DEFENSE ACQUISITIONS: ONE YEAR AFTER REFORM

HEARING

BEFORE THE

SUBCOMMITTEE ON NATIONAL SECURITY
AND FOREIGN AFFAIRS

OF THE

COMMITTEE ON OVERSIGHT
AND GOVERNMENT REFORM

HOUSE OF REPRESENTATIVES

ONE HUNDRED ELEVENTH CONGRESS

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(II)

C O N T E N T S

HEARING ON DEFENSE ACQUISITIONS: ONE YEAR AFTER REFORM

WEDNESDAY, MAY 19, 2010

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON NATIONAL SECURITY AND FOREIGN
AFFAIRS,
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM,
Washington, DC.

The subcommittee met, pursuant to notice, at 10 a.m., in room 2154, Rayburn House Office Building, Hon. John F. Tierney (chairman of the subcommittee) presiding.

Present: Representatives Tierney, Murphy, Welch, Foster, Driehaus, Quigley, Flake, and Luetkemeyer.

Staff present: Andy Wright, staff director; Talia Dubovi and Scott Lindsay, counsels; LaToya King, professional staff member; Boris Maguire, clerk; Bronwen DeSena and Aaron Blacksberg, interns; Adam Fromm, minority chief clerk and Member liaison, Stephen Castor, minority senior counsel; Ashley Callen, minority counsel; and Christopher Bright, minority senior professional staff member.

Mr. TIERNEY. Good morning. A quorum being present, the Subcommittee on National Security and Foreign Affairs hearing entitled, "Defense Acquisitions: One Year after Reform," will come to order.

Before we begin this hearing, I would like to quickly address one piece of business that was left over from the subcommittee's April 28, 2010, hearing that was entitled, "The Rise of the Drones II: Examining the Legality of Unmanned Targeting." We have an additional statement for the record to submit, as well as a corrected version of a statement that was submitted already.

I therefore ask unanimous consent that the hearing record be reopened, that the written statement of Professor Michael W. Lewis be submitted for the record, that the corrected version of Professor Hina Shamsi's statement be submitted for the record, and that, thereafter, the hearing record be reclosed. Without objection, so ordered.

With respect to today's hearing, I ask unanimous consent that only the chairman and ranking member of the subcommittee be allowed to make opening statements. Without objection, so ordered.

I ask unanimous consent that the hearing record be kept open for 5 business days so that all members of the subcommittee be allowed to submit a written statement for the record. Without objection, so ordered.

So again, good morning to our panelists that are here and other folks that have come by. Today, the subcommittee is exercising one

of its fundamental responsibilities, which is the oversight of Defense Department spending. Specifically, we will be examining the acquisition of major weapon systems.

The United States has the most advanced military force in the world. Our men and women in uniform operate the most sophisticated, highly developed, and technologically superior array of weapon systems this world has ever seen. This subcommittee recently held hearings on one of the newest additions to the military's toolbox, the unmanned aerial vehicle. New and improved weapon systems can help our military to be more effective and efficient, while keeping our troops out of harm's way to the greatest extent possible.

However, fielding such a force has been difficult and costly, as seen by the numerous reports of cost overruns, schedule delays, and performance failures that have plagued our acquisitions programs for years and years. Numerous efforts to reform the acquisition system have been undertaken, including the Weapon Systems Acquisitions Reform Act of 2009, which is now law, and the IMPROVE Acquisitions Act of 2010, which passed the House in late April and is currently being considered by the Senate.

In addition, the Defense Department has made its own changes to its acquisition policy, and there have been countless recommendations made for improving acquisitions by various commissions, think tanks, and non-governmental organizations. Still, as we will hear today, problems do persist.

On April 29, 2008, the subcommittee held a joint hearing with the full Oversight and Government Reform Committee that focused on the cost overruns and scheduling delays that persisted throughout the Department of Defense's acquisition system. The centerpiece for that hearing was the Government Accountability Office's 2008 Assessment of Selected Weapon Programs. At that time, the Government Accountability Office found that the Department of Defense's largest weapon programs had exceeded their original costs by $295 billion, and their 2009 report showed little improvement.

I do have to note, as an aside to this remark, that I also saw in GAO's report that there was no such assessment for performance of DOD's portfolio. It had been precluded because the Department of Defense did not issue timely or complete selected acquisition reports on its major defense acquisition programs, and I would like, during the course of remarks for somebody to address why that wasn't done and why we are left without that valuable information, if you would.

In these tough economic times, when Americans are out of work and families are struggling to make ends meet, we have to redouble our efforts to ensure that every precaution is in place to avoid wasting taxpayer money.

Contrary to the longstanding recommendations of GAO, the Department has still not fully implemented a knowledge-based approach of its weapons acquisitions program. It boils down to the need for the Department to take some common-sense steps in its processes, such as testing prototypes to ensure that they meet all program requirements before starting production, confirming that manufacturing processes are repeatable, sustainable, and capable

of consistently producing quality products, and making every effort to keep program requirements from changing in ways that cause increased costs and schedule delays.

Now, that seems a no-brainer. It seems to be a best practice. And the question that I have that I think GAO asked at the very end of its report: Why do you need laws to do things that are best practices? Why do you need to continue to be whipped with new procedures to get these things done that ought to be done by common sense by anybody that has ever run a small business or a household? So if somebody will address that, it would be helpful.

GAO found that none of the 42 programs assessed have attained or are on track to attain all the required amounts of knowledge at the critical phases in the acquisition system.

As an example, one of these programs, which Secretary of Defense Robert Gates designated as the Department's highest priority acquisition in 2007, is the Mine Resistant Ambush Protected Vehicle [MRAP], and its new lighter and more agile MRAP All Terrain Vehicle [M–ATV]. The cost of this critical program grew by 161 percent from 2007 to 2009, due in large part to problems that were discovered during testing that was initiated after production began.

Nevertheless, according to GAO, the new M-ATV program still has concurrent production and testing schedules that are likely to require post-production fixes and result in cost growth and scheduling delays. In fact, all 6,644 vehicles are scheduled to be delivered by the time developmental tests are scheduled to be completed. While I understand that the military has deemed this an urgent requirement, and that may be somewhat of an exception and we can talk about that, but I question whether all of the programs that are moving forward that have not met those requirements on time fall into that category, and I question why we are making the same costly mistakes over and over again.

On May 8th, Secretary Gates directed every component within the Department "To take a hard, unsparing look at how they operate," with the goal of finding real, long-term cost savings in the defense budget. I applaud Secretary Gates for taking this important step. Congress also has to do more in that effort. The IMPROVE Act that was recently passed by the House makes critical changes to help bring down the cost of our defense programs and save taxpayer money. I hope that the Senate will act on this legislation soon.

I never miss an opportunity to report that there are some 249 bills that have passed the House that are sitting over in the other body, waiting for them to do something. This would be an important one for them to take action on.

As Secretary Gates noted, "given America's difficult economic circumstances and parlous fiscal condition, military spending on things large and small can and should expect closer, harsher scrutiny." That scrutiny continues today.

[The prepared statement of Hon. John F. Tierney follows:]

Statement of John F. Tierney
Chairman
Subcommittee on National Security and Foreign Affairs
Committee on Oversight and Government Reform
U.S. House of Representatives

Hearing on "Defense Acquisitions: One Year after Reform"

As Prepared for Delivery

May 19, 2010

Good morning. Today, the Subcommittee exercises one of its fundamental responsibilities: oversight of Defense Department spending. Specifically, we will be examining the acquisition of major weapon systems.

The United States has the most advanced military force in the world: our men and women in uniform operate the most sophisticated, highly developed, and technologically superior array of weapons systems this world has ever seen. This Subcommittee recently held hearings on one of the newest additions to the military's toolbox, the unmanned aerial vehicle. New and improved weapons systems can help our military to be more effective and efficient, while keeping our troops out of harm's way to the greatest extent possible.

However, fielding such a force has been difficult and costly, as seen by the numerous reports of cost overruns, schedule delays, and performance failures that have plagued our acquisitions programs for years and years. Numerous efforts to reform the acquisition system have been undertaken, including the Weapons Systems Acquisitions Reform Act of 2009 and the IMPROVE Acquisitions Act of 2010, which passed the House in late April and is currently being considered by the Senate. In addition, the Defense Department has made its own changes to its acquisition policy, and there have been countless recommendations made for improving acquisitions by various commissions, think tanks, and nongovernmental organizations. Still, as we will hear today, problems persist.

On April 29, 2008, the Subcommittee held a joint hearing with the full Oversight and Government Reform Committee that focused on the cost overruns and scheduling delays that persisted throughout DOD's acquisition system. The centerpiece for that hearing was the Government Accountability Office's 2008 *Assessment of Selected Weapon Programs*. At that time, GAO found that DOD's largest weapon programs had exceeded their original costs by $295 billion, and their 2009 report showed little improvement.

Today's hearing will focus on the conclusions and recommendations made in GAO's latest assessment, which was released in March. I understand that DOD has made progress since our 2008 hearing on implementing important reforms to its acquisitions programs and that the Department is genuinely trying to make improvements. However, in these tough economic times, when Americans are out of work and families are struggling to make ends meet, we must redouble our efforts to ensure that every precaution is in place to avoid wasting taxpayer money.

Contrary to GAO's longstanding recommendations, DOD has still not fully implemented a "knowledge-based approach" to its weapons acquisitions program. It boils down to the need for the Department to take some common-sense steps in its processes, such as testing prototypes to ensure that they meet all program requirements *before* starting production, confirming that manufacturing processes are "repeatable, sustainable, and capable of consistently producing" quality products, and making every effort to keep program requirements from changing in ways that cause increased costs and schedule delays. Instead, GAO found that *none* of the 42 programs assessed have attained or are on track to attain all the required amounts of knowledge at the critical phases in the acquisition system.

As an example, one of these programs – which Secretary of Defense Robert Gates designated as the Department's highest priority acquisition in 2007 – is the Mine Resistant Ambush Protected Vehicle, or MRAP, and its new lighter and more agile MRAP All Terrain Vehicle, or M-ATV. The cost of this critical program grew by 161% from 2007 to 2009, due in large part to problems that were discovered during testing that was initiated *after* production began. Nevertheless, according to GAO, the new M-ATV program still has concurrent production and testing schedules that are likely to require postproduction fixes and result in cost growth and scheduling delays. In fact, all 6,644 vehicles are scheduled to be delivered by the time developmental tests are scheduled to be completed. While I understand that the military has deemed this an urgent requirement, I question whether we need to be making the same costly mistakes twice.

On May 8th, Secretary Gates directed every component within the Department "to take a hard, unsparing look at how they operate," with the goal of finding real, long-term cost savings in the Defense budget. I applaud Secretary Gates for taking this important step. Congress, too, can do more to help this effort. The IMPROVE Act that was recently passed here in the House makes critical changes to help bring down the cost of our defense programs and to save taxpayer money. I hope that the Senate will act on this legislation soon.

As Secretary Gates noted, "given America's difficult economic circumstances and parlous fiscal condition, military spending on things large and small can and should expect closer, harsher scrutiny." That scrutiny continues today.

Mr. TIERNEY. Mr. Flake.

Mr. FLAKE. Thank you, Mr. Chairman. Thanks for holding this hearing. I appreciate the witnesses coming forward.

Members of Congress and taxpayers alike have long been concerned about reports of cost overruns, billions of Federal dollars going to cost overruns associated with defense spending and weapon systems. Congress can and should exercise its oversight responsibilities when it comes to spending, particularly when it comes to defense spending.

Whether it is relatively small defense earmarks that allow Members of Congress to give a no-bid contract to a private company or multi-billion dollar defense weapon systems being handled by the Pentagon, defense spending remains difficult to rein in. It is one area that I have been concerned about, and I know it makes your job more difficult to deal with the congressional earmarks that come as well, and I would like to hear some of what you have to say about that process.

It appears that we have an ally in the Pentagon. As the chairman mentioned, Secretary Gates said military spending on things large and small can expect closer, harsher scrutiny. That is what this hearing is all about and I am glad to be a part of that tougher, harsher scrutiny, and I look forward to the testimony. Thanks.

Mr. TIERNEY. Thank you.

Now we will receive testimony from the witness panel before us today. I will introduce all of them before we start.

