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SENATE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES
UNITED STATES SENATE

DEPARTMENT OF DEFENSE

WRITTEN TESTIMONY FOR THE
SENATE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES
UNITED STATES SENATE

SUBJECT: Tactical Aviation Programs

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Chairman Lieberman, Ranking Member Brown, and distinguished Members of the Committee. Thank you for the opportunity to address this committee regarding the Air Forces' tactical aviation programs. The Air Force remains fully engaged worldwide, supporting the Combatant Commanders requirements and executing our National Strategy.

Finding the proper balance between force structure, readiness and modernization is our guiding principle. While we will be a smaller force, we will maintain the agility, flexibility and readiness required to meet our commitments to the Combatant Commanders as well as continue to modernize and grow more capable in the future. The Service protected our distinctive capabilities fundamental to the priorities of the new strategic guidance: control of air, space and cyberspace; global intelligence, surveillance and reconnaissance; rapid global mobility and global strike -- all enabled by effective command and control.

**Current Environment and Operations Update**

Today, the Air Force flies and fights in air, space, and cyberspace--globally and reliably--as a valued member of our Joint and Coalition teams. Over 30,000 Airmen are deployed across the globe, including over 23,000 in the U.S. Central Command Area of Responsibility, with another 134,000 "committed in place" to defend the homeland, command and control our nuclear forces, operate remotely piloted aircraft, and support other Combatant Commander requirements. The Air Force is an active partner in Defense Department planning that will shift our emphasis from today's wars, to the

broader range of challenges and opportunities posed by the President's strategic guidance, particularly in the Asia Pacific region. Be assured that Soldiers, Sailors, Airmen and Marines who deploy in support of our global commitments will do so with an Air Force that is agile, flexible, ready, and technologically advanced. Last fiscal year alone, Air Force global precision attack aircraft flew over 24,000 sorties and 110,000 hours in support of Overseas Contingency Operations.

Since September 11, 2001, your mobility air forces have executed more than 440,000 airlift sorties, moving more than 3.6 million tons of cargo and nearly 6.9 million passengers in support of Operation ENDURING FREEDOM, Operation IRAQI FREEDOM and then NEW DAWN. Your combat air forces simultaneously provided top cover and weapons on target with another 162,000 sorties supporting those same operations. Aeromedical evacuation crews surged to complete nearly 180,000 patient movements, averaging 52 per day. On the home front, Air Force fighter, air refueling, and early warning aircraft have flown almost 62,000 total sorties supporting Operation NOBLE EAGLE. As a testament to the capability of our Total Force, the Air National Guard and Air Force Reserve have flown more than 65 percent of these sorties with the Air National Guard currently operating 17 of 18 Aerospace Control Alert sites across the United States.

As we transition to support the new Defense Strategy, we must carefully balance our force between the active and reserve components to maintain what will be a smaller Air Force at a higher state of readiness. One part of the solution will be to pursue Active Associations with many Air Reserve Component units, combining active duty and reserve component airmen on the same operational team.

The Air Force continues to work towards meeting the current strategy laid out by the President and the Secretary of Defense, while operating in a more fiscally constrained environment. The FY13 PB retains critical core capabilities and maintains the Air Force's ability to rapidly respond to global mission demands. It requires the Air Force to balance risk, modernization and force structure reductions with a commitment to maintain readiness and take care of our people. We stand ready to support the Department's efforts to meet the demands of the *U.S. National Security Strategy*.

**Fighter Force Structure and Modernization**

In 2011, Air Force analysis indicated a fighter force structure of 1,200 primary mission aircraft and 2,000 total aircraft were required to execute the National Military Strategy (NDS) with some risk. The new strategic guidance combined with new fiscal constraints required the Air Force to balance risk across its core functions. Current analysis estimates fighter force structure demand at approximately 1100 primary mission aircraft and approximately 1900 total fighter aircraft to carry out the NDS with increased risk. Additionally, the Air Force previously reported a fighter force shortfall in both the near and mid-term. We aggressively pursued mitigating efforts to meet force structure requirements. The most significant efforts involved closely monitoring F-35 production and increasing production as capability matures, and 4$^{th}$ generation sustainment and modernization. The F-35 program status remains the key variable in the fighter force structure as the Air Force transitions to a fifth generation fighter force. Current Air Force mitigation options preserve decision space as we carefully monitor program status and impending decision points.

