NOT FOR PUBLICATION UNTIL RELEASED BY
THE HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES

STATEMENT OF

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BEFORE THE

TACTICAL AIR AND LAND FORCES SUBCOMMITTEE

OF THE

HOUSE ARMED SERVICES COMMITTEE

ON

F-35 PROGRAM REVIEW

MARCH 23, 2016

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I Introduction

Chairman Turner, Ranking Member Sanchez and distinguished Members of the Subcommittee, thank you for the opportunity to appear before you today to discuss the F-35 Lightning II.

The F-35 Lightning II is the Department of Defense`s largest acquisition program, matched by its importance to our Nation's security. The F-35 will form the backbone of United States (U.S.) air combat superiority for decades to come, replacing or complementing the legacy tactical fighter fleets of the Air Force, Navy, and Marine Corps with a dominant, multirole, fifth-generation aircraft, capable of projecting U.S. power and deterring potential adversaries. For our International Partners and Foreign Military Sales (FMS) customers, who are participating in the program, the F-35 will become a linchpin for future coalition operations and will help to close a crucial capability gap that will enhance the strength of our security alliances. Accordingly, delivering this transformational capability to front-line forces as soon as possible remains a top priority.

II Accomplishments

The F-35 program is executing well across the entire spectrum of acquisition, to include development and design, flight test, production, fielding and base stand-up, sustainment of fielded aircraft, and building a global sustainment enterprise. In February 2016, the F-35 reached 50,000 flight hours, including approximately 26,000 for the F-35A, 18,000 for the F-35B and almost 6,000 hours for the F-35C. We are pleased to report many accomplishments by the F-35 team during the past year, since we last addressed this committee. Of note, we have seen declaration of Initial Operating Capability (IOC) for the F-35B by the U.S. Marine Corps

(USMC) last summer, providing our Combatant Commanders with a 5th generation strike fighter capable of operations from expeditionary airstrips or sea-based carriers, the delivery of first seven F-35A aircraft to Hill Air Force Base (AFB) in preparation for the U.S. Air Force's (USAF) declaration of IOC later this year, and delivery of Block 3F software to flight test in support of Navy F-35C IOC in 2018. The F-35 team remains committed to sustaining and expanding these fielded capabilities.

Accomplishments in flight testing in recent months include completion of F-35B Block 2B Operational Test aboard the USS WASP and successful completion of the second round of sea trials with the F-35C aboard the USS DWIGHT D. EISENHOWER (CVN 69). We have now completed a total of five sea trials with the F-35B and F-35C. The developmental test program is progressing steadily with a focus on wrapping up testing of the Block 3i software this spring. This last iteration of Block 3i software will give the F-35A the combat capability required for USAF IOC. The team also completed F-35A high angle of attack and performance testing and continued flight envelope expansion for all aircraft variants. High angle of attack flight testing will complete this spring for F-35C and fall for F-35B. For the F-35A, we have performed a series of successful AIM-9X air-to-air missile launches and airborne test firings of its GAU-22 internally-mounted 25-millimeter cannon. Air-to-ground accuracy testing of the GAU-22 is now underway and expected to complete in summer 2016. Additionally, we successfully conducted the first operational fleet weapons drops for the USMC and USAF, and completed all Block 3i weapons delivery accuracy events.

Our overall assessment is that the program is making solid progress across the board and shows improvement each day while continuing to manage emerging issues and mitigate

programmatic risks. We are confident the F-35 team can overcome these challenges and deliver on our commitments. In this testimony, we present a detailed update on the progress that has been made over the past year, providing a balanced assessment of the current status of the program, highlighting both the accomplishments and the setbacks, as well as articulating where we believe risks remain.

III Development

Steady progress continues toward completion of the F-35 System Development and Demonstration (SDD) phase in fall of 2017. Last year, we testified before this subcommittee and said the program was nearing completion of Block 2 software development and was closing in on completing all flight testing necessary to field our initial warfighting capability, also known as Block 2B. We are now in the same position for our next increment, Block 3i. We should complete all 3i testing this spring and convert all the fielded aircraft with earlier versions of Block 3i to the latest version starting this summer.