Mr. Michael J. Sullivan serves as the Director for Acquisition and Sourcing Management at the U.S. Government Accountability Office. His team is responsible for examining the effectiveness of agency acquisition and procurement practices in meeting their mission performance objectives and requirements. He also manages a body of work designed to help the Department of Defense apply best commercial practices to better develop advanced weapon systems, and he holds both a B.A. and an MPA from Indiana University.

Mr. John Roth is the Deputy Comptroller for Program/Budget in the Office of the Under Secretary of Defense. He has been in the Senior Executive Service since 1990 and is currently responsible for the budget review and analysis of all Defense programs. Mr. Roth is also an honorary professor at the Defense Systems Management College. He received his B.A. from the University of Virginia and earned an MPA from George Washington University. Mr. Roth has also completed a number of prestigious programs in executive excellence, national security leadership, and senior management.

Dr. Nancy Spruill is the Director of Acquisition Resources and Analysis for the Under Secretary of Defense for Acquisition, Technology, and Logistics. In this capacity, she is responsible for all aspects of AT&L's participation in planning, programming, budgeting, and execution of Defense Acquisition systems, and the congressional process. She serves as the Executive Secretary to the Defense Acquisition Board and is responsible for the timely and accurate submission to Congress of selected acquisition reports and unit cost reports for major defense acquisition programs.

She is a certified acquisition professional and has received several distinguished honors and awards, including Department of De-

fense Medal for Distinguished Civilian Service. She holds a B.S. in Mathematics from the University of Maryland, as well as an M.A. and a Ph.D. from George Washington University.

So I want to thank all of you again for coming here to testify today and sharing your substantial expertise. It is, as you know, the policy of this committee to swear you in before you testify, so I ask you to please stand and raise your right hands. If there is anyone who is also going to be responding to the questions, I would ask that you also have them stand, as well.

[Witnesses sworn.]

Mr. TIERNEY. The record will please reflect all the witnesses answered in the affirmative.

And, with that, we would be pleased, Mr. Sullivan, if you would please give us your remarks in around 5 minutes or so, and the lights will indicate when your time is up. You are familiar with those? Thank you.

STATEMENTS OF MIKE SULLIVAN, DIRECTOR, ACQUISITION AND SOURCING MANAGEMENT, U.S. GOVERNMENT ACCOUNTABILITY OFFICE; JOHN ROTH, DEPUTY COMPTROLLER FOR PROGRAM/BUDGET, OFFICE OF THE UNDER SECRETARY OF DEFENSE—COMPTROLLER; AND NANCY SPRUILL, PH.D., DIRECTOR, ACQUISITION RESOURCES AND ANALYSIS, OFFICE OF THE UNDER SECRETARY OF DEFENSE FOR ACQUISITION, TECHNOLOGY AND LOGISTICS

STATEMENT OF MIKE SULLIVAN

Mr. SULLIVAN. Thank you, Mr. Chairman, Ranking Member Flake, members of the subcommittee. I am pleased to be here today to discuss the department's management of its major weapon systems acquisition program. My statement today is based on the report we did on March 31st of this year that assessed the portfolio of major weapon systems acquisitions over at the department, and it includes observations about DOD's effort to manage its portfolio, the knowledge attained at key junctures of a subset of 42 weapon systems programs that we drilled down into, and the department's implementation of recent acquisition reforms.

We made two observations this year on the department's overall portfolio management. First, priorities were clearly examined for this year's budget and reset. In fiscal year 2010, the Secretary of Defense proposed canceling or curtailing programs with projected total costs of at least $126 billion that he characterized as too costly or no longer relevant. Congress supported several of the recommended terminations.

Second, the portfolio did grow to 102 programs in 2009, a new increase of five since December 2007, the last time we had selected acquisition reports to do that analysis. And the additional programs added about $72 billion that entered the portfolio. Thirteen programs, including the Future Combat Systems, left the portfolio. Those programs took a total cost of about $179 billion with them out of the portfolio, including over $47 billion in cost growth.

As you stated, Mr. Chairman, we weren't able to place a value on the overall portfolio or determine its cost growth this year due to the lack of selected acquisition reports available from the depart-

ment. I think a lot of that had to do with the changeover in administration, but I will let the department explain that, I guess. We plan to do that analysis again this year and the selected acquisition reports are back in place, so we do have those.

Some observations from our assessment of knowledge on the 42 programs that we drilled down into and looked at. At the program level, there is still kind of a mixed picture. While program knowledge is increasing, and we have found that for the last couple of years now, none of the 42 programs we assessed have attained all of the requisite amounts of knowledge that are needed at key junctures in the program to keep risk in place.

Our analysis allows us to make the following observations. First, the newer programs in the portfolio are beginning with higher levels of technology maturity, and this is a very good sign. But they are not yet benefiting from a lot of the early systems engineering reviews that, for example, the legislation that just passed will bring in and what the department has brought in in their own policies. We haven't seen that taking place yet. We hope to see improvement as that does come in, get a better match between capabilities that are needed and the resources available.

Second, programs that have held critical design reviews, which is more or less the second juncture in a program where you need to reduce risk for systems integration, in recent years, those programs have reported higher levels of design knowledge, usually in the way of releasable design engineering drawings. However, few are using prototypes to ensure design stability, and, again, that was a facet of the acquisition reform legislation we hope would pick-up.

Third, most programs still rely on after-the-fact metrics to get manufacturing processes and control before they go to production. That is something that we think should be done with statistical process control and other ways. They should be able to get those processes in control much sooner than they do.

Fourth, most programs continue to change key system requirements after program start. The department has put a lot of policy in place, and the acquisition reform legislation addresses this too, and we would like to see that improve in the future. Many programs continue to struggle with software development; it is a huge issue on these complex weapon systems and they continue to have problems. And we have found that many program offices that manage these weapon systems rely on non-government personnel more than they used to, and that reliance seems to be increasing. That is something we want to keep our eye on.

Now I would like to make some observations about how DOD is implementing the reforms. As you know, it is still relatively early, just under a year since they went into effect. Both DOD's December 2008 acquisition policy revisions and the Weapon Systems Acquisition Reform Act of 2009 require programs to invest more time and resources in the front-end of the acquisition process, when programs are just beginning or actually even before they begin. And they are doing this to refine concepts through early systems engineering, developing technologies so that they are more mature, and building more prototypes of both systems and subsystems before system development actually starts.

We made two observations concerning how well the department is implementing the reforms. First, the department is incorporating acquisition reforms into the newer acquisition programs. In fact, 8 of the 10 programs that were new in our 2010 assessment, that had not yet entered system development, which is the milestone B, which is really where an acquisition program begins, reported that they either have or have plans to hold the very important early system engineering reviews prior to the milestone B decision. This is consistent with both DOD's policy and the reform legislation.

Second, the department has established the new position of the Director of Cost Assessment and Program Evaluation, and this group is already up and running and has already weighed in on a number of programs, some new programs in order to get more realistic cost estimates and other programs that have been in trouble, including the Joint Strike Fighter program, which just went through a drastic kind of budget scrub; and I think that this new position, the CAPE did a pretty nice job in defining the risks on that program. And I believe that we are seeing signs of that new position resulting in more reasonable cost estimates.

To conclude, I would kind of like to echo what the chairman was talking about. I would just like to offer a few thoughts about other factors that should be considered so that we make the most of today's opportunity for meaningful change, especially when we have the leadership we have in the department right now that seems to, as Congressman Flake said, is stepping up and trying to make some good decisions.

First, poor outcomes on these programs delays cost growth, reduced quantities, have been persistent for decades, and everybody has known about it. If we think of these processes as merely broken, then some of the targeted repairs that we have in this reform legislation should fix them. I think the challenge is greater than that, and if we understand the current inefficiencies—right now they are kind of accepted as a cost of doing business—then the challenge for getting better outcomes is greater. It really becomes much more leadership oriented than anything else. Seen in this light, it will take considerable and sustained leadership and effort to change the incentives and inertia that reinforce this status quo, and I think the Congress has a role in that as well.

Second, while actions taken and proposed by the department and Congress are constructive and will serve to improve acquisition outcomes, one has to ask the question why extraordinary actions are needed to force practices that should occur normally? I think just as the chairman stated. Clearly, more independence, methodological rigor that we are now beginning to get from the CAPE, and better information about risk areas like technology will make estimates more realistic. On the other hand, realism is compromised as competition for funding within the Pentagon encourages programs to make themselves appear affordable. Reform must recognize and counteract these pressures as well.

Finally, if reform is to succeed, then programs that present realistic strategies and resource estimates must succeed in winning approval and funding over those that present potential capabilities for unrealistic costs, and this will take a firm cooperative effort between the department and the Congress.

Mr. Chairman, this completes my statement. I would be happy to respond to any questions.

[The prepared statement of Mr. Sullivan follows:]

United States Government Accountability Office

GAO

Testimony

Before the Subcommittee on National
Security and Foreign Affairs, Committee
on Oversight and Government Reform,
House of Representatives

For Release on Delivery
Expected at 10:00 a.m. EDT
Wednesday, May 19, 2010

DEFENSE ACQUISITIONS

Observations on Weapon Program Performance and Acquisition Reforms

Statement of Michael J. Sullivan, Director,
Acquisition and Sourcing Management

GAO

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GAO-10-706T

DEFENSE ACQUISITIONS

Observations on Weapon Program Performance and Acquisition Reforms

Why GAO Did This Study

The past two years have seen the Congress and DOD take meaningful steps towards addressing long-standing weapon acquisition issues—an area that has been on GAO's high risk list since 1990. This testimony focuses on the progress DOD has made in improving the planning and execution of its weapon acquisition programs and the potential for recent acquisition reforms to improve program outcomes.

The testimony includes observations about (1) DOD's efforts to manage its portfolio of major defense acquisition programs, (2) the knowledge attained at key junctures of a subset of 42 weapon programs from the 2009 portfolio, (3) other factors that can affect program execution, and (4) DOD's implementation of recent acquisition reforms. The testimony is based on the results of our annual assessment of weapon programs. To conduct the assessment, GAO analyzed data on the composition of DOD's portfolio of major defense acquisition programs. GAO also collected data from program offices on technology, design, and manufacturing knowledge, as well as on other factors that can affect program execution.

GAO has made numerous recommendations on weapon system acquisition in prior work but is not making any new recommendations in this testimony.

What GAO Found

While DOD still faces significant challenges in managing its weapon system programs, the current acquisition reform environment provides an opportunity to leverage the lessons of the past and manage risks differently. This environment is shaped by significant acquisition reform legislation, constructive changes in DOD's acquisition policy, and initiatives by the administration, including making difficult decisions to terminate or trim numerous weapon systems. To sustain momentum and make the most of this opportunity, it will be essential that decisions to approve and fund acquisitions be consistent with the reforms and policies aimed at getting better outcomes.

DOD has started to reprioritize and rebalance its weapon system investments. In 2009, the Secretary of Defense proposed canceling or significantly curtailing weapon programs with a projected cost of at least $126 billion that he characterized as too costly or no longer relevant for current operations, while increasing funding for others that he assessed as higher priorities. Congress supported several of the recommended terminations. DOD plans to replace several of the canceled programs in fiscal years 2010 and 2011, hopefully with new, knowledge-based acquisition strategies, because the warfighter need remains. The most significant of these will be the effort to restructure the Army's terminated Future Combat System program. At the same time, however, DOD's portfolio of major defense acquisition programs continues to grow. Between December 2007 and July 2009, the number of major defense acquisition programs grew from 96 to 102 programs. GAO has previously reported that DOD should continue to work to balance its weapon system portfolio with available funding, which includes reducing the number or size of weapon system programs, or both, and assessing the affordability of new programs and capabilities in the context of overall defense spending.

At the program level, our recent observations present a mixed picture of DOD's adherence to a knowledge-based acquisition approach, which is a key for improving acquisition outcomes. For 42 programs GAO assessed in depth in 2010, there has been continued improvement in the technology, design, and manufacturing knowledge programs had at key points in the acquisition process. However, most programs are still proceeding with less knowledge than best practices suggest, putting them at higher risk for cost growth and schedule delays. A majority of programs have also experienced requirements changes, software development challenges, or workforce issues, or a combination, which can affect program stability and execution. DOD has begun to implement a revised acquisition policy and congressional reforms that address many of these areas. For example, eight programs we examined in the technology development phase plan to test competitive prototypes before starting system development and seven programs plan to hold early systems engineering reviews. If DOD consistently applies this policy, the number of programs adhering to a knowledge-based acquisition should increase and the outcomes for DOD programs should improve.