As directed, to develop the FY13 PB the Air Force accepted risk in our Combat

Air Forces by retiring or reclassifying aircraft from seven squadrons: five A-10 squadrons, one F-16 squadron, and one training/support coded F-15 Aggressor squadron. We chose to retire more A-10s as a result of guidance to size our forces for one large scale combined arms campaign with sufficient combat power to also deny a second adversary, without conducting a large scale, prolonged stability operation. The A-10 remains essential for combined arms and stability operations and we retain enough A-10s to meet the requirements of the new strategic guidance, but multi-role platforms provide more utility across the range of the potential missions for which we are directed to prepare. After reductions, we retain 54 combat-coded fighter squadrons and maintain the capabilities and capacity required to meet the requirements of new strategic guidance at increased risk while providing a bridge to the F-35.

Fifth generation fighters such as the F-22A and F-35 are key elements of our nation's defense and deterrent capability. These aircraft are necessary to maintain a margin of superiority which permits our air, sea, and ground forces freedom of maneuver and attack. They each possess unique, complimentary, and essential capabilities that provide synergistic effects across the spectrum of conflict. Legacy fourth generation aircraft simply cannot survive to operate and achieve the effects necessary to win in an integrated, anti-access and area denial (A2/AD) environment.

**F-35**

During FY12 the Air Force will continue the balanced approach across the global precision attack portfolio used in FY11, by prioritizing investment in fifth-generation aircraft while sustaining legacy platforms as a bridge to the F-35, Joint Strike Fighter.

The multi-role F-35A is the centerpiece of the Air Force's future precision attack capability. In addition to complementing the F-22's world class air superiority capabilities, the F-35A is designed to penetrate air defenses and deliver a wide range of precision munitions. This modern, fifth-generation aircraft brings the added benefit of increased allied interoperability and cost-sharing across Services and eight partner nations. The FY13 PB includes approximately $5 billion for continued development and procurement of 19 F-35A, conventional take-off and landing (CTOL) aircraft. In response to continued program cost growth, lagging production performance, and escalating concurrency modification costs, we reduced the program of record by 179 aircraft, 98 of those are USAF F-35A CTOL aircraft, over the FYDP in the FY13 PB. The reduction of F-35 quantities in the FYDP realigns the pace of production to balance the need for a stable industrial base with the realities of increasing concurrency modification costs and a resource-constrained fiscal environment. Finally, the FY13 PB suspended F-35 dual capable aircraft (DCA) funding until the program is mature enough to support DCA integration.

Flight Operations at Eglin recently commenced. In close coordination with Air Force staff and the DoD Director, Operational Test and Evaluation, the Air Force Technical Airworthiness Authority (ASC/EN) signed a Military Flight Release (MFR) for F-35A aircraft on February 28, 2012, which allowed the Commander of Air Education and Training Command (AETC/CC) to approve the start of Local Area Operations (LAO) at Eglin AFB for F-35A aircraft. LAO will build familiarity with the aircraft, exercise the logistics infrastructure, and measure the maturity of the air system. These

flights will be conducted within the restrictions and limits of the MFR. AETC will continue LAO at Eglin until they judge that training operations are ready to begin.

During calendar year 2011, the F-35 program team achieved a number of significant milestones, including: delivery of six training aircraft to Eglin AFB; achieving the 1,000th CTOL flight hour; performing the first successful fuel transfer from a KC-10 tanker; reaching over 450 CTOL flights for the year; rolling-out the first partner nation (UK) short take-off and vertical landing (STOVL) aircraft from the production line in November 2011; and completion of academic and simulator requirements by the first two U.S. Air Force pilots at the Academic Training Center (ATC). They performed instructor pilot monitored engine runs in AF-9 to become the first operational, engine run qualified CTOL pilots.

