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TESTIMONY OF

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ACTING PROGRAM EXECUTIVE OFFICER F-35 LIGHTNING II PROGRAM

BEFORE THE UNITED STATES SENATE

COMMITTEE ON ARMED SERVICES

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Mr. Chairman and distinguished members of the Committee, I appreciate your invitation to present an update on the F-35 Lightning II Program status.

The F-35 is the Department of Defense's largest cooperative program, with eight other Partner countries participating under Memorandums of Understanding for System Development and Demonstration (SDD) and for Production, Sustainment and Follow-on Development. The eight Partner countries include the United Kingdom, Italy, The Netherlands, Turkey, Canada, Australia, Denmark, and Norway. In addition, Israel submitted a Letter of Request in July 2009 for unique development scope and acquisition of seventy-five aircraft beginning no earlier than Low Rate Initial Production (LRIP) lot VI. Several other Foreign Military Sales type study efforts continue for other nations outside the Partnership. Through FY 2010, the eight International Partners will have provided approximately $4.4 billion of their $4.5 billion commitment to the SDD phase of the program.

The F-35 Program has made progress towards providing the Air Force, Navy and Marines as well as our Partners a stealthy, long range, multi-role 5th Generation fighter. As a multi-role fighter, the F-35 will greatly enhance operational capability and tactical flexibility of the combatant commanders by providing a 5th Generation fighter family that can be deployed from main operating bases, austere bases and aircraft carriers. The F-35's design incorporates leading edge stealth, propulsion, mission systems sensors, interoperability and supportability technology. It is these technologies and capabilities that will provide the warfighters with a long range, day-one, strike fighter that is capable of executing the essential missions of Strategic and Tactical Suppression/Destruction of Enemy Air Defenses (SEAD/DEAD), Strategic Attack, Interdiction, Offensive and Defensive Counter Air, Tactical Intelligence, Surveillance and Reconnaissance (ISR) and Close Air Support.

The F-35 is in its ninth year of the System Development and Demonstration (SDD) phase. The program continues technical progress focused on developing and delivering a phased "Block" implementation of software-intensive mission systems capabilities. Technical risks are understood and being addressed. All variants are projected to meet their respective Key Performance Parameters (KPPs). The Program has issued procurement contracts for three lots of LRIP aircraft and will commence LRIP IV negotiations soon. We have experienced manufacturing delays in completing the developmental test aircraft; however, the metrics indicate the production line is maturing and we expect deliveries to recover to contractual schedule by LRIP III completion in late 2011. We also expect to start training operations at Eglin AFB in late 2010 with LRIP 1 aircraft.

Along with many important accomplishments, the program has experienced challenges and disappointments in the transition from development to production. Development program shortfalls, notably late delivery of aircraft to flight test and related test schedule delays, drove the program restructure announced last month. Key aspects of the restructure include: extending the development test schedule to March 2015 and moving Milestone C (Full Rate Production) to April 2016, commensurate with completion of Initial Operational Test and Evaluation (IOT&E); extending LRIP production further; adding one incrementally funded carrier variant (CV) to the SDD program in order to expand development testing capacity; expanding JSF software integration capability by adding an additional software integration line; utilizing three LRIP aircraft in support of development testing; fully funding the SDD program to the OSD Joint Estimating Team's estimate; and lowering the planned procurement quantity profile through 2015. The remaining fee pool on the SDD Air System prime contract will be converted to a performance incentive construct. The new fee construct will establish a balanced and objective

incentive structure based on the contractor's performance in attaining milestone schedule events and cost targets. It is important to note that the Department did not uncover any technology or manufacturing show-stoppers in its review, and did not descope performance requirements during the restructure process.

I'm confident and optimistic in the wake of the restructure – technical progress remains sound based on all key indicators, and I believe the added time and resources will alleviate schedule pressures that have been building for the past few years. The Program's nearterm focus will be refinement of the restructure to include establishing a revised flight test schedule, negotiating Over Target Baselines with the prime contractors, and incentivizing them to meet their commitments below target costs.

A snapshot of technical progress follows:

- SDD airframe and vehicle systems design is 100% complete.
- Five SDD jets have flown a total of 216 hours over 160 flights through March 8, 2010.
- Fifteen of the nineteen ground and flight test articles have completed fabrication and been delivered from the factory to final assembly or the test team at Ft Worth, and all SDD aircraft will be ferried to their respective test centers inside the coming year. In total, 43 SDD and LRIP aircraft (including 3 International Partner LRIP jets) are completed or in-work. We await Defense Acquisition Board (DAB) approval for LRIP IV full funding this spring.
- Approximately 82% (15.4M lines of code) of all F-35 software is coded. The first SDD aircraft (AA-1) with its Block 0.1 configuration has more code than was developed for the F-22 during its SDD phase. We have completed the qualification testing for the avionics and flight systems components for the three variants, and are 63% complete with the full life durability testing of those components. Systems integration testing continues on plan via the flying test beds, a

Cooperative Avionics Test Bed (CATB), and extensive ground-lab testing, with over 150,000 hours of ground-lab testing completed to-date. Those facilities, part of the large upfront investment in F-35 design and development, are reducing risk faster than any previous legacy program at the same point. Specifically:

-- All variants are within the 3% weight growth projection.

-- BG-1, the STOVL structural test article, has completed test faster than legacy systems with only one minor finding.

-- AG-1, the CTOL structural test article began testing 31 July 2009 and is now 76% complete with no problems discovered to date.

-- The full scale pole model has completed testing with no issues, and has verified the accuracy of the F-35 signature predictions and indicated satisfactory margin to the Key Performance Parameter for signature.

-- Software productivity has surpassed expectations according to all measures including the Joint Estimating Team's assessment, and is demonstrating orders of magnitude better software stability at equivalent points compared to legacy programs.

-- The F135 engine development program has completed over 13,000 ground test hours and has flown without incident over 160 times. The prior third-turbine blade failure has been effectively addressed as have other lesser significant test findings. In addition, we are executing the F136 engine development program in accordance with appropriated funding while recognizing that the Department does not intend to continue the development next year. The F136 pre-SDD engines have completed over 500 hours of test to reduce risk on their design; the first two SDD engines, while experiencing some test problems last year, have now completed 114 hours of test and advanced the knowledge of their design.

There is no doubt that the initial SDD jets have taken longer to build and ferry to the test centers than originally planned. I believe, however, the prime contractor teams have improved their manufacturing processes and are poised to demonstrate stable and efficient production, a robust design, a highly reliable and sustainable system, and most importantly, an extremely lethal and survivable 5th Generation fighter.

Joint development of the F-35 is providing the Services and coalition partners with an affordable weapon system that meets the needs of the warfighters. Analyses show F-35 will exceed legacy capability before delivery of our final software spiral.

Thank you again for this opportunity to appear today. I am looking forward to working with you on behalf of the entire F-35 team and more importantly, our ultimate customer, the F-35 warfighter.