The final block of F-35 development program capability, known as Block 3F, provides a fully capable F-35 aircraft and marks the end of the SDD program. Block 3F Mission Systems software is currently undergoing Developmental Test (DT), and many of the deficiencies discovered in Blocks 2B and 3i software will be corrected in Block 3F. However, since both 2B and 3i testing took longer than originally planned, the program estimates there is a risk to completing Block 3F on time – it is now projected to be about four months late and will be delivered in late fall of 2017. This delay is an improvement over our projection from one year ago, and it is not expected to impact U.S. Navy (USN) IOC for the F-35C in 2018 or the other U.S. and coalition partner's capabilities. There are still some stability issues with both the 3i and

3F software that we are currently working through.

Looking beyond the SDD program, the Follow-on Development or Modernization effort, also known as Follow-on Modernization, will be the means to deliver improved capabilities to the weapon system to ensure its relevance against advanced and emerging threats. The program anticipates the Joint Requirements Oversight Council will approve the Follow-on Modernization / Block 4 Capabilities Development Document this summer. Work continues with the U.S. services and International Partners to ensure the Modernization Program will be "right-sized" for affordability and sustainability. In addition, the Department will ensure that separate cost, schedule, performance and earned-value data will be available to provide detailed insight into program execution. To this end, we awarded the initial Planning and Systems Engineering contract in June 2015, and execution remains on track to conduct a comprehensive System Requirements Review this fall. Two additional contract actions are planned. The first will allow for the decomposition of system level requirements through a rigorous systems engineering effort, and the second will continue that work through Preliminary Design Review planned in spring 2018 and will support a Defense Acquisition Executive decision point to move forward with the Block 4 development program in mid-2018.

F-35A Dual Capable Aircraft (DCA) continues to be aligned with and included in the Block 4 Follow-on Modernization effort. This past summer a series of test flights were conducted to assess the vibration, acoustic, and thermal environments of the F-35A weapons bay with the B61-12 weapon. Nuclear Certification planning efforts have been initiated as part of the Block 4 contracting activity in anticipation of beginning B61-12 integration on the F-35A in 2018.

Commensurately, we have begun to “right size” the Development Test fleet of aircraft in preparation for Follow-on Modernization. As part of this process, the services and program office are working together to determine the correct mix of capacity and capabilities to allow us to operate a flight test fleet that is representative of the warfighter’s fleet. This will provide the needed capability at a lower cost, allowing the services to put more resources toward capability enhancements.

Although solid progress is being made -- we are now 80 percent complete with all of SDD -- F-35 development is not without technical discoveries and deficiencies, which are common for a system that is still in development.

On August 27, 2015, the U.S. Services and International Partners restricted F-35 pilots weighing less than 136 pounds from operating the F-35 after safe escape tests indicated the potential for increased risk of injury to this pilot population. Currently, no F-35 pilots are impacted by this restriction. The restriction is focused on this population, as lighter pilots are assessed to have lower neck strength and are therefore more prone to injury as a result of neck loading observed during testing.

There are three technical solutions that when in place will reduce the risk of neck injury to all pilots and will eliminate the restriction to any pilot population. Two of the solutions pertaining to the ejection seat, have been verified through testing, and will be ready to incorporate into production aircraft and retrofit to delivered aircraft by the end of 2016. These solutions are a head support panel between the parachute risers that prevents neck over-extension and a pilot-selectable weight switch, which adds a very slight delay in the opening of the main parachute, thus reducing opening shock loads. The third solution applies to the helmet and

involves reducing its weight. This lighter helmet is expected to field by the end of 2017, but the program intends to accelerate this timeline.

