—Joint Urgent Operational Need

**JRAC**—Joint Rapid Acquisition Cell

**JRMET**—Joint Reliability and Maintainability Evaluation Team

**JT&E**—Joint Test and Evaluation

**JTS**—Joint Tactics Squadron

**JTTP**—joint tactics, techniques, and procedures

**LDTO**—Developmental Test Organization

**MAJCOM**—Maj or Command

**MCOTEA**—Marine Corps Operational Test and Evaluation Agency

**MCRT**—Mission Control Room Training

**MD**—mission data

**MDAP**—major defense acquisition program

**MDO**—mission data optimization

**MDS**—mission design series

**MFR**—memorandum for record

**MOT&E**—Multi-Service Operational Test and Evaluation

**MPE**—Mission Planning Environment

**MRM**—mission risk management

**NDI**—non-developmental item

**NSTISSI**—National Security Telecommunications and Information Systems Security Instruction

**NUCWSEP**—Nuclear Weapon System Evaluation Program

**OA**—operations analyst

**OA**—operational assessments

**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&E**—operational test and evaluation

**OTA**—operational test agency  
**OTB**—Operational Test Bulletin  
**OTO**—operational test organization  
**OTRR**—operational test readiness review  
**OUE**—operational utility evaluation  
**PA**—public affairs  
**PACAF**—Pacific Air Forces  
**PCA**—performance characterization assessment  
**PID**—program introduction document  
**PII**—personally identifiable information  
**PM**—program manager (acquisition)  
**PM**—project manager (53 WG)  
**PMD**—Program Management Directive  
**PMT**—Project Manager Training  
**POC**—point of contact  
**PTO**—participating test organization  
**QOT&E**—qualification operational test and evaluation  
**QRT**—quick reaction test  
**RA**—resource advisor  
**RAM**—reliability, availability, maintainability  
**RCO**—Rapid Capability Office  
**RDS**—records disposition schedule  
**RMB**—Risk Management Board  
**ROM**—rough order of magnitude  
**RPO**—rated project officer  
**RSA**—range safety approval  
**RTT**—readiness to test  
**SOT**—science of test  
**SER**—SEEK EAGLE Request  
**SIMCERT**—Simulator Certification  
**SIPRNET**—Secret Internet Protocol Router Network  
**SME**—subject matter expert

**SOC**—statement of capabilities  
**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  
**T&E**—test and evaluation  
**TAMP**—Tactical Air Missile Program  
**TB**—Tactics Bulletins  
**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  
**TES**—Test and Evaluation Strategy  
**THA**—Test Hazard Analysis  
**TI**—tactics investigation  
**TIF**—Test Information File  
**TIK**—telemetry instrumentation kit  
**TIPT**—test integrated product team  
**TMG**—Test Management Group  
**TMS**—Test Management System  
**TP**—test plan  
**TPL**—test priority list  
**TPWG**—test plan working group  
**TRB**—Tactics Review Board

**TRP**—Test Resource Plan  
**TRR**—Test Readiness Review  
**TSP**—test support plan  
**TS**—test squadron  
**TSS**—Training Systems Squadron  
**TTH**—Test Team Handbook  
**TTP**—tactics, techniques, and procedures  
**TTT**—Test Team Training  
**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  
**VFT**—Verification Flight Testing  
**V&V**—validated and verified  
**WEG**—Weapons Evaluation Group  
**WEPTAC**—Weapons and Tactics Conference  
**WG**—Wing  
**WIT**—watch item  
**WSEP**—Weapons System Evaluation Program  
**WSIG**—Warfighter Senior Integration Group

### *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 (ATD)**— 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.

**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)**— 1) 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; 2) 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 to be answered 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)**— and 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.

**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.

**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. MOEs 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.

**Mission Data Optimization (MDO)**— the 53 EWG's formal approach for developing "missionized" system software for EW systems. MDO is a special type of test which is governed by AFI 10-706 and Air Combat Command Instruction (ACCI) 10-707, instead of AFI 99-103. MDOs will begin with a performance characterization assessment (PCA) of the threat to be countered. These PCAs are scientific assessments to determine and quantify the capabilities and vulnerabilities of the threat system for the purpose of jammer technique and/or emitter identification development. PCAs are completed using generic EW techniques generation, and do not test any current fielded EW system for techniques generation. Results from the PCA will help the system engineers determine potential vulnerabilities of the threat that can be exploited by the EW system's capabilities. System engineers enter an MDO with a trial set of jamming/receiving techniques expected to provide better aircraft survivability than currently fielded software. The trial set can be expanded or modified as results are determined. Results of MDOs can lead to the formal release of new or better system software. MDOs usually are executed as ground mount testing followed by flight testing to verify the ground test performance.

**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.

**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 TTPs 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 critical operational issue 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.** Release of 53 WG-conducted test information to entities outside the 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); AFGSC/A5B (or AFGSC/A3T in the case of a TD&E) for tests sponsored by AFGSC; or AFSPC/A3T for tests sponsored by AFSPC.

**A2.3.** Release of 53 WG-conducted test information to entities within the 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, AFGSC, or AFSPC (as applicable) without approval from the 53 WG/CC (or the cognizant 53d group commander in cases of mission planning or electronic warfare mission data optimization testing). The PM should ensure 53 WG leadership is aware of any potentially unfavorable test results before discussing or distributing to ACC/AFGSC/AFSPC 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. 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/AFSPC without the written approval of the 53 WG/CC (or the appropriate 53d group commander for mission planning or electronic warfare mission data optimization testing). Note: The 29 TSS 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 53 WG/CC.

**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 or electronic warfare mission data optimization testing) 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/AFGSC/AFSPC 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/AFGSC/AFSPC 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 is authorized to release TTPs to the CAF via the most expedient means available. Direct dissemination of TTPs 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, 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/CCEA, 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. 53 WG/PA will work directly with 96 TW/PA at Eglin AFB, and with host base PA's for all other 53 WG GSUs 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 releasability 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 advisors will review the product for technical and capabilities public releasability and make a recommendation.

A2.6.2. 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. 53 WG CC/CV 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, the 53 WG command section 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/AFGSC/AFSPC projects on OSD Oversight is normally accomplished by the 53 TMG/CC. Review and release of mission data file (MDF) testing results for ACC or AFGSC projects on OSD Oversight is normally accomplished by the 53 EWG/CC. Review and release of suitability data for projects on OSD Oversight is normally accomplished by the cognizant program office in ACC/A5/8/9, AFGSC/A5, or AFSPC/A3. 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, or AFSPC, 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 53 TMG/CC. In the case of mission data test products, this authority normally resides with

the 53 EWG/CC. 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; 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 53 TMG/CC or the 53 EWG/CC, as applicable, 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, 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.

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. 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. 53 WG project managers should forward DOT&E visit summaries to

the cognizant test management unit commander, who in turn will forward to 53 TMG/CC or 53 EWG/CC (as applicable), as well as the appropriate AFOTEC detachment commander, if applicable.