**F-22**

The F-22 is the only fielded U.S. fighter capable of operating in anti-access and area denial (A2/AD) environments. F-22 attributes of stealth, super cruise, integrated avionics and sensors combine to deliver the Raptor's unique operational capability in A2/AD environments. F-22 modernization is required to counter threat advancement efforts that specifically target F-22 attributes in order to degrade US ability to operate in A2/AD environments. Accordingly, F-22 modernization is consistent with DoD Strategic Guidance to "invest as required to ensure [the] ability to operate effectively in (A2/AD) environments".

Focused on maintaining operational superiority against the advancing threat, the FY13 PB request for F-22 modernization investment includes $512M RDT&E plus $333M procurement in FY13. Modernization increment 2.0 is fielded now on the

combat-coded F-22 fleet and will be the final (very capable war fighting) configuration of the F-22 training fleet at Tyndall AFB. Increment 3.1 initial operational capability (IOC) is scheduled to occur in 2012, delivering advanced air-ground capabilities including SAR ground mapping, threat geolocation, and SDB carriage. Increments 3.2A/B, fielding in 2014/2018 respectively, will deliver advanced electronic protection and combat ID, AIM-120D and AIM-9X missiles, and significantly-improved ground threat geolocation.

F-22 production is complete—the last Raptor is scheduled to be delivered in early May 2012, completing the program of record of 187 aircraft. The final F-22 fleet will include 139 combat coded Block 30/35s, 32 training Block 20s, 12 Developmental Test/Operational Test Block 20/30/35s, and 2 pre-block test aircraft. The production line is shut down with no plan for restart at any time. Accordingly, all government-owned production tooling is being stored for F-22 sustainment purposes only.

The F-22 fleet stood down May-Sept 2011 while safety issues associated with delivery of adequate breathing oxygen to pilots were investigated. Safety Investigation and Scientific Advisory Board (SIB/SAB) investigations were not able to determine root cause but informed development of technical and procedural mitigations which enabled a safe return to flight (RTF). Over 7000 sorties have been flown since return to flight. RTF mitigations allowed eight in-flight oxygen-related incidents to be resolved safely. The F-22 fleet transition from production to sustainment has been marked by a solid improvement in operational availability (Ao)—growing from ~59% Ao for CY2011 to ~66% Ao in Jan 2012.

**A-10**

The A-10 provides our Joint Force Commanders responsive, lethal, precise, and persistent firepower for close air support and combat search and rescue. It has been a steady, stellar performer in all recent conflicts. Notably, the A-10's very high operations tempo and advanced age present substantial sustainment challenges. Reflecting this, the A-10's FY11 aircraft availability rate was 59 percent.

The Air Force plans to retain 242 A-10s through 2030. The FY13 PB invests approximately $205M across the FYDP to fund A-10 modernization, sustainment, and life extension programs. Following completion of the Precision Engagement modification in FY11, all previously designated "A" model aircraft were designated as the A-10C. The Precision Engagement upgrade gives the venerable A-10 the ability to deliver the newest and greatest complement of weapons than was ever available before, through the integration of targeting pods, digital data links and global positioning systems. Installation of the Helmet Mounted Cueing System, beginning in FY12, will provide increased situational awareness to the pilot. Further, installation of the first of the new replacement wings began in FY11, an essential program for the long-term structural longevity of the airplane. Other updates include a replacement portable maintenance tester and improved turbine and aircraft monitoring systems used to monitor structural fatigues and stresses. Emphasis on the continued health and upgrades will ensure the A-10 excels at close air support for the next two decades.