Another deficiency the Program is solving involves the Ground Data Security Assembly Receptacle (GDR), which is part of the Off-board Mission Planning system and is used to encrypt and decrypt the mission and maintenance data carried on the Portable Memory Device to and from the airplane by the pilot. In 2015, the program faced significant challenges with the pilot debrief timeline, because the GDR required approximately 1.5 hours to download a 1.5 hour flight -- far too long. We have now developed an improved GDR that will decrease the timeline to download mission data by a factor of 8, meaning a 1.5 hour flight will be downloaded in about 15 minutes. The new program successfully completed a CDR for the redesign in September 2015. Test units are now being built for qualification and integration testing. We will deliver the new GDR in summer 2016 with the first ten units delivered to Hill AFB in Utah in support of USAF IOC. Further GDR deliveries to back-fill other units will begin in fall 2016.

As previously reported, in September 2013, during F-35B full-scale durability testing, we experienced a significant bulkhead crack at 9,056 equivalent flight hours (EFH). The root causes have been established and redesign effort for the bulkheads is well underway. A laser shock peening process is being developed to address specific locations requiring additional material improvement to meet full life. The qualification of this process is progressing satisfactorily and is expected to be available for both production and retrofit of fielded aircraft by the end of 2017. The F-35B durability test restarted in February 2015 and progressed to 11,915 EFH by August 2015. At that time, cracking had developed at a previously identified short life location and

required repair. That repair work is nearing completion now. The F-35B durability test is expected to complete its second life of durability testing during summer 2016.

In October 2015, the F-35C test article experienced cracking in the wing front spars at 13,731 EFH. The root cause has been established and redesign efforts for the spars has begun. Standard redesign techniques, such as local material thickening and cold-working are expected to be used to achieve full intended life. This finding does not affect the F-35A or B variant spars because the F-35C spars are designed differently to account for the aircraft's larger wings. In addition, at 13,931 EFH additional cracking was found in the left side of a main fuselage bulkhead. Once an investigation got underway, a similar, though smaller crack was also found on the right side. This new cracking is under investigation and analysis in on-going. There is no near-term airworthiness concern for fielded or test aircraft due to either case of cracking because these aircraft can fly for approximately 10 years or more before these structural issues require a fix. The F-35C is expected to complete its second life of durability testing in late 2016.

The F-35 Program Office is making progress in resolving two technical issues involving the fuel system: fuel tank overpressure at elevated g-loading and fuel tank inerting for lightning protection. The technical solution for the fuel overpressure has been designed, tested and is in the process of being fielded. This will allow all F-35 variants to reach their full structural capability. Additionally, the F-35 team recently qualified the improved fuel tank inerting system, and the operational restriction to avoid lightning in-flight was lifted for the F-35A in late 2015. The fuel systems differences among the three aircraft variants require additional measures to qualify the new inerting system for F-35B and F-35C. The F-35B requires the next software release, which is expected this spring, and the F-35C will be corrected with a hardware change

beginning summer 2016. Implementation of both overpressure and lightning corrective actions will provide full g-envelope and full lightning protection for all three variants prior to SDD closure and is expected to meet all IOC requirements.

IV Cost, Schedule, and Performance Metrics and Production Status:

Affordability remains a top priority. We continue to make it clear to the program management team and the F-35 industrial base that the development phase must complete within the time and funding allocated, continue to drive cost out of aircraft production, and reduce life-cycle costs. To that end, the program has engaged in a multi-pronged approach to reduce costs across production, operations, and support. The government/industry team is reducing aircraft production costs through "blueprint for affordability" initiatives and reducing F135 engine costs via ongoing engine "war on cost" strategies. These efforts include up-front contractor investment on cost reduction initiatives, mutually agreed upon by the government and contractor team. This arrangement motivates the contractors to accrue savings as quickly as possible in order to recoup their investment, and it benefits the government by realizing cost savings at the time of contract award. The goal is to reduce the flyaway cost of the USAF F-35A to between $80 and $85 million dollars by 2019, which is anticipated to commensurately decrease the cost to the Marine Corps F-35B and Navy F-35C variants. The program has also set a goal of decreasing overall operating and support life-cycle cost by 30 percent.