_____United States Government Accountability Office

Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss the Department of Defense's (DOD) management of its acquisition of major weapons systems—an area that has been a part of GAO's high-risk list since 1990—and the potential for recent acquisition reforms to improve program outcomes. While DOD still faces significant challenges in managing its weapon system programs, the past two years have seen DOD and the Congress take meaningful steps towards addressing long-standing weapon acquisition issues. DOD made major revisions to its acquisition policies to place more emphasis on acquiring knowledge about requirements, technology, and design before programs start—thus putting them in a better position to field capabilities on-time and at the estimated cost. Congress strengthened DOD's acquisition policies and processes by passing the Weapon Systems Acquisition Reform Act of 2009,[1] which includes provisions to ensure programs are based on realistic cost estimates and to terminate programs that experience high levels of cost growth. The House Armed Services Committee Panel on Defense Acquisition Reform issued its final report and made recommendations on areas, such as assessing the performance of the defense acquisition system, that were incorporated into the proposed Implementing Management for Performance and Related Reforms to Obtain Value in Every Acquisition (IMPROVE) Act of 2010.[2] In addition, DOD has started to reprioritize and rebalance its weapon system investments. In DOD's fiscal year 2010 and 2011 budget requests, the Secretary of Defense proposed ending all or part of at least a half dozen major defense acquisition programs that were over cost, behind schedule, or no longer suited to meet the warfighters' current needs. Congress's support for several of the recommended terminations signaled a willingness to make difficult choices on individual weapon systems and DOD's weapon system investments as a whole.

While DOD's acquisition policies and process may be headed in the right direction, fiscal pressures continue to build. Notwithstanding the federal government's long-term fiscal challenges, the Pentagon faces its own near-term and long-term fiscal pressures as it attempts to balance competing demands, including ongoing operations in Afghanistan and Iraq, initiatives

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[1] Pub. L. No. 111-23.

[2] H.R. 5013, 111th Cong. (as received from the House and referred to the S. Comm. on Armed Serv., Apr. 29, 2010).

to grow and modernize the force, and increasing personnel and health care costs. While DOD's fiscal year 2010 budget request started the process of reprioritizing acquisition dollars to meet warfighters' most pressing needs, the department must still address the overall affordability of its weapon system investments. DOD should continue to work to balance its weapon system portfolio with available funding, which includes reducing the number or size of weapon system programs, or both, and assessing the affordability of new programs and capabilities in the context of overall defense spending.

My statement focuses on the progress DOD has made in improving the planning and execution of its weapon acquisition programs and the potential for recent acquisition reforms to improve program outcomes. It includes observations about (1) DOD's efforts to manage its portfolio of major defense acquisition programs,[3] (2) the knowledge attained at key junctures of a subset of 42 weapon programs from the 2009 portfolio, (3) other factors that can affect program execution, and (4) DOD's implementation of recent acquisition reforms. The testimony is based on the results of our recently issued annual assessment of weapon programs.[4] To conduct the assessment, GAO analyzed data on the composition of DOD's portfolio of major defense acquisition programs. GAO also collected data from program offices on technology, design, and manufacturing knowledge, as well as on other factors that can affect program execution. That work was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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[3]Major defense acquisition programs (MDAP) are those identified by DOD that require eventual total research, development, test and evaluation (RDT&E), including all planned increments, expenditures of more than $365 million or procurement expenditures, including all planned increments , of more than $2.19 billion in fiscal year 2000 constant dollars.

[4]GAO, *Defense Acquisitions: Assessments of Selected Weapon Programs*, GAO-10-3SSSP, Washington, D.C.: March 30, 2010.

Observations on DOD's 2009 Major Defense Acquisition Program Portfolio

In our 2010 assessment of weapon programs, we made several observations concerning DOD's management of its major defense acquisition portfolio. First, in DOD's fiscal year 2010 budget, the Secretary of Defense proposed canceling or significantly curtailing programs with projected total costs of at least $126 billion that he characterized as too costly or no longer relevant for current operations, while increasing funding for others that he assessed as higher priorities. Congress supported several of the recommended terminations (see table 1).

Table 1: Secretary of Defense's Fiscal Year 2010 Budget Recommendations

	System	Total estimated cost (dollars in billions)	Secretary's comments	Congressional action
Recommended termination	VH-71 Presidential Helicopter	$13	Plan to develop options for a new program	Conferees recommended $100 million for technology capture that DOD has budgeted for the VH-71 program.
	Combat Search and Rescue Helicopter	Unspecified	Plan to reexamine requirements	Did not authorize appropriations for the program.
	Next-Generation Bomber	Unspecified	Will not initiate new development program without better understanding of the requirement and technology	Supported development of a Next- Generation Bomber Aircraft, but did not authorize appropriations.
	Future Combat System– Manned Ground Vehicles	87	Plan to reevaluate requirements, technology, and approach before relaunching and recompeting program	Directed Army to develop, test, and field an operationally effective and affordable next generation ground combat vehicle. Conferees recommended rescission of $26 million in existing funding.
	Transformational Satellite	26	Plan to buy two more AEHF satellites as alternative	Did not authorize appropriations for the program.
	Ballistic Missile Defense– Multiple Kill Vehicle	Unspecified	Plan to reexamine requirements; no mention of new program	Did not authorize appropriations for the program.
Recommended end of production	C-17	Unspecified	Recommended ending production at 205 aircraft	Conferees recommended $2.5 billion for the procurement of 10 C-17 aircraft, associated spares, support equipment, and training equipment.
	DDG-1000	Unspecified	Recommended ending production at 3 ships	Did not fund additional ships. Appropriated $1.4 billion for completion of third DDG-1000.
	F-22	Unspecified	Recommended ending production at 187 aircraft	Did not fund additional aircraft. Conferees recommended rescission of $383 million in existing funding.
Total		$126 billion		

Source: GAO analysis of Secretary's April 2009 statement on fiscal year 2010 budget and fiscal year 2010 DOD authorization and appropriations acts.

Second, DOD plans to replace several of the canceled programs in fiscal years 2010 and 2011, hopefully with new, knowledge-based acquisition strategies, because the warfighter need remains. The most significant of these new programs will be the effort to restructure the Army's Future

Combat System program into several smaller, integrated programs. Third, DOD's portfolio of major defense acquisition programs grew to 102 programs in 2009—a net increase of 6 since December 2007. Eighteen programs with an estimated cost of over $72 billion entered the portfolio.[5] Not all of these programs entering the portfolio are new starts. For instance, the Airborne Signals Intelligence Payload, and the Reaper Unmanned Aircraft System are two programs that began as acquisition category II programs,[6] but their total research and development or procurement costs now exceed the threshold for major defense acquisition programs. Twelve programs with an estimated cost of $48 billion, including over $7 billion in cost growth, left the portfolio.[7] These programs left the portfolio for a variety of reasons, including program restructure, termination, or completion. When the Future Combat System is added to the programs leaving the portfolio, the total cost of these programs increases to $179 billion, including over $47 billion in cost growth.

Our 2010 assessment did not include an analysis of the cost and schedule performance of DOD's major defense acquisition program portfolio as a whole. In recent years, this analysis showed that the cumulative cost growth on DOD programs had reached $300 billion (in fiscal year 2010 dollars) and the average delay in delivering initial capabilities was 22 months. DOD did not issue timely or complete Selected Acquisition Reports for its major defense acquisition programs in fiscal year 2009 for the second consecutive presidential transition, which precluded an analysis of the performance of DOD's portfolio. We will resume our portfolio analysis in next year's assessment.

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[5]Cost data was only available for 13 of the 18 newly designated major defense acquisition programs.

[6]An acquisition category II program is defined as a program that does not meet the criteria for an acquisition category I program and is estimated to require eventual total RDT&E expenditures of more than $140 million or procurement expenditures of more than $660 million in fiscal year 2000 constant dollars.

[7]The estimated cost for these 12 programs is based on DOD's December 2007 Selected Acquisition Reports. Cost growth was calculated from the programs' first cost estimate.

Observations from Our Assessment of Knowledge Attained by Key Junctures in the Acquisition Process

At the program level, our recent observations present a mixed picture of DOD's adherence to a knowledge-based acquisition approach, which is key for improving acquisition outcomes. In our 2010 assessment of weapon programs, we assessed the knowledge attained by key junctures in the acquisition process for 42 individual weapon programs in DOD's 2009 portfolio. While program knowledge is increasing, as in the past, none of the 42 programs we assessed have attained or are on track to attain all of the requisite amounts of technology, design, and production knowledge by each of the key junctures in the acquisition process.[8] However, if DOD consistently implements its December 2008 policy revisions on new and ongoing programs, then DOD's performance in these areas, as well as its cost and schedule outcomes, should improve. Our analysis allows us to make five observations about DOD's management of technology, design, and manufacturing risks and its use of testing and early systems engineering to reduce these risks.

- **Newer programs are beginning with higher levels of technology maturity, but they are not taking other steps, such as holding early systems engineering reviews, to ensure there is a match between requirements and resources.** Achieving a high level of technology maturity by the start of system development is an important indicator of whether a match between the warfighter's requirements and the available resources—knowledge, time, and money—has been made.[9] Since 2006, there has been a significant increase in the percentage of technologies demonstrated in a relevant or realistic environment by the start of system development. This increase coincided with a change in statute. In 2006, the National Defense Authorization Act included a provision requiring all major defense acquisition programs seeking milestone B approval—entry into system development—to get a certification stating the program's technologies

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[8]Not all programs provided information for every knowledge point or had reached all of the knowledge points—development start, design review, and production start.

[9]The start of system development, as used here, indicates the point at which significant financial commitment is made to design, integrate, and demonstrate that the product will meet the user's requirements and can be manufactured on time, with high quality, and at a cost that provides an acceptable return on investment. Under the revised Department of Defense Instruction 5000.02, Operation of the Defense Acquisition System (Dec. 8, 2008), system development is now called engineering and manufacturing development. Engineering and manufacturing development follows materiel solution analysis and technology development. For shipbuilding programs, this point occurs when a program awards a detailed design and construction contract.

have been demonstrated in a relevant environment.[10] While only one of the six programs that entered system development since 2006 and provided data had fully mature critical technologies—that is, demonstrated in a realistic environment, according to our criteria—all the programs had critical technologies that had been at least demonstrated in a relevant environment. Overall, only 4 of the 29 programs in our assessment that provided data on technical maturity at development start did so with fully mature critical technologies.

While the technology levels of DOD programs entering system development have increased, these programs are still not regularly conducting early systems engineering reviews, which help ensure there is a match between requirements and resources. We have previously reported that before starting development, programs should hold systems engineering events, such as the preliminary design review, to ensure that requirements are defined and feasible and that the proposed design can meet those requirements within cost, schedule, and other system constraints. We have also found that programs conducting these events prior to development start experienced less research and development cost growth and shorter delays in the delivery of initial operational capabilities than programs that conducted these reviews after development start.[11] Almost all nonship programs (37 of 40 that provided data) in our latest assessment have held at least one of three key systems engineering reviews (system requirements review, system functional review, and preliminary design review). However, only 1 of 37 programs that held a preliminary design review did so before the start of system development. The remaining programs held the review, on average, 30 months after development start. The Weapon Systems Acquisition Reform Act of 2009 established

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[10]A major defense acquisition program may not receive milestone B approval until the milestone decision authority certifies that the technology in the program has been demonstrated in a relevant environment. National Defense Authorization Act for Fiscal Year 2006, Pub. L. No. 109-163, § 801 (codified at 10 U.S.C. § 2366b (a)(3)(D)).