**F-16**

Our primary multi-role F-16 comprises 50 percent of the current fighter fleet. The FY13 PB invests approximately $1.4 billion across the FYDP for F-16 modernization, life extension, and continued sustainment to meet critical warfighter needs to 2025 and

beyond. The majority of the efforts to accomplish this across the FYDP will focus on the Service Life Extension Program (SLEP) and Combat Avionics Programmed Extension Suites (CAPES) modernization program for 300 aircraft, with the intent of reaching 350 aircraft. The requirement for the legacy SLEP is highlighted by bulkhead cracks found in approximately 73 percent of our Block 40/52 F-16 aircraft.

Legacy SLEP will extend airframe structural service life by approximately 25 percent from the current 8,000 hours to 10,000+ hours, adding six to eight years. The FY13 PB request adds $8.8 million to continue design and development of structural modification kits for the Block 40/52 fleet to be responsive to the Air Force's total fighter requirement. Additionally, the Falcon Structural Augmentation Roadmap (STAR) program, which replaces known life-limited structural components and maintains the original design airframe life of 8,000 actual flight hours, has been rephrased to complete in FY15.

The FY13 PB adds $69.7 million in development, with a total of $526 million in development and procurement funding laid in across the FYDP for F-16 CAPES. This will allow for the development of capabilities for advanced electronically scanned array (AESA) radar, a new center cockpit display unit, data link enhancements and electronic warfare defensive suite upgrades. These avionic upgrades will keep the F-16 Block 40/52s relevant in the threat environment beyond 2025 until replaced by the F-35 Joint Strike Fighter.

Currently the F-16 aircraft availability is 64.9 percent and in FY11was 66.1 percent. F-16 fleet aircraft availability dropped 4.9 percent since FY05. Drivers to the reduced availability include the Falcon STAR (all blocks) structural integrity program,

engine inlet ram (all blocks), lower wing skin cracking (blocks 25/30/32), and aft cockpit corrosion for two seat aircraft. We expect these drivers to continue to impact aircraft availability through FY15.

**F-15 C/D**

The FY13 President's Budget (PB) invests approximately $1.7 billion across the Fiscal Year Defense Plan (FYDP) on modernization and sustainment programs for the F-15C/D fleet. We project the F-15C/D fleet will remain viable until 2030-2035 with potential for an airframe service life extension following full-scale fatigue testing. This test is underway and will conclude in 2014. The Air Force manages the fleet through scheduled field and depot inspections under an individual aircraft tracking program. In FY 2011, the F-15C/D's aircraft availability was 55.9 percent.

We continue to modernize our F-15C/D fleet with Active Electronically Scanned Array (AESA) radars, and a more capable aircraft mission computer. We expect these efforts to enable 175 F-15C/D aircraft to operate safely and effectively through at least 2035 as determined by the full-scale fatigue test. We may extend the long-term status to the entire 249 aircraft inventory based on requirements of the future force structure.

**F-15E**

The F-15E fleet continues to provide support for on-going operations. Aircraft availability for the F-15E in FY 2011 was 64.9 percent.

The FY 2013 President's Budget investment across the FYDP is approximately $2.1 billion for F-15E modernization and sustainment programs. This includes integrating the latest precision weapons to hit targets accurately and reduce collateral damage, and adding a helmet mounted cueing system for all front seat cockpits that will reduce the F-

15E‘s time to engage a target. Finally, we are adding a state-of-the-art AESA radar system that advances capabilities to identify and engage targets. The Air Force expects the F-15E to be an integral part of the Nation‘s force through at least 2035. A full-scale fatigue test, due to be complete in 2015, will provide data regarding the feasibility of a service life extension.

**Conclusion**

The Air Force stands ready to win today’s Joint fight as we adjust to the challenges of tomorrow. While the environment we are in necessitated difficult choices, we remain committed to working together to manage risks and determine a fiscally sound procurement, sustainment and retirement strategy to remain prepared for the current fight as we posture for the new strategic guidance. The dominance of air, space and cyberspace continues to be requisite to the defense of the United States. We appreciate your continued support and look forward to working in concert to ensure our decisions enable us to strengthen our force.