The price of F-35s continues to decline steadily Lot after Lot. For example, the price (including airframe, engine, and contractor fee) of a Low Rate Initial Production (LRIP) Lot 8 aircraft was approximately 3.6 percent less than an LRIP Lot 7 aircraft, and an LRIP Lot 7 aircraft was 4.2 percent lower than an LRIP Lot 6 aircraft. LRIP Lots 9 and 10 contract

negotiations are nearing completion, and LRIP 9 contract award is anticipated no later than May of this year. LRIP 10 will award when the Secretary of the Air Force certifies that F-35As delivered during FY18 will be full Block 3F capable.

The program met its 2015 production goal of delivering 45 aircraft and is on track to meet the goal of delivering 53 aircraft in calendar year 2016, with 48 of those aircraft produced in Fort Worth, Texas and another five produced in the Italian Final Assembly and Check Out facility at Cameri, Italy. As of March, 2016, a total of 171 aircraft have been delivered to our test, operational and training sites. The delivery schedule for aircraft also continues to improve. LRIP Lot 6 aircraft averaged 68 manufacturing days behind contracted delivery dates, and LRIP Lot 7 aircraft have improved to an average of 30 manufacturing days behind contract dates. We expect that gap to continue to reduce as we approach the first LRIP Lot 8 deliveries in the March-April 2016 timeframe. We continue to work with both Lockheed Martin and Pratt & Whitney to prepare the program for the production ramp increase over the next few years.

The F-35 enterprise is exploring the possibility of entering into a Block Buy Contract (BBC) for LRIP Lots 12-14 (FY18-20). A BBC would enable significant program cost avoidance by allowing the contractors to utilize Economic Order Quantity purchases, increase cost reduction initiatives enabling suppliers to maximize production economies of scale through batch orders. To substantiate the potential savings of a BBC concept, the F-35 Program Office contracted with RAND Project Air Force (a Federally Funded Research and Development Center) to provide an independent assessment, which is expected in March 2016. Due to budget timing and uncertainty, the Department of Defense intends to begin the Block Buy in Lot 13 rather than Lot 12. However, we are considering an option to allow the F-35 Partners and FMS

customers to begin a BBC in Lot 12, followed by U.S. participation in LRIP Lots 13 and 14. This option will still result in significant cost savings.

Overall, we believe the risk of entering into a BBC in LRIP Lot 12 (FY18) to the F-35 International Partners and FMS customers is low. By the time it is necessary to commit to a Block Buy many aspects of the program will be stable including completion of durability testing for all three variants, near completion of all hardware qualification, completion of the majority of 3F software and weapons delivery testing, and stable production processes and ramp.

Earlier this year, the program reached agreement with Pratt & Whitney on the next two lots of F135 propulsion systems. The F-35A/F-35C propulsion system reduced 3.4 percent from the previously negotiated LRIP Lot 8 price to the negotiated LRIP Lot 10 price. The F-35B propulsion system (including lift systems) reduced 6.4 percent from the previously negotiated LRIP Lot 8 price to the LRIP Lot 10 price. For calendar year 2015, all F135 production deliveries met contract requirements. However, recurring manufacturing quality issues have created issues with delivered engines. Recent quality escapes on turbine blades and electronic control systems resulted in maintenance activity to remove suspect hardware from the operational fleet prior to delivery, but Pratt & Whitney still met their timeline for the Lockheed production line. Pratt & Whitney has taken action to improve quality surveillance within their manufacturing processes and is executing a rigorous quality program with their supplier. Additionally, the program office manufacturing quality experts have engaged both Lockheed and Pratt & Whitney to ensure quality improvement processes are in place to meet production ramp requirements. We are also continuing to conduct stringent Production Readiness Reviews with hundreds of suppliers to ensure the production ramp will be achievable and smooth.

