



ACQUISITION,
TECHNOLOGY
AND LOGISTICS

THE UNDER SECRETARY OF DEFENSE

3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010

FEB 24 2010

**MEMORANDUM FOR SECRETARY OF THE NAVY
SECRETARY OF THE AIR FORCE**

**SUBJECT: F-35 Lightning II Joint Strike Fighter (JSF) Program Restructure Acquisition
Decision Memorandum (ADM)**

Over the past several months, I have conducted an extensive Department-wide Review (the Review) of the JSF program with the Department of the Air Force, the Department of the Navy, the JSF Joint Program Office (JPO), the Director of Cost Assessment and Program Evaluation (CAPE), the Director of Operational Test and Evaluation (DOT&E), and my own staff. The review also included intensive interaction with the Program's principal contractors. I considered inputs from the CAPE-led Joint Estimating Team (JET), the F135 Joint Assessment Team (JAT), the Independent Manufacturing Review Team (IMRT), the JPO, contractors, and other inputs. As a result of this Review, the Secretary of Defense (SecDef) directed a comprehensive restructuring of the JSF program, which shall be implemented in accordance with this ADM.

The JET estimate issued in October 2008 (JET I) projected that the System Development and Demonstration (SDD) phase of the JSF program would take longer and cost more than the JPO and prime contractor were projecting. Based on the JET I estimate, the SecDef directed in October 2008 that \$476M be added to the SDD program in FY 2010 to mitigate the schedule risk and cost growth forecast.

In July 2009 the Deputy Secretary of Defense directed that a second JET Estimate, JET II, be prepared by October 2009. The JET II estimate was substantially similar to the JET I estimate. It noted that the increased engineering and software staffing, extended manufacturing span times, engineering change traffic, and delayed delivery of aircraft to flight test that were noted in JET I had continued for another year, resulting in a projected 30-month slip in the JSF's SDD schedule.

The JAT review noted substantial cost growth in the F135 JSF engine program and identified measures to arrest, and possibly reverse, that growth.

Additionally, the IMRT review identified a large number of conditions that would need to be satisfied in order for the planned production ramp rate for JSF to be achieved.

Based on two consecutive years of credible JET forecasting of an SDD slip, together with the JAT and IMRT reviews, it was clear that a Department-wide Review of the entire JSF program was warranted. Furthermore, using the JET II estimate, the JSF program would have a critical Nunn-McCurdy breach. While the JET II was only an estimate, the Review was undertaken as though the JSF program was in Nunn-McCurdy breach. This Review began in November 2009 and continues.

I judge that aggressive management steps in connection with a restructuring of the program, identified in the Review and taken with the cooperation of the prime contractor and directed below, can be expected to prevent some but not all of the slip in SDD schedule. A Revised JET II estimate was made presuming the program restructuring identified in the Review, and it forms the basis of the restructured schedule and budget. The Revised JET II estimate projects a 13-month slip where a 30-month slip was previously forecast. It also projects a \$2.8B increase in the cost of the SDD program. I believe this revised estimate is a credible and realistic basis for the JSF program plan, and while the restructuring will likely be able to mitigate the slip from 30 months to 13 months, the contractor will be incentivized to improve on the revised JET II schedule and cost position further. The Revised JET II estimate is very roughly assessed to be a "50%" estimate, meaning that it has a 50% chance of overestimating the costs of the SDD program and a 50% chance of underestimating them. The Revised JET II estimate also forecasts a later and somewhat lower production ramp, in accordance with the IMRT report, and I believe this is also realistic. Taken together, these forecasts result in the delivery of 122 fewer aircraft over the Future Years Defense Programs (FYDP), relative to the President's FY 2010 budget baseline (56 fewer aircraft relative to President's FY 2009 budget baseline) with some of the production funds allocated instead to the restructured development program. On the other hand, no fundamental technology or manufacturing problems were discovered in the Review, nor were the performance requirements for the JSF changed as a result of the Review.

The Secretary of Defense directed that the JSF program be funded to the Revised JET II estimate but that efforts be made to improve, if possible, upon the performance forecast and specifically to pursue the possibility of larger aircraft buys within the planned budget.

Accordingly, I direct the following restructuring of the JSF program:

- Extend the SDD program 13 months and move Milestone C (Full Rate Production) to November 2015, commensurate with completion of Initial Operational Test and Evaluation (IOT&E). Plan the start and completion of IOT&E consistent with the entrance criteria and execution plans in the approved Test and Evaluation Master Plan (TEMP).
- Add one incrementally funded carrier variant (CV) aircraft to the SDD program in order to expand developmental testing capacity.

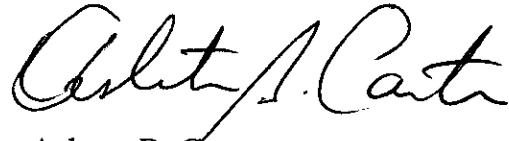
- Expand the JSF software integration capability by adding an additional software integration line.
- Utilize three Low Rate Initial Production (LRIP) aircraft in support of development testing. By May 1, 2010, the JSF PEO shall provide an integrated plan to use these LRIP aircraft. This plan should indicate aircraft that will be transferred to development test as well as the aircraft to be used for IOT&E.
- Fully fund the SDD program to the JET's current estimate (Revised JET II) which is the basis for the JSF program's President's FY 2011 Budget planned total resources.
- Add one additional LRIP annual procurement lot (LRIP 9) prior to entering full-rate production.
- Revise the production ramp rate in accordance with Resource Management Decision (RMD) 700. No later than June 1, 2010, the PEO shall provide me an implementation plan addressing the IMRT recommendations. At the FY 2011 JSF DPR, the PEO shall provide a status against this plan.
- Fully fund the JSF Production Program to the JET's current estimate (Revised JET II) from within the JSF program's FY 2011 President's Budget.
- If the contractors can execute the development program and/or deliver aircraft at lower costs (in line with their previous commitments), we will work with the Congress to procure additional aircraft from within the JSF program budget. Long lead procurement funding for as many as 48 aircraft in FY 2011 shall accordingly be requested from Congress.
- The JSF PEO shall work with the operational community to determine potential impacts of this re-structure on the schedule for Initial Operational Capabilities.

I remain convinced that close partnership and clear accountability are required with the JSF contractors. Therefore, I direct the Air Force and Navy Service Acquisition Executives and JSF PEO to, with the contractor, withhold \$614M in SDD award fees and to revise the SDD contract structure and the LRIP to reward measurable progress against significant schedule events and ensure event-based fees are paid only if the events are accomplished in time to support the re-structured schedule. The contract structure should also be changed to reward improved cost and schedule performance as compared to the program plan. Additionally, future aircraft and engine production contracts should move to fixed-price incentive fee structures as soon as possible.

Finally, I intend to continue the Department-wide Review of the JSF program. 2010 will be a critical year for the program, with delivery of test aircraft to Patuxent River and Edwards AFB, completion of hundreds of test flights, commencement of flight testing at Eglin AFB, and other key milestones planned.

My points of contact are Steve Misra, Deputy Director for Acquisition Management (OUSD(AT&L)/ARA/AM), 703-697-8558 and Col Michael Schmidt,

Deputy for Tactical Aircraft Systems, Portfolio Systems Acquisition, Air Warfare
(OUSD(AT&L)PSA/AW), 703-697-3619.

A handwritten signature in black ink, appearing to read "Ashton B. Carter". The signature is fluid and cursive, with the first name "Ashton" being the most prominent.

Ashton B. Carter

cc:
DAB Principals
DAB Advisors