[11]GAO, *Defense Acquisitions: Assessments of Selected Weapon Programs*, GAO-09-326SP, Washington, D.C.: March 30, 2009.

a statutory requirement for programs to conduct a preliminary design review before milestone B, so we expect improvements in this area.[12]

- **Programs that have held critical design reviews in recent years reported higher levels of design knowledge; however, few programs are demonstrating that the design is capable of meeting performance requirements by testing an integrated prototype.** Knowing a product's design is stable before system demonstration reduces the risk of costly design changes occurring during the manufacturing of production-representative prototypes—when investments in acquisitions become more significant. The overall design knowledge that programs have demonstrated at their critical design reviews has increased since 2003. Programs in our assessment that held a critical design review between 2006 and 2009 had, on average, almost 70 percent of their design drawings releasable at the time of the review, which is a consistent upward trend since 2003. However, most designs are still not stable at this point. Of the 28 programs in our latest assessment that have held a system-level critical design review, only 8 reported having a stable design. Only 2 of the 5 programs that held a critical design review in 2009 had a stable design at that point. The 5 programs reported that, on average, 83 percent of the total expected drawings were releasable.

  While the design knowledge of DOD programs at the system-level critical design review has increased since 2003, these programs are still not regularly demonstrating that these designs can meet performance requirements by testing integrated prototypes before the critical design review—a best practice. None of the 5 programs in our latest assessment that held their critical design review in 2009 and planned to test a prototype did so before the review. Of the 33 programs that reported that they either had tested or were going to test an early system prototype and provided a critical design review date, only 4 did so before their critical design review.[13] The Weapon Systems

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[12]Under the Weapon Systems Acquisition Reform Act of 2009, a major defense acquisition program may not receive milestone B approval until the program has held a preliminary design review and the milestone decision authority has conducted a formal post-preliminary design review assessment and certified on the basis of such assessment that the program demonstrates a high likelihood of accomplishing its intended mission. Pub. L. No. 111-23, § 205(a)(3) (codified as amended at 10 U.S.C. § 2366b(a)(2)).

[13]One program that held a critical design review in 2009 did not plan to test an early systems prototype.

Acquisition Reform Act of 2009 requires that DOD policy ensure that the acquisition strategy for each major defense acquisition program provides for competitive prototypes before milestone B approval, unless a waiver is properly granted.[14] This requirement should increase the percentage of programs demonstrating that the system's design works as intended before the critical design review.

- **Some programs are taking steps to bring critical manufacturing processes into control, however many** programs still rely on "after the fact" metrics. Capturing critical manufacturing knowledge before entering production helps ensure that a weapon system will work as intended and can be manufactured efficiently to meet cost, schedule, and quality targets. Identifying key product characteristics and the associated critical manufacturing processes is a key initial step to ensuring production elements are stable and in control. Seven programs in our latest assessment have identified their critical manufacturing processes, including four of the programs that entered production in 2009. Three of those seven programs reported that their critical manufacturing processes were in control.[15] It is generally less costly—in terms of time and money—to eliminate product variation by controlling manufacturing processes than to perform extensive inspection after a product is built. However, many DOD programs rely on inspecting produced components instead of using statistical process control data in order to assess the maturity of their production processes. For example, 12 programs in our assessment reported tracking defects in delivered units, nonconformances, or scrap/rework as a way to measure production process maturity. The use of "after the fact" metrics is a reactive approach towards managing manufacturing quality as opposed to a prevention-based approach.

- **Programs are still not regularly testing production representative prototypes before committing to production**. We have previously reported that in addition to demonstrating that the

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[14]Pub. L. No. 111-23, § 203.

[15]DOD policy states that the knowledge required for a major defense acquisition program to proceed beyond low- rate initial production shall include demonstrated control of the manufacturing process and acceptable reliability, the collection of statistical process control data, and demonstrated control and capability of critical processes. Department of Defense Instruction 5000.02, Operation of the Defense Acquisition System, enclosure 2, paragraph 7.c.(2) (Dec. 8, 2008). We did not specifically assess compliance with this requirement.

system can be built efficiently, production and postproduction costs are minimized when a fully integrated, capable prototype is demonstrated to show that the system will work as intended and in a reliable manner. The benefits of testing are maximized when the tests are completed prior to a production decision because making design changes after production begins can be both costly and inefficient. However, of the 32 programs in our assessment that could have tested a prototype before production, only 17 either tested or expect to test a fully configured, integrated, production-representative prototype before holding their production decision. In December 2008, DOD changed its policy to require programs to test production-representative articles before entering production.

- **More programs are using reliability growth curves before beginning production.** Reliability growth testing provides visibility over how reliability is improving and uncovers design problems so fixes can be incorporated before production begins. According to DOD's acquisition policy, a major defense acquisition program may not proceed beyond low-rate initial production until it has demonstrated acceptable reliability. Over half—22 of 40 programs that responded to our questionnaire—reported that they use a reliability growth curve, with 18 of these programs reporting they are currently meeting their established goals. In addition, 12 of 19 programs that expect to hold their production decision in 2010 and beyond reported using reliability growth curves and most stated they are currently meeting their goals. This practice should help these programs begin production with a reliable product design.

Observations on Other Factors That Can Affect Program Execution

Our 2010 assessment of weapon programs also included three observations on other areas related to DOD's management of its weapons programs, including requirements, software management, and program office staffing. We have previously identified requirements changes and increases in software lines of code as sources of program instability that can contribute to cost growth and schedule delays. We have also reported that workforce challenges can hinder program execution and negatively affect program management and oversight.

- **A majority of programs changed key systems requirements after development start.** Of the 42 programs in our 2010 assessment that reported tracking requirements changes, 23 programs reported having had at least one change (addition, reduction, enhancement, or deferment) to a key performance parameter—a top-level requirement—since development start. Further, nine programs

experienced at least one change to a key system attribute—a lower level, but still a crucial requirement of the system. Eight programs reported major effects on the program as a result of these requirements changes, such as not meeting acquisition program baseline cost, schedule, and performance thresholds. DOD's revised December 2008 acquisition policy attempts to reduce potentially disruptive requirements changes by requiring programs to hold annual configuration steering board meetings to ensure that significant technical changes are not approved without considering their effect on cost and schedule.

- **Many programs are at risk for cost growth and schedule delays because of software development issues.** Seventeen of the 28 programs in our 2010 assessment that reported data on software lines of code estimated that the number of lines of code required for the system to function has grown or will grow by 25 percent or more—a predictor of future cost and schedule growth. Overall, the average growth or expected growth in lines of code for the 28 programs was about 92 percent. In addition to measuring growth in software lines of code, we have previously reported that collecting earned value management data for software development and tracking and containing software defects in phase are good management practices. Overall, 30 programs in our assessment reported collecting earned value management data to help manage software development. Thirty-two programs in our latest assessment also reported collecting some type of software defect data. For the 22 programs that responded a more specific question about defect correction, on average, only 69 percent of the defects were corrected in the phase of software development in which they occurred. Capturing software defects in phase is important because discovering defects out of phase can cause expensive rework later in programs.

- **Programs' reliance on nongovernment personnel continues to increase in order to make up for shortfalls in government personnel and capabilities.** In recent years, Congress and DOD have taken steps to ensure the acquisition workforce has the capacity, personnel, and skills needed to properly perform its mission; however, programs continue to struggle to fill all staff positions authorized. Only 19 of the 50 programs in our 2010 assessment that responded to our questions on staffing were able to fill all the positions they had been authorized. A commonly cited reason for not being able to fill positions was difficulty finding qualified candidates. As a result of staff shortfalls, program offices reported that program management and oversight has been degraded, contracting activities have been delayed, and program

management costs have increased as contractors are used to fill the gap. Overall, 43 programs or 86 percent of those providing data reported utilizing support contractors to make up for shortfalls in government personnel and capabilities.

In addition, for the first time since we began reporting on program office staffing in 2008, programs reported having more nongovernment than government staff working in program offices (see table 2). The greatest numbers of support contractors are in engineering and technical positions, but their participation has increased in all areas, from program management and contracting to administrative support and other business functions.

Table 2: Program Office Composition for 50 DOD Programs

Percentage of staff

	Program management	Engineering and technical	Contracting	Other business functions	Administrative support	Other	Total
Military	28	7	6	3	2	5	8
Civilian government	40	41	74	45	18	24	40
Total government	**67**	**47**	**80**	**48**	**20**	**29**	**49**
Support contractors	32	43	20	50	78	70	45
Other nongovernment[a]	0	9	0	3	2	1	6
Total nongovernment	**33**	**53**	**20**	**52**	**80**	**71**	**51**

Source: GAO analysis of DOD data.

Notes: Totals may not add due to rounding.

[a]Other nongovernment includes federally funded research and development centers, universities, and affiliates.

Observations about DOD's Implementation of Acquisition Reforms

DOD has begun to incorporate acquisition reforms into the acquisition strategies for new programs. Both DOD's December 2008 acquisition policy revisions and the Weapon Systems Acquisition Reform Act of 2009 require programs to invest more time and resources in the front end of the acquisition process—refining concepts through early systems engineering, developing technologies, and building prototypes before starting system development. In addition, DOD policy requires establishment of configuration steering boards that meet annually to review all program requirements changes as well as to make recommendations on proposed descoping options that could help keep a program within its established cost and schedule targets. These steps could provide a foundation for

establishing sound, knowledge-based business cases for individual weapon programs and are consistent with many of our past recommendations; however, if reform is to succeed and weapon program outcomes are to improve, they must continue to be reinforced in practice through decisions on individual programs.

Our analysis of the programs in our 2010 assessment allowed us to make two observations about the extent to which DOD is implementing recent acquisition reforms:

- **Most of the ten programs in our 2010 assessment that had not yet entered system development reported having acquisitions strategies consistent with both DOD's revised acquisition policy and the provisions of the Weapon Systems Acquisition Reform Act of 2009.** Specifically, 8 programs in our assessment planned to develop competitive prototypes before milestone B.[16] In addition, 7 programs have already scheduled a preliminary design review before milestone B.[17]

- **Only a few programs reported holding configuration steering boards to review requirements changes, significant technical changes, or de-scoping options in 2009.** Seven programs in our assessment reported holding configuration steering boards in 2009. Under DOD's revised acquisition policy, ongoing acquisition category I and IA programs in development are required to conduct annual configuration steering boards to review requirements changes and significant technical configuration changes that have the potential to result in cost and schedule effects on the program. In addition, the program manager is expected to present de-scoping options to the board that could reduce program costs or moderate requirements. None of the programs reported that the boards that were held approved requirements changes or significant technical changes. One

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[16]The Weapon Systems Acquisition Reform Act of 2009 requires that DOD policy ensure that the acquisition strategy for each major defense acquisition program provides for competitive prototypes before milestone B approval, unless a waiver is properly granted. Pub. L. No. 111-23, § 203(a).

[17]The Weapon Systems Acquisition Reform Act of 2009 establishes a statutory requirement that a major defense acquisition program may not receive milestone B approval until the milestone decision authority has received a preliminary design review, conducted a formal post-preliminary design review assessment, and certified on the basis of such assessment that the program demonstrates a high likelihood of accomplishing its intended mission. Pub. L. No. 111-23, § 205(a)(3) (codified as amended at 10 U.S.C. § 2366b(a)(2)).

program—the P-8A Poseidon—reported that it presented de-scoping options to decrease cost and schedule risk on the program and had those options approved.

Concluding Observations on the Challenges to Achieving Lasting Reform

I would like to offer a few thoughts about other factors that should be considered so that we make the most out of today's opportunity for meaningful change. First, I think it is useful to think of the processes that affect weapon system outcomes (requirements, funding, and acquisition) as being in a state of equilibrium. Poor outcomes—delays, cost growth, and reduced quantities—have been persistent for decades. If we think of these processes as merely "broken", then some targeted repairs should fix them. I think the challenge is greater than that. If we think of these processes as being in equilibrium, where their inefficiencies are implicitly accepted as the cost of doing business, then the challenge for getting better outcomes is greater. Seen in this light, it will take considerable and sustained effort to change the incentives and inertia that reinforce the status quo.

Second, while actions taken and proposed by DOD and Congress are constructive and will serve to improve acquisition outcomes, one has to ask the question why extraordinary actions are needed to force practices that should occur normally. The answer to this question will shed light on the cultural or environmental forces that operate against sound management practices. For reforms to work, they will have to address these forces as well. For example, there have been a number of changes to make cost estimates more rigorous and realistic, but do these address all of the reasons why estimates are not already realistic? Clearly, more independence, methodological rigor, and better information about risk areas like technology will make estimates more realistic. On the other hand, realism is compromised as the competition for funding encourages programs to appear affordable. Also, when program sponsors present a program as more than a weapon system, but rather as essential to new fighting concepts, pressures exist to accept less than rigorous cost estimates. Reform must recognize and counteract these pressures as well.