V Sustainment

As of the beginning of March 2016, there are 151 operational (fleet and operational test) and 20 DT F-35s in the inventory operating at eight sites. Together, the entire fleet has logged more than 50,000 flight hours since our first flight in 2006. F-35A deliveries to Eglin AFB in Florida are complete, and the program continues deliveries to Luke AFB, which is the main training base for the USAF and Partners, including Australia's and Norway's first two F-35As. During 2015, the program began delivering F-35As to Hill AFB in support of the USAF's first operational F-35 wing. The program has also started F-35B pilot training at Marine Corps Air Station Beaufort in South Carolina. In the next four years, we will add another seventeen operating bases to the F-35 enterprise across all three regions: North America, the Pacific and Europe.

As additional aircraft come off the production line, the program is working to ensure sites across the globe are ready to accept the F-35. Since January 2015, the program has sent out fifty-one site activation teams supporting detailed planning at twenty-five different locations around the globe. These sites include stand up of F-35 capability for six of the Partner Nations, all three of the foreign military sales customers, as well as additional sites for USAF, USMC and USN. Planning commenced in 2015 for base standups in Norway, the Netherlands, Turkey, United Kingdom, Israel, Japan and Korea. The site activation highlight for 2015 was the successful preparation and arrival of the F-35 at Hill AFB, forming the foundation for a projected 2016 USAF IOC.

Aircraft availability rates continue to be a focus area for the program and various program initiatives are now showing a positive trend in this area. A disciplined Reliability &

Maintainability program, improved maintenance procedures and manuals, continued improvement in Autonomic Logistics Information System (ALIS), better forecasting of spares requirements, improved repair turn around times from supplier, and incorporation of aircraft design improvements have resulted in excellent gains in mission capability rates and aircraft availability rates. Today, across the fleet, we are seeing 55 to 60 percent availability rates with units performing at 63 percent mission capability.

Last year the program provided information regarding its efforts toward the establishment of the Global Sustainment posture across Europe, Asia-Pacific, and North America. In 2015, the program made progress in standing up regional Maintenance, Repair, Overhaul, and Upgrade (MRO&U) capabilities for airframes and engines in the European and Pacific regions. These initial MRO&U capabilities will support overseas F-35 airframe and engine heavy-level maintenance for all customers, including the U.S. Services, and will continue to provide the best-value to the enterprise. Italy will provide initial airframe MRO&U capability in the European region in 2018. Turkey will provide engine heavy maintenance in the European region in 2018 with The Netherlands and Norway providing additional capability a few years later. F-35 airframe MRO&U capability in the Pacific region will be provided first by Australia in 2018 and then by and Japan. Australia will also be providing initial engine heavy maintenance, followed by Japan about five years later.

In 2015 the program also kicked-off initial planning efforts for expansion of component repair into the European and Pacific regions. Efforts began to identify ‘best value’ repair sources in each region for approximately 18 key depot-level repairable items. International Partners and their respective industries will be requested to propose component groupings which leverage

their strongest industrial competencies to deliver optimum repair capability at best cost to the global sustainment solution.

The program will continue this process in 2016 and 2017 with the Department of Defense assigning to our Partners and FMS customers repair capabilities such as wheels and brakes, electrical and hydraulic systems, maintenance of support equipment, and warehousing for the global supply chain. These same capabilities either currently exist or are being developed at the U.S. Services' CONUS depots in accordance with current U.S. law.

VI Risk & Challenges

Although improving, the Program is not without risks and challenges. Currently, our most significant technical concern is the development and integration of mission systems software.

The aircraft has approximately eight million lines of code, with another 16 million lines of code on the off-board systems. This is an order of magnitude greater than any other aircraft in the world and represents a complex, sometimes tricky, and often frustrating element in the program. Several years ago the program instilled discipline in the way software is developed, lab tested, flight tested, measured and controlled by the program office. This has produced much better and more predictable results over the past two years. However, both the fielded Block 3i software and the 3F software in flight test are not as stable as they need to be to support our warfighters. We are experiencing instability in the sensors -- particularly the radar – leading it to shut off and "reboot" in flight. Currently, this problem occurs about once every four hours of flying, and we expect to improve this to once every eight to ten hours of flying. We believe we have identified the root cause of these stability problems to be the timing of software messages

from the sensors to the main F-35 fusion computer, and we have tested solutions in the lab environment. We will be flight testing these fixes in the March-April timeframe. If the fixes are successful, we will add them to a new version of 3i software and field that in time for USAF IOC. We will also incorporate the fixes in the 3F software we are developing and flight testing. To ensure we completely understand these issues the program office has launched an in-depth look at this issue in the form of a software stability "Red Team." This team, made up of a group of experts from the Navy and Air Force, will conduct its study beginning in March and report back to the Program Office.

The final software version, Block 3F, has the most software risk facing the program for a number of reasons. First, 3F testing started later than planned because we had to spend more time fixing Block 2B and 3i software. Second, 3F has the same stability issues as Block 3i as described above. Third, the Block 3F software must take information from other sources, such as other non-F-35 aircraft, satellites, and ground stations and fuse this information with F-35 information, giving the pilot a complete and accurate picture of the battlespace. Additionally, the remaining flight loads, buffet, and weapons delivery accuracy flight testing needs to be accomplished. We estimate there is about four months of risk to this schedule, placing full 3F capability to the warfighters in the late fall of 2017.

The next version of ALIS, version 2.0.2, which includes new capabilities to support USAF IOC, also has some schedule risk. This version of ALIS combines the management of F135 engine maintenance within ALIS and tracks all the life-limited parts on each and every F-35 aircraft. The development of these capabilities is proving to be difficult because they

require integration with Lockheed Martin's and Pratt & Whitney's Enterprise Resource Planning systems, or the "back end" of ALIS.

We are also working closely with the Joint Operational Test Team to finalize its F-35 FY16 Cyber Test Plan. This testing is scheduled to begin in April 2016 and will perform end-to-end Vulnerability and Adversarial Testing on ALIS and the F-35 Air Vehicle. Hundreds of penetration and cyber security test have already been accomplished on the system, enabling us to connect the F-35 systems to the DoD Global Information Grid (DoD and Services networks).

We have also instituted an ALIS initiative aimed at fixing prior deficiencies and rapidly fielding them to the warfighter. As we continue to develop new capabilities, the Program has set up a parallel effort -- known as "Service Packs" -- to fix many of the deficiencies the maintainers in the field have brought to our attention. These deficiencies usually result in workarounds and add workload to our maintainers' already busy jobs. Service Packs are developed, tested and fielded on a much quicker timeline than our larger increments of ALIS. We fielded the first Service Pack in January, and feedback from the field has been encouraging. We will continue to rapidly field Service Packs to improve the usability of ALIS for our maintainers, the next of which will be fielded this spring.

One final comment concerning risks and issues on the program deals with the recent report issued by the Director of Operational Test and Evaluation (DOT&E). This report is factually accurate and was written entirely based on information that came from the F-35 Program Office – there is no information in the report that was not already known by the Program Office, the U.S. Services, and our Partners. While not highlighted by the DOT&E report, for each issue cited the F-35 Program has a dedicated effort underway to resolve or

otherwise mitigate the issue. We are prepared to provide further details on any of these issues and our actions to address them.

VII Delivering Combat Capability

Following the declaration of IOC in June of 2015, the USMC has continued to train and exercise its combat capable F-35B aircraft. At the beginning of December 2015, Marine Fighter Attack Squadron 121 deployed eight F-35Bs to Twentynine Palms in California for Exercise Steel Knight. The team executed 32 sorties in support of the combined arms live-fire exercise, taking an important step toward integrating the F-35B into the Marine Corps Ground Combat Element and demonstrating their capability to execute close air support and strike missions from an austere operating site.