Third, decisions on individual systems must reinforce good practices. Programs that have pursued risky and unexecutable acquisition strategies have succeeded in winning approval and funding. If reform is to succeed, then programs that present realistic strategies and resource estimates must succeed in winning approval and funding. Those programs that continue past practices of pushing unexecutable strategies must be denied funding before they begin. This will require sustained leadership from the

Secretary of Defense, the Under Secretary of Defense for Acquisition, Technology and Logistics, and the military services, and the cooperation and support of Congress.

Fourth, consideration should be given to setting some limits on what is a reasonable length of time for developing a system. For example, if a program has to complete development within 5 or 6 years, this could serve as a basis to constrain requirements and exotic programs. It would also serve to get capability in the hands of the warfighter sooner.

Fifth, the institutional resources we have must match the outcomes we desire. For example, if more work must be done to reduce technical risk before development start—milestone B—DOD needs to have the organizational, people, and financial resources to do so. Once a program is approved for development, program offices and testing organizations must have the workforce with the requisite skills to manage and oversee the effort. Contracting instruments must be used that match the needs of the acquisition and protect the government's interests. Finally, DOD must be judicious and consistent in how it relies on contractors.

Mr. Chairman, this completes my prepared statement. I would be happy to respond to any questions you or other Members of the Subcommittee may have at this time.

Contacts and Acknowledgements

For further information about this statement, please contact Michael J. Sullivan (202) 512-4841 or sullivanm@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Individuals who made key contributions to this statement include Ronald E. Schwenn, Assistant Director, Kristine R. Hassinger, Carol T. Mebane, and Kenneth E. Patton.

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Mr. TIERNEY. Well, thank you, Mr. Sullivan. I want to again congratulate you and your team for the work on that and how helpful it is to all of us.

Mr. SULLIVAN. Thank you.

Mr. TIERNEY. Mr. Roth, unfortunately, he used your 5 minutes as well, so we are going to skip over you. No, I am only kidding. [Laughter.]

We do want to hear from you as well, so we would appreciate your comments now.

STATEMENT OF JOHN ROTH

Mr. ROTH. Thank you, Mr. Chairman. Chairman Tierney, Ranking Member Flake, members of the committee, thank you for this opportunity to participate in this hearing and for your continued support of America's armed forces.

I am here today representing the Office of the Comptroller and the annual budget process in the Department of Defense. The budgets we develop for congressional consideration each year include the amounts requested for these acquisition programs. As a result, our office has in fact considerable interest in acquisition reform, which is the subject of today's hearing.

We are currently executing the fiscal year 2010 budget. We are working with Congress on our fiscal year 2011 budget request, and we have begun internally working already on the budget for fiscal year 2012. So it is clearly an overlapping and complex process that we are trying to manage as best we can.

As we proceed, we have been directed by Secretary Gates, "to take an unsparing look at how the department operates." In his recent speech, the Secretary explained "the goal is to cut out overhead costs and to transfer those savings to force structure and modernization within the program budget. In other words, to convert sufficient 'tail' to 'tooth' to provide the equivalent of roughly 2 to 3 percent real growth, resources needed to sustain our combat power at a time of war and to make investments to prepare for an uncertain future."

This policy builds on the progress that has already been made over the past couple years, including the initiatives with a significant impact on Defense spending.

First, it builds on the department's progress in acquisition reform, which we will discuss this morning, including the creation of the Office of Cost Assessment and Program Evaluation, as well as in the implementation of the Defense Acquisition Workforce Development Fund. Through March 31st of this year, almost half of the amount appropriated for this working capital fund, nearly $400 million, has been obligated, and over 3,000 new Workforce Development Fund employees have been brought on board. This is a critical first step in strengthening the in-house acquisition work force. Hiring projections for the remainder of fiscal year 2010 are on track to meet the department's targets. The fiscal year 2011 budget builds on this by including another $218 million for the Workforce Development Fund.

Acquisition work force development is a part of a much larger effort to reduce the department's reliance on contractors by insourcing what is considered to be essential government work. The

goal is to reduce contractors from the recent high of 39 percent of DOD's work force back to 26 percent, the level that existed before 2001.

Second, in addition to the department's progress in acquisition reform, the budget request for fiscal year 2011 takes account of the savings generated by canceling programs that were deemed to be underperforming or over budget. The Secretary has clearly demonstrated his commitment to making difficult choices on acquisition programs, including an unprecedented number of program cancellations in the fiscal year 2010 budget, as well as the 2011 budget.

Amongst them were the VH–71 Presidential helicopter, the F–22 aircraft, and the Army's Future Combat Systems ground vehicle program. These further cancellations recommended for 2011 included the alternate engine for the F–35 aircraft, additional acquisitions of C–17 aircraft, the Next Generation Cruiser, the new Navy Intelligence Aircraft, and the Defense Integrated Military Human Resources Systems, so-called DIMHRS, which simply failed to live up to expectations.

Last, the Secretary's guidance to DOD budgeteers follow several years of significant progress in financial management, especially in the areas of financial information and audit readiness. Several of our defense agencies now maintain auditable statements. Two large trust funds managed by DOD have either qualified or unqualified opinions. In particular, the Marine Corps has asserted audit readiness for their Fiscal Year 2010 Statement of Budgetary Resources, and an audit is currently underway. The dollar value of those elements of defense currently either auditable or under audit is greater than 10 of the current CFO agencies, though there is still much more to accomplish.

The department has introduced a change of emphasis that reinforces the fact that a financial audit is really an enterprise initiative. We are now concentrating on the kinds of budgetary information DOD managers use everyday, specifically budget information and existence and completeness of assets. A stronger, better controlled business environment will produce both improved quality and more transparent financial information. We appreciate the support of the Congress to this new approach and we have pledged to keep you apprised of our progress through semiannual reports on financial improvement and audit readiness.

Mr. Chairman, this concludes my statement, and I am open to any questions you have.

[The prepared statement of Mr. Roth follows:]

Statement

Of

John P. Roth

Deputy Comptroller (Program/Budget)

Department of Defense

Before the

House Committee on Oversight and Government Reform

Subcommittee on National Security and Foreign Affairs

May 19, 2010

Chairman Tierney ... Ranking Member Flake ... Members of the Committee ... thank you for the opportunity to participate in this hearing and for your support of America's Armed Forces.

I am here today representing the Office of the Comptroller and the annual budget process of the Department of Defense. The budgets we develop for Congressional consideration each year include the amounts requested for acquisitions. As a result, our office has considerable interest in acquisition reform, which is the subject of today's hearing.

We are presently executing the FY 2010 budget, working with Congress on the FY 2011 request, and preparing a budget for Fiscal Year 2012.

As we proceed, we have been directed by Secretary Gates to take an "unsparing look" at how the Department operates. In a recent speech, the Secretary explained: "The goal is to cut overhead costs and to transfer those savings to force structure and modernization within the programmed budget. In other words, to convert sufficient 'tail' to 'tooth' to provide the equivalent of ... roughly two-to-three percent real growth – resources needed to sustain our combat power at a time of war and make investments to prepare for an uncertain future."

This policy builds on the progress that has been made over the past couple of years, including initiatives with a significant impact on Defense spending:

First, it builds on the Department's progress in acquisition reform, including creation of the Office of Cost Assessment and Program Evaluation -- or CAPE – as well as implementation of the Defense Acquisition Workforce Development Fund. Through March 31st of this year, almost half of the amount appropriated for DAWDF – nearly $400 million -- has been obligated, and 3,200 new DAWDF-funded employees have been brought on board. This is a critical first step in strengthening the in-house acquisition work force. Hiring projections for the remainder of FY 2010 are on track to meet the Department's targets. The FY 2011 budget request includes another $218 million for the DAWDF.

Acquisition workforce development is part of a much larger effort to reduce the Department's reliance on contractors by in-sourcing what is considered to be essential government work. The goal is to reduce contractors from the recent high of 39 percent of the DoD workforce, to 26 percent, the level that existed before 2001.

Second, in addition to the Department's progress in acquisition reform, the budget request for FY 2011 takes account of the savings generated by cancelling programs that were deemed under-performing or over-budget. The Secretary has clearly demonstrated his commitment to making difficult choices on acquisition programs, including an unprecedented number of program cancellations in the FY 2010 budget. Among them were the VH-71 Presidential helicopter, the F-22, and the Army's Future Combat Systems ground vehicle program. Further cancellations recommended for FY 2011 include the alternate engine for the F-35; additional acquisitions of the C-17; the Next Generation Cruiser (CG-X); a new Navy Intelligence Aircraft (EP-X); and DIMHRS, the Defense Integrated Military Human Resources System, which failed to live up to expectations.

Lastly, the Secretary's guidance to DoD budgeteers follows several years of significant progress in financial management, especially in the areas of financial information and audit readiness. Several of our Defense agencies now maintain auditable statements. Two large trust funds managed by DoD have either qualified or unqualified opinions. The Marine Corps has asserted audit readiness for their FY 2010 Statement of Budgetary Resources, and an audit is currently underway. The dollar value of those elements of Defense currently either auditable or under audit is greater than that of 10 of the current CFO agencies, though there is still much more to accomplish.

In addition, the Department has introduced a change of emphasis that reinforces the fact that a financial audit is really an enterprise initiative. We are now concentrating on the kinds of budgetary information DoD managers use every day – specifically budgetary information and existence and completeness of assets. A stronger, better controlled business environment will produce both improved quality and more transparent financial information. We appreciate the support of the Congress for this new approach, and we have pledged to keep you apprised of our progress through semi-annual reports on financial improvement and audit readiness.

Mr. Chairman, this concludes my opening statement. I welcome your questions concerning the budgetary aspects of the acquisition program.

Mr. TIERNEY. Thank you, Mr. Roth.

Dr. Spruill.

STATEMENT OF NANCY SPRUILL, PH.D.

Dr. SPRUILL. Thank you. Can you hear me? Thank you.

Chairman Tierney, Ranking Member Flake, and other distinguished members of this subcommittee, I am honored to be here today. Thank you for the nice summary of my history. I would like to add two things. First, I am proud to be a third generation Federal employee. My grandfather worked at the Bureau of Engraving and Printing, and my father spent his career at the Federal Reserve. And I am glad to follow in those footsteps.

Also, an additional thing that I do for AT&L is that I provide authoritative data and analysis in support of the oversight of the acquisition programs.

I am pleased to come and talk today about defense acquisitions and discuss the broad trends, incentives, and challenges present in the Defense Department's current acquisition system for major weapons programs.

For the past several years, the department has been making changes to improve the acquisition process, changes such as putting increased emphasis on the front end of the process. That means starting programs right, making and using material development decisions at program initiation, conducting preliminary design reviews before milestone B, budgeting to independent cost estimates, requiring competitive prototyping, implementing configuration steering boards, establishing program management agreements, and completing independent program reviews. We have made support to the war fighter our highest priority, and we are increasing and improving the acquisition work force.

The department has initiated many improvements to the Defense Acquisition System since the enactment of the Weapon Systems Acquisition Reform Act of 2009 [WSARA] in the areas of system engineering, development tests and evaluation, technology maturity, and cost estimation with the goal of reestablishing a culture of acquisition excellence in the Department of Defense. The department is committed to making tradeoffs among cost, schedule, and performance to significantly reduce cost growth in major defense acquisition programs.

The procedural and organizational changes required by WSARA complemented and reinforced many of the department's recent policy changes, as Mr. Sullivan mentioned. The department strongly supports and is aggressively implementing the WSARA requirements and will continue to seek additional ways to improve the effectiveness of our weapon systems process.

As you mentioned, another important piece of the legislation is the IMPROVE Acquisition Act currently under debate. We look forward to working with Congress as they finalize the provisions of this act and we have several issues we would like to discuss.

We are committed to addressing the issues outlined in the IMPROVE legislation, as well as WSARA, so that improvements in acquisition systems serve and support the Nation's war fighters and reduce cost growth in defense acquisition programs.