The USAF also showed their increasing capabilities with the F-35A, executing a deployment of six Operational Test aircraft from the 31st Test and Evaluation Squadron at Edwards AFB, California to Mountain Home AFB, Idaho. The squadron executed 54 sorties over twelve days of flying as part of a joint training exercise with U.S. Navy Seals, F-15Es, A-10s, and Apache and Blackhawk helicopters, delivering 10 GBU-31 and 20 GBU-12 precision guided inert munitions. This is the first time the F-35A has deployed to and operated from a base with no organic F-35 support or presence.

The F-35 Lightning II Joint Program Office's top priority is now meeting USAF IOC at Hill AFB, Utah with Block 3i capabilities between August and December 2016. Hill's active-duty 388th Fighter Wing and Reserve 419th Fighter Wing will be the first USAF combat-coded units to fly and maintain the Lightning II. In support of meeting the USAF's IOC date, Hill AFB

has already received its initial F-35As and is now training with them, including the first weapons employment from an operational F-35A.

The USN has set August 2018 as its IOC objective date with the F-35C. In support of meeting the USN IOC, sea trials will continue this year and culminate in the third and final DT period afloat. This test is expected to last approximately 21 days and will test and certify the remaining embarked launch and recovery environmental envelopes, including those with various ordnance and fuel load combinations expected in fleet use. The test will also complete all initial shipboard flight deck and hangar deck supportability procedures and processes, paving the way Operational Test and Fleet use.

VIII International Partner and FMS Participants

International participation on the program with eight Partners and three FMS customers remains solid. The program has now delivered the first Royal Norwegian Air Force F-35 to Luke AFB expanding the International Partner pilot training currently ongoing there. The first Italian Air Force F-35A was also delivered from the production facility in Cameri, Italy, and then subsequently completed the first F-35 trans-Atlantic flight in February, landing at Naval Air Station, Patuxent River in Maryland. After completion of some program testing, this aircraft will also join the pilot training effort at Luke AFB. F-35A has also conducted aerial refueling flight testing with a Royal Australian Air Force KC-30A tanker and completed aerial refueling flight testing and certification with an Italian Air Force KC-767 tanker.

In 2015, as part of initial site planning, we commenced standup of maintenance capabilities in Norway, Netherlands, Turkey, United Kingdom, Israel, Japan and Korea. Also, the Japanese Final Assembly and Check Out assembly facility is now complete with both

Electronic Mate Assembly Stations tools installed and accepted. Construction and installation activities remain on schedule, and the major components are now being shipped. The first Japanese F-35A is scheduled to rollout of the facility in November 2016.

We anticipate that Denmark will make its final decision on its fighter replacement late spring 2016. Additionally, although Canada has indicated that it will conduct a new fighter replacement competition, it still remains a full partner in the F-35 program. We continue to provide the Canadian government with the most up-to-date and accurate information to aid them in their future selection process.

IX Conclusion

In summary, the F-35 program is making solid progress across all areas including development, flight test, production, maintenance, and stand-up of the global sustainment enterprise. As with any big and complex program, new discoveries, challenges and obstacles will occur. The F-35 is still in development, and it is the time when technical challenges are expected. However, we believe the combined government / industry team has the ability to resolve current issues and future discoveries. The team's commitment to overcoming these challenges is unwavering and we will maximize the F-35's full capability for the Warfighter.

We will continue executing with integrity, discipline, transparency and accountability, holding ourselves accountable for the outcomes on this program. The team recognizes the responsibility the program has been given to provide the pillar of the U.S. and allied fighter capability with the F-35 for generations to come, and that your sons and daughters, grandsons and granddaughters may someday take this aircraft into harm's way to defend our freedom and way of life. It is a responsibility we take very seriously.

Thank you again for this opportunity to discuss the F-35 program. We look forward to answering any questions you have.