Finally, I wanted to mention improving the acquisition work force. Good people are the essential elements of any successful acquisition reform strategy. We are on track to meet the growth targets for rebuilding the civilian acquisition work force in 2010 and beyond, and we are focusing on more than numbers; we are focusing on quality. We are pleased that we are attracting talented people to help us address the important issues we face every day. We look forward to working with Congress as we develop an acquisition system that develops value to the taxpayer and is responsive to the 21st century operating environment.

Thank you for the opportunity to appear before you today. I will do my best to answer any question that you may have for me. Thank you.

[The prepared statement of Dr. Spruill follows:]

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BY THE HOUSE COMMITTEE

ON OVERSGHT AND

GOVERNMENT REFORM

STATEMENT

BY

DR. NANCY L. SPRUILL

DIRECTOR, ACQUISTION RESOURCES AND ANALYSIS,

OFFICE OF THE UNDER SECRETARY OF DEFENSE

FOR ACQUISITION, TECHNOLOGY AND LOGISTICS

BEFORE

THE UNITED STATES HOUSE OF REPRESENTATIVES

COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM

SUBCOMMITTEE ON NATIONAL SECURITY AND FOREIGN AFFAIRS

May 19, 2010

<u>STATEMENT</u>

Chairman Tierney, Ranking Member Flake and distinguished members of the Subcommittee on National Security and Foreign Affairs, I am Nancy Spruill, Director, Acquisition Resources and Analysis, in the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)). I am responsible for all aspects of AT&L's participation in the Planning, Programming, Budgeting, and Execution System (PPBES), the Congressional process, and the Defense Acquisition System. As the Executive Secretary to the Defense Acquisition Board, I support USD (AT&L)'s oversight of the almost 100 Major Defense Acquisition Programs, including submission to Congress of Selected Acquisition Reports and support of the Nunn-McCurdy certification process. I am also deeply involved in providing authoritative data and analysis in support of USD(AT&L)'s oversight of acquisition programs.

For the past several years the Department has been making changes to improve the acquisition process. Changes such as putting increased emphasis on the front end of the process—starting programs right, making material development decisions at program initiation, conducting preliminary design reviews before Milestone B, budgeting to independent cost estimates, requiring competitive prototyping, implementing configuration steering boards, establishing program management agreements, and completing independent program reviews. We have made support to the warfighter our highest priority and we are increasing and improving the acquisition workforce.

I am pleased to come before you today to address **"Defense Acquisitions: One Year after Reform,"** and discuss the broad trends, incentives, and challenges present in

the Defense Department's current acquisition system for major weapon programs. Thank you for the opportunity to appear before you in today's hearing.

The Department has initiated numerous improvements to the Defense Acquisition System since the enactment of the Weapons System Acquisition Reform Act (WSARA) of 2009 in the areas of systems engineering, developmental test and evaluation, technological maturity, and cost estimation with the goal of re-establishing a culture of acquisition excellence in the Department of Defense. The Department is committed to making trade-offs among cost, schedule, and performance to significantly reduce cost growth in major defense acquisition programs.

Procedural and organizational changes required by WSARA complemented and reinforced many of the Department's recent policy changes. The Department strongly supports and is aggressively implementing the WSARA requirements and will continue to seek additional ways to improve the effectiveness of our weapon systems processes. One of the most important reforms to come out of WSARA was increased emphasis on strengthening the front end of the process—placing more emphasis on acquiring knowledge about requirements, technology and design.

Strengthening the Front End of the Process

Each major program will be subject to a mandatory process entry point, the Materiel Development Decision (MDD) before Milestone A. This will ensure programs are based on approved requirements and a rigorous assessment of alternatives. The objective is to balance, early on, performance needs with schedule and cost limitations.

To reduce technical risk, our standard practice will be to conduct Competitive Prototyping and a Preliminary Design Review before Milestone B. At that point, an independent review must certify the maturity of program technologies for a program to progress to the more costly Engineering and Manufacturing Development (EMD) phase.

We are also making investments to increase the size and capabilities of our cost estimating staff. We believe this increase in capacity, combined with the changes we have made to the front end of the process, will improve the accuracy of our cost estimates and that program costs and associated outcomes will be more predictable.

While ensuring effective oversight, we are being attentive to not burdening the process with excessive reviews. The lead time to design and deliver capability is already too long. As a result, we intend to ensure that process agility is not undermined with more "checkers" than those being "checked."

We expect these "front end" changes, supported by disciplined systems engineering and effective development testing—as required by WSARA—to result in requirements that are both responsive to the capability need and technically feasible within the time frame and funding available. As well, we believe these steps will result in more thoughtfully structured programs that reinforce our stated preference for an evolutionary acquisition approach.

These changes are already working. The Joint Lightweight Tactical Vehicle Program awarded three separate contracts for prototype vehicles. The resulting competition is being based on real performance of actual hardware. As a result, we are

able to conduct more effective developmental testing, improve the design solution, and increase our confidence in the system cost estimates.

Executing Programs Properly

In addition to the changes we have made to the front end of the process we are also implementing policies designed to improve our ability to execute programs.

A key focus of this effort is improving the business arrangements we have with our suppliers. We plan to make greater use of fixed price contracts when we have stable, well-defined requirements and mature technology. To align profitability with performance, we will employ contract fee structures that are tied to delivered accomplishments rather than process. Where objective measures do not exist, we will restrict the use of award fees.

Let me cite some examples of these arrangements in operation. The Joint Air to Surface Standoff Missile (JASSM) is employing contract incentives tied directly to missile reliability as demonstrated during flight tests that are being executed before each successive contract award. The Small Diameter Bomb Program used a fixed price contract for development, they plan to use a fixed price incentive fee contract during Engineering and Manufacturing Development.

To address the issue of "requirements creep" we will continue to employ "Configuration Steering Boards." These boards provide a mechanism to preclude destabilizing requirements changes and to match requirements with mature technology.

The newly established WSARA-directed office of Program Assessment and Root Cause Analysis (PARCA) will improve our ability to monitor program performance. We

strongly support this new organizational capability and, while the office is not yet fully staffed, we are engaged in establishing the performance assessment structure, and the operational concept for its employment on a routine basis.

WSARA also strengthened the review process for programs exceeding the Nunn-McCurdy critical cost breach limits and we are implementing those changes currently as we are now conducting several such reviews. In addition to the acquisition process improvements I've already mentioned, I also want to comment on another important element of our acquisition portfolio.

Acquisition of Services

Although the GAO report focuses principally on the acquisition of weapons systems, we are keenly aware of the fact that the Department has come to rely significantly on contractors to provide a variety of support services which enable us to project power and sustain our warfighters. The extent of this reliance and the sheer magnitude of taxpayer dollars spent in this arena demands that we acquire these services in a manner that ensures we are obtaining value. Recently, we have made strides to improve the quality and consistency of our services acquisitions by communicating to military departments and defense agencies the common framework we believe is essential to initiate contracts, and we have implemented a comprehensive architecture for the acquisition of services.

OSD is validating adherence to that architecture through the review and approval of acquisition strategies submitted for services acquisitions valued at $1 billion or more. For example, we are using this opportunity to shape these programs to severely curtail the

use of new time and materials contracts, to limit service contract periods of performance to three to five years, ensure requiring organizations dedicate sufficient resources to performance oversight, and to demand competition for task orders on indefinite delivery, indefinite quantity (IDIQ) contracts. Military departments and defense agencies are to employ the same set of service acquisition tenets and associated review criteria for contracts valued less than the $1 billion OSD threshold.

Additionally, we are using Peer Reviews to influence consistency of approach, ensure the quality of contracting, and drive cross-sharing of ideas, best practices and lessons learned. For all acquisitions valued at $1 billion dollars or more, the Department assigns an independent Peer Review team, which is comprised of senior contracting leaders and attorneys from outside the military department or defense agency whose procurement is the subject of the review, to meet with acquisition teams to assess whether the acquisition process was well understood by both government and industry. Similarly, military departments and defense agencies are accomplishing Peer Reviews within their respective organizations for acquisitions valued at less than the $1 billion.

IMPROVE ACT

Another important piece of legislation is the "Implementing Management for Performance and related Reforms to Obtain Value in Every Acquisition Act" (or IMPROVE Acquisition Act) currently under debate. We expect the IMPROVE Acquisition Act to help improve the defense acquisition process in the areas of acquisition system management, requirements identification and control, financial

management, fostering the highest quality acquisition workforce, and promoting and strengthening excellence in the Department of Defense acquisition system and the U.S. industrial base. We look forward to working with the Congress as they finalize the provisions of this Act as we have several issues we would like to discuss. We are committed to addressing the issues outlined in the IMPROVE legislation, as well as in WSARA, so that improvements in the acquisition system serve and support the Nation's warfighters and reduce cost growth in defense acquisition programs.

General Accountability Office (GAO) Annual Reports

Over the last several years, the annual Government Accountability Office (GAO) reports on Selected Weapon Programs have identified where the Department, generally, and the Offices of the USD(AT&L) and the Under Secretary of Defense Comptroller, specifically, should focus management attention. Although the reports assessed different numbers of programs every year, each report had specific focus areas, which the Department addressed. For example, the 2008 report focused on "knowledge-based" elements and decisions, the 2009 report focused on "collective cost growth," and the 2010 report focused on reducing developmental risk.

First, the Department is encouraged the 2010 report cites the progress we have made over the past several years in our efforts to improve acquisition processes and reduce cost growth. We have instituted several major changes that are beginning to show results. The 2010 report acknowledges there has been continued improvement in technology, design, and manufacturing knowledge in programs. We agree early systems engineering reviews and higher technology readiness levels for new program entry will

be fundamental to restraining cost growth across the major defense acquisition programs. The 2010 report also acknowledges that recent changes in DoD acquisition policies are having beneficial impacts with respect to requirements changes, software development challenges, and workforce issues.

We appreciate and respect the GAO's perspective on our acquisition system, and agree with their discussion on problems associated with unintentional cost growth. In the 2010 report, we examined cost growth from another perspective. When we eliminate cost growth due to program age and to quantity increases, we can get to Actual Cost Growth. Using this definition, we find that Actual Cost Growth is concentrated among just a few programs.

In the 2010 report, the GAO said that the Department must adhere to knowledge-based acquisition in order to increase the number of successful acquisition programs. The Department realizes that greater knowledge and stability are critical to managing cost growth. As a Department, we need to minimize changes to requirements after contract award. We need to keep Program Managers in place for several years to ensure the success of the program. The Department has implemented a number of measures to increase adherence to knowledge-based acquisition and improve stability. Central to our efforts to reform the acquisition system is the recognition that we must have a well-trained, adequately staffed workforce. It takes great people to determine what constitutes best value for the American taxpayer and for the soldiers, sailors, airmen and marines who depend on the weapons, products and services we buy.

Acquisition Workforce

The 2010 Quadrennial Defense Review found that the Defense Acquisition Workforce has been allowed to atrophy. In response, the Department has already budgeted for an increase of 20,000 new acquisition workforce personnel over the next 5 years. The Department plans to hire 9,000 new civilian employees and convert 11,000 contract positions to government positions. This "insourcing" effort will also have the added benefit of reducing the Department's reliance on private corporations to perform inherently governmental work.

Over the past year, we have made enormous strides towards re-building and retaining a high quality acquisition workforce. Our strategy to grow the Department's acquisition workforce directly supports the President's objective to ensure the acquisition workforce has the capacity and ability to develop, manage, and oversee acquisitions appropriately. Last April, Secretary Gates announced his intention to significantly improve the capability and capacity of the defense acquisition workforce. With unparalleled leadership support, Department strategy and planning, and the tools provided by Congress, the Department is taking decisive action. Since April 2009, the Department has successfully implemented strategy to shape and rebalance the workforce through growth hiring for contracting, oversight, systems engineering, program management and other critical functions. This strategy includes making adjustments for a better balance between our government workforce and contractor support personnel to ensure that critical and inherently governmental functions are performed by government employees. For Fiscal Year 2009, growth targets were exceeded and DOD is on track to

meet or exceed Fiscal Year 2010 growth and rebalancing targets. Component hiring is aligning with strategy priorities in contracting, systems engineering, program management, cost estimating, auditing and other critical functions. Just last month, the Department delivered to the Congress our Human Capital Strategic Workforce Plan and a report on the Defense Acquisition Workforce Development Fund.

While the Department has made great strides in its acquisition reform efforts, we realize there is still more work to be done. We look forward to continuing our dialogue with the Congress and GAO to identify ways to improve our acquisition processes. We recognize that we have cost and schedule growth in some of our programs. We look forward to continuing to work together with the GAO to improve our cost and schedule growth metrics. Improved metrics will allow for a more accurate assessment of current portfolio performance and policies.

Our acquisition process is improving, and our programs are being restructured to be more efficient and cost effective. The wars in Iraq and Afghanistan place a tremendous amount of stress on the Defense Acquisition System, while at the same time they have greatly increased our funding. The Department recognizes that we simply cannot continue to operate in this fashion, and further acquisition reform is necessary. This will support Secretary Gates' initiative to save two to three percent in overhead costs starting in FY 2012. We will continue to implement the necessary laws and policies to help the Department create a more efficient and effective acquisition system. We must invest our taxpayers' dollars wisely on systems that will help the men and women of the Armed Forces succeed in their missions. Our number one priority is to ensure that our

soldiers, sailors, airmen, and marines have the capabilities to defeat any adversary at anytime, anywhere in the world.

SUMMARY

In summary, measurable progress for acquisition excellence has been accomplished. Much work remains to be done. We recognize that the character, range, and complexity of the Department's acquisition portfolio have substantively changed. We also recognize the unique challenges these changes have produced. The Department is committed to aggressively addressing all unnecessary cost, schedule, and performance growth, and we will continue to implement new and innovative initiatives that help control costs and keep programs on track over the long term. USD(AT&L) Ash Carter recently testified that: "I support, as does the Secretary, the initiatives the Congress directed when it unanimously passed the Weapon Systems Acquisition Reform Act (WSARA). Acquisition Reform is one of DoD's High Priority Performance Goals presented in the Analytic Perspectives volume of the President's FY 2011 Budget. The Department is moving out to implement these initiatives." DoD's acquisition initiatives described above are supportive of DoD's High Priority Performance Goals to "Reform the DoD Acquisition Process" and "Implement DoD-wide in-sourcing initiative." We look forward to working with Congress as we develop an acquisition system that delivers value to the taxpayer and is responsive to the 21st century operating environment.

Chairman Tierney, Ranking Member Flake and distinguished members of the Subcommittee, I am pleased to address any questions that you may have for me. Thank you.

Mr. TIERNEY. Thank you. That is all we can ask.

Dr. SPRUILL. Pardon?

Mr. TIERNEY. Doing your best to answer the questions.

I thank all of you for your testimony on that; it makes me think somewhat, in listening to Mr. Roth and Dr. Spruill, that maybe it is our patience of getting to where we want to go a little bit quicker that drives some of our concern. It is good to hear that a lot of the recommendations made formally by the Government Accountability Office and by Congress in its legislation is being implemented.

I guess the question is, as I started at the outset, why were those things not done to begin with, which is probably an unfair question to ask you. It wasn't on your watch and it seems that you are addressing them. Are we moving as quickly as we can be moving I guess would be the next question. Are we really progressing? Why are there still programs that are moving forward with immature technology? Why are there still programs that aren't getting the knowledge base that they need early enough in the system program?

Dr. SPRUILL. I will try to answer that. As you know, there are now 102 major defense acquisition programs at all different phases of their life. After talking with Congress and staffers, we have focused on programs that are at the beginning. We personally just do not have the capability to address all 102 at once. The thinking was if I get the programs up front, then they will be on the right track as they go down.

As you know, WSARA required us to look at meeting the milestone B certification requirements for any programs that were between milestone B and milestone C. We have started down that path. It is a difficult path in the sense that the older a program is, the harder it is to find the information to talk about the structure of the program.

Mr. TIERNEY. I guess that would have been why it would have been helpful to have the information and giving us an assessment of where we were on those. Is that something you are moving toward doing as well?

Dr. SPRUILL. Yes, we are. As you know, right now we are working to implement the WSARA. We have stood up new offices. They have some responsibilities, cost estimating, performance assessment.

So we have started moving through the makeup certifications, as we call them. The long pull in attempting to getting them done is the cost estimates, and you all expanded in WSARA the responsibility and the scope of the CAPE folks, and we have started to beef up those staffs, as Mr. Roth mentioned, but there are still a lot of programs that need cost estimates as they are moving through the process today, so doing additional ones has been difficult, especially a while ago, when they didn't have the staff.

But we are moving toward doing those makeup certifications and we hope to complete them. We have not completed them within the 1-year, but we hope to complete them as soon as possible thereafter. But the cost estimates are the hardest thing to move us through that process.

Mr. TIERNEY. Thank you.

Mr. Sullivan, if I ask you to assess Dr. Spruill's performance so far in terms of going to the early programs, the programs that are beginning, and it is not unreasonable to start there, how are we doing with those? Are 100 percent of those getting the sort of knowledge-based assessments that they need early on?

Mr. SULLIVAN. The critical indicator that we look at to see if a program is developing a good business case that will result in a good cost estimate is the technologies, as you know, and we are pleased to report, in the last 2 years, we have seen increased knowledge about the technologies, more mature technologies as the things that are required for the business case than in the past.

In fact, last year the department, I think 100 percent of the new starts were at what we call a technology readiness level 6, which is a reasonable technology maturity. We would like to see it at 7. We disagree with them on that. But that is unprecedented, really, that they have had that kind of thing.

I think one of the reasons for that was congressional action and the department itself changing policies a couple of years prior to this reform, where they beefed up the certification process for looking at technology maturity. Now, I believe DDR&E must assess all of the technologies going into a weapon system.

But it is also more than that. I think the rest of it is kind of time will tell, because technologies are the critical thing. But then, of course, to make a good business case, to really have a good match, you have to understand your requirements.

So this preliminary design review that the legislation pushes up to before milestone B, if the department takes that seriously, that will be another way to get a better cost estimate. And a number of other things that we would like to see the department start doing, we see indications that the department is working hard to try to implement those things.

So we are optimistic right now given the 2-year trend of technology maturity and what we seem to see as a good faith effort to try to implement some of these reforms. But time will tell.

Mr. TIERNEY. Thank you.

Mr. Flake.

Mr. FLAKE. Mr. Sullivan, you talk about knowledge-based acquisition process. Can you explain in plain English what that means?

Mr. SULLIVAN. Yes. We get that a lot, which means we probably should make it simpler. For years, GAO has looked at weapon systems, and we have drilled down into them and reported on problems with weapon systems, usually after the fact. And Congress sent us a clear message that they would like to get information sooner.

So beginning about 10 years ago, we started our best practices work in order to try to change the way that we audit and look at things and try to get more proactive, and what we found out was we found a pretty good methodology at world-class commercial firms, where there were three kind of junctures that they would invest money if they could eliminate risk enough to make the next move forward.

The first was when they would start a development program and establish what we call the business case, which is a match between

what it is you are trying to build and the resources you have available.

The knowledge-based aspect of that is the technologies, for the most part. For example, we went to Caterpillar and asked them how they built the mining truck that had some fairly exotic requirements in terms of what environment it would operate in, how many subsystems it would have on it, what kind of grades it would have to go up and down. Thirteen different mines wanted this mining truck and it was a 300 ton bed that they were making. It was unprecedented.

And we talked to them about how they had to make trades early to establish a business case that, No. 1, they would be able to deliver in 3 years, so they could make the market; No. 2, have the capabilities that their customers wanted. They went through painstaking process—and this is just one example; we went to a lot of places and got this—and eliminated a lot of requirements along the way. Most of their customers wanted a single engine to propel this big mining truck, and their engineers said we can't do that, we can't promise to deliver this on time and for the cost, the price that we have to have to make money. We have invention on this. We can't do it. So they eliminated that and kept their business case.

So the business case is the knowledge of technologies. If a company feels good about the technologies they have and the resources they have to be able to start a program, they make that decision.

And then just very briefly, there are two other knowledge points. One is at the point where you want to have a prototype that shows that the design is capable and will perform. We call that the design knowledge point. And usually you want to retire the technology risk, then the design risk before you would make the next leap into understanding how to scale up and manufacture it at a very high production rate. And then that is where you want processes and control, so you want knowledge of your processes at that point.

Mr. FLAKE. Thanks for clarifying.

Mr. Roth, the IMPROVE Act, according to CBO, is slated to cost about $250 million to implement. How long will it take to recoup the additional cost by implementing the IMPROVE Act do you estimate, or do you think that we ever will?

Mr. ROTH. Just the cost of implementation alone?

Mr. FLAKE. Yes. Yes.

Mr. ROTH. To be honest with you, I haven't seen a good cost estimate of what it takes in terms of just implementing it.

Mr. FLAKE. That is a number that the CBO gave us.

Mr. ROTH. Yes. I would have to get back on it. I hadn't seen the CBO number. It would appear to me I think we have the infrastructure in place probably to implement much of what I saw in the IMPROVE Act, but, that said, I would have to go back.

Do you have any better feel for that?

Dr. SPRUILL. No. I am not aware of the number.

Mr. FLAKE. OK, Dr. Spruill, I mentioned before one of the things that has concerned me and makes your job, I am sure, a lot more difficult, is when Members of Congress will move in with their own priorities. We saw in the defense bill last year about 1,000 earmarks that Members of Congress will say, "I want." We have to fill

out a certification form that says this earmark is to go to this company.

Now, despite that, we hear from the Department of Defense that it is their policy to have fair and open competition for each of these programs. How does that jibe when a Member of Congress will say I want it to go to this company at this address; yet there is free and open competition? Now, we have asked procurement over at DOD to kind of reconcile this, and there seems to be an uncanny alignment between those who are supposed to get the earmark and those who actually do in the end. How do you have a process of fair and open competition within that framework?

Dr. SPRUILL. I am not an expert on earmarks. All of those come through DDR&E. I focus more on the major weapons programs. What I believe is if an earmark is in law, it will go to the organization it was earmarked for. I think that they are working very hard with Congress to make improvements in how we handle that. But I would have to answer that one for the record; I do not know enough in-depth to give you a good answer.

Mr. FLAKE. OK. If you could for the record, I would appreciate that.

Dr. SPRUILL. Be happy to.

Mr. FLAKE. Thank you, Mr. Chairman.

Mr. TIERNEY. Thank you.

Mr. Welch, you are recognized for 5 minutes.

Mr. WELCH. Thank you very much, Mr. Chairman.

Thank you. One of the questions I have is how much of the challenge we face is a result of acquisition system failures versus political failures. And the reason I ask that is that it does seem that Congress at least pays lip service to the notion of trying to have a streamlined acquisition process, but repeatedly comes up with a new "reform" after yet the latest example of a massive cost overrun.

So it leads me to ask the question how much of the problem is really political in nature. The weapon systems that we develop are oftentimes the initiative of private industry that see an opportunity to fill what they define as a need, as opposed to our battlefield commanders generating a real world battlefield need definition. Obviously, a weapon system gets a constituency because it is a jobs program, and eventually the debate about yes or no on proceeding comes down to jobs, as opposed to how it fits into a strategic defense framework.

So you have been through this, have been through panels like this before, and what my question is expressing is some skepticism that we can come up with an acquisition mechanism that will, independent of political reform, be successful. And I will start with you, Mr. Sullivan, to just comment on that, if you would.

Mr. SULLIVAN. Well, I think what I would say is when we look at the major weapon system acquisition programs, normally these are started by the department because they are filling either a structural threat, a strategic threat that is out there like our fighter aircraft, for example, or any other, the cargo aircraft tankers, things like that, or more specific threats like MRAP, which came directly as an urgent need from the field.

So I don't think there is necessarily a lot of big P politics involved with that. What happens is there are three major processes: there is the requirement setting process; the funding process, what they call the PPBE; and then the acquisition system that is supposed to take the results of that and execute a program. They don't necessarily do a good job of talking to each other, and I think within the department itself there is an awful lot of resource shifting and shuffling around that goes on on weapon systems programs.

But if you take an F–22 program, for example, that performed, cost and schedule-wise, very poorly, I don't think you could necessarily say that was a political problem. It was a problem with people inside the building not being able to get those three major processes and the processor owners not necessarily being held accountable for what the others were doing.

Mr. WELCH. Thank you.

Mr. Roth.

Mr. ROTH. I would echo some of the same thoughts. The years I have been in this business, one of the things that would help in terms of precluding, let's say, some of the cost growth we have in acquisition programs is more stability in the programs, and that means both from a requirement standpoint, from a funding standpoint; that once you decide a path you go down, that the various stovepipes in the building, whether they be financial, acquisition, technical, whatever, get behind the program.

Too often in the past we have had too few dollars chasing too many programs. We start too many programs, then ultimately we have to make suboptimal decisions in terms of necking down the many programs to the dollars that are available. So then you end up stretching programs and you are doing all other kinds of things that are suboptimal. So from the best I have seen in past studies and all, one of the key elements is to try to introduce greater stability in all the various and sundry programs.

Mr. WELCH. Dr. Spruill.

Dr. SPRUILL. I would say that many of the initiatives, and maybe this gets to the chairman's point, that Congress has identified for us to do as we go through different milestones is either something we were doing already or something we should have been doing. In many cases, for example, when the 2366 A & B certifications came up, when we sat down and really looked at them, we said, we are doing these today, but pulling them all together and viewing them as one thing that we need to check before we move into the milestone was actually a helpful initiative from Congress. So I think that some of the political help we get is very helpful.

One of the things that John says about stability is an issue for the acquisition community. However, on the other side, if we would keep to the cost estimates we had when programs started, I believe it would be easier to keep that stability down the line.

So I think there is kind of both sides of it. I think there may be some political aspects, but I think a lot of what Congress and we, back and forth, and I will say back and forth with GAO, are making improvements to the system that need to be made.

Mr. SULLIVAN. I would just summarize that by saying it is a matter of accountability and leadership, is what it really boils down to,

and when you see a leader taking charge of things, things can happen that don't happen often.

Mr. WELCH. Thank you very much.

Mr. TIERNEY. Thank you, Mr. Welch.

Mr. Luetkemeyer, you are recognized for 5 minutes.

Mr. LUETKEMEYER. Thank you, Mr. Chairman.

Just kind of walk me through the process here a little bit; I am kind of new to what we are doing here. With regards to the cost for changes, what percentage of the increase in cost to the programs is due to changing requirements or new technologies that are developed as you go through the process, versus what it was initially when an item was bid? Or is there a process in place that leaves a lot of that open and just sort of ballparks it?

Mr. SULLIVAN. I think the best way to measure that, if you are looking for cost growth as a result of requirements, changes, or design problems, you would look at the programs are broken into development, cost, and procurement costs, so usually those kind of problems, if you have immature technologies and problems with design and problems with ramping up to production, it will come out in what are kind of the nonrecurring costs of the development of the weapon system.

For example, when we looked at this 2 years ago, we broke out development costs, and there was a 42 percent growth in development costs. That is not in this year's written statement, but to give you an idea. I think you could look at that 42 percent growth as resulting from poor estimating or immature technologies or changing requirements and things like that.

Mr. LUETKEMEYER. On the information here, back in 2008, 63 percent of the programs had change requirements once the system development began. I mean, I can understand to a certain point the need for being able to be flexible and improve the product or service, or whatever we are purchasing, based on new requirements, new technologies, but I am just kind of curious. Can you give me a figure of the total increase in cost that we had that was due to the changes that were like that, versus just poor estimating up front? Have you got that information?

Mr. SULLIVAN. We can't break it out that way. We just know that when you have a major change in requirements in the middle of a development program, it is clearly going to perturbate everything you are doing in terms of design and manufacturing. So we can't give you a specific number, but it is a major contributor, probably the major contributor in cost growth during development.

Mr. LUETKEMEYER. What is the financial incentive for the manufacturer or the awardee of the contract to get the figure right up front? How much of this underbidding goes on, and then whenever it comes time to produce the prototype or produce another stage, all sudden it is, oops, we forgot this, oops, we forgot that; and whenever a change comes along they double or triple in order to recoup their moneys? Is there a financial incentive there for them, or I guess a deterrent for them not to do that?

Mr. SULLIVAN. I think what happens is, first of all, these weapon systems are very complex. There is no market for these weapon systems, so there is an incredible amount of risk that the government asks the contractor to take on. Therefore, they tend to use

what they refer to as cost reimbursable or time and material kind of contracts with a profit attached to that, which is fine.

I mean, you wouldn't expect a contractor to take on all that risk by themselves with a fixed price contract, but the problem comes in—and I think the legislation addresses an awful lot of this—they begin the programs before they have a good understanding of the requirements. Usually the preliminary design reviews and all those systems engineering reviews that the department is putting into place now, gives the department, the customer a much better feel for a much better cost estimate. They have lacked that in the past and it leaves you susceptible to low-balling and all those other things. Nobody really knows how much it costs. There is not a lot of knowledge about that. That is our take on it.

Dr. SPRUILL. Could I answer both the previous one, or try to answer? I do not know the statistic on how much is due to requirements. I do know that over the last few years the JROC, the folks who set the requirements, have made it very clear to the program manager if you find that the requirements are driving your cost up, please come back to us and let's have a discussion on whether the requirement makes sense or if it could be adjusted. So the department is very aware of the requirements' contribution and has taken initiative to fix it.

On the technology side, one of the reasons that we need to improve the acquisition work force along the lines of systems engineering and testers is exactly what you say. We should not be letting a contract for an amount of money that is way underbid; we should have the technical knowledge in the department to say, no, that doesn't make sense, that bid is not a good bid. So we are trying to deal with both of those issues.

Mr. LUETKEMEYER. OK.

Thank you, Mr. Chairman.

Mr. TIERNEY. Thank you. Good questions.

Mr. Driehaus.

Mr. DRIEHAUS. Thank you very much, Mr. Chairman. I would just like to pick up.

Mr. Sullivan mentioned a bit earlier the example of a single engine and the need for competition in procurement. I would like to followup a little bit on that conversation around competition.

I would ask unanimous consent, Mr. Chairman, to enter two documents in the record. The first is a memorandum from the Office of the Under Secretary of Defense for Acquisition, Technologies, and Logistics, dated September 4, 2009. The document states that competition is the cornerstone of our acquisition process and the benefits are well established.

The second document, Mr. Chairman, is a slide show that is used to train those in the procurement career field from the Department of Defense itself around competition and weapons acquisitions.

Mr. TIERNEY. Is there any objection?

[No response.]

Mr. TIERNEY. Without objection, so ordered.

[The information referred to follows:]
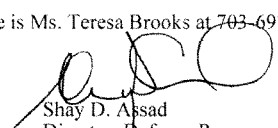
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MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Competition in Department of Defense Acquisition

Competition is the cornerstone of our acquisition process and the benefits are well established. The President's Memorandum on Government Contracting dated March 4, 2009, reinforces the importance of striving for an open and competitive process as an overriding obligation to American taxpayers and the need to place greater emphasis on achieving competition in our procurements. In Fiscal Year 2008, Department of Defense (DoD) competitive obligations totaled $252 billion, a record 64 percent of DoD obligations. While this is better than DoD's ten year average of 61 percent, we must continue to emphasize the importance of competition and take appropriate action to overcome barriers and reach our competitive obligations goals in the years to come.

Meeting this goal requires a commitment to competition from personnel throughout the acquisition process, from identifying and developing requirements to putting them on contract. To facilitate this effort, a working group of representatives from various DoD components developed a standardized competition training tool to educate and focus all DoD agencies on current competition policy and guidance, reiterate the importance and benefits of competition, and highlight opportunities to increase competition in government acquisitions. The training tool is structured to emphasize key concepts with links to in-depth material for those desiring a more thorough understanding of policy and procedures. Additionally, it will both educate and motivate acquisition professionals and their technical experts to do their part in ensuring the competitive process is maintained, sustained, and nurtured. I am confident that the Department will benefit from this training and enable us to continue to fulfill our commitment to the American taxpayers. The training is available at: http://www.acq.osd.mil/dpap/cpic/cp/docs/training.ppt.

I ask Defense components to reinvigorate and expand the role of the competition advocate(s) and reinforce the importance of competition to everyone involved in the acquisition process, including the requirements community. To the maximum extent practicable, competition advocates are encouraged to take the lead to ensure this training is delivered in an environment that provides the greatest opportunity for real-time dialogue and discussion. An additional resource to gain access to this training material can be found on the Defense Acquisition University (DAU) Distance Learning Center as Continuous Learning Module (CLM) 055.

My point of contact for this initiative is Ms. Teresa Brooks at 703-697-6710 or Teresa.brooks@osd.mil.

Shay D. Assad
Director, Defense Procurement
and Acquisition Policy

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Mr. DRIEHAUS. Thank you very much, Mr. Chairman.

This issue of competition and procurement is one that obviously Congress is in the midst of, and it seems that we are in the midst of on a regular basis. As you know, Congress has long established its preference for procurement of goods and services through competition. The Congressional Research Service cites that the Federal Government has supported procurement through competition since 1781.

Just over 200 years later, Congress passed the Competition in Contracting Act of 1984. And since 1996 nine bills have been signed into law by the President that requires the design and development of a primary and secondary propulsion system. The Weapon Systems Acquisition Act of 2009 stresses the use of competition for major defense acquisition programs. This you all know.

I am particularly interested, as we talk about competition, in propulsion systems and the F–35, and I, after going through the testimony and looking at some of the criteria that have been established for competition and contracting by the Department of Defense, it is my understanding that there are seven criteria that would allow the Secretary of Defense to waive competition for significant contracts, such as propulsion systems. Those are: single source for goods or services, unusual and compelling circumstances, maintenance of the industry base, requirements of international agreements, statutory authorization or acquisition of brand name items for resale, national security, and necessary in the public interest.

As we look at competition, especially in propulsion systems, and we look specifically at the significant investment Congress has already made in the propulsion system, the competitive engine program for the Joint Strike Fighter, help me better understand how the opposition of the Secretary to the continuation of this program aligns with the Department of Defense's own criteria for waiving such competition and procurement.

Mr. Sullivan, if you would like to start.

Mr. SULLIVAN. I don't know if I can help you understand all of that, but I think the department has made clear that they believe that they have very low risk in a single point of failure on the engine that they have in place now, and I believe the Secretary believes that the remaining investment costs that would be needed short-term to make sure that the alternate engine program could be competitive are prohibitive in this budget environment.

Mr. DRIEHAUS. Just to followup on that, did we not learn this lesson in the F–15 and the F–16, that in fact having the competitive engine does in fact drive down cost over the long-term and ensures stability over the long-term in a propulsion system?

Mr. SULLIVAN. Yes, I think on that situation, where they infused competition into a single source. There are studies that show that they did get quite a bit of benefit out of that not only in terms of reducing the life cycle costs of the engine, but also with contractor responsiveness, reliability rates, and things like that.

Mr. DRIEHAUS. Mr. Roth, could you comment on the seven waiver criteria?

Mr. ROTH. Well, I think the issue, as Mr. Sullivan alluded to, is really the opportunity cost of additional investment in an alternate

engine versus the potential savings or the potential payback that one might get for it. I think it is important to note where we are in this program. We arrived here to where we are today through a competitive contracting process, so the team that is in place today was one that essentially won that competition and has moved forward.

The estimates that we have, as best as we can tell, that in order to pursue an alternate engine in this particular budget climate, we would have to invest at least $2½ billion to $3 billion in this engine; the second engine needs to be developed as well; and the payback, as best as we can tell, is somewhat argumentative in terms of whether we would ever get that money back.

And our fear is that you are not really going to end up with true competition, but you are essentially going to end up with two single source engines, because the users of the airplanes have made it fairly clear that the kind of logistics complexities that would be introduced by having to manage two engines is not something they are particularly interested in.

So, for those reasons, and given the opportunity costs of trying to invest another $2½ billion, $3 billion in an engine in this particular budgetary climate, the leadership has made a decision that it wasn't worth the cost.

Mr. DRIEHAUS. Well, as you know, Mr. Roth, CRS has disputed whether or not there was in fact true competition in the process. And we have learned that the competitive engine is actually reducing cost. As a matter of fact, the competitor has come out with a fixed price bid over time, which would drive down cost for the engine over time. We have made billions of dollars in investments in this competitive engine to date. It is now leading to procurement competition that is significantly driving down costs over the long-term through fixed pricing, which is unheard of in propulsion systems.

So I find it difficult to stomach the department's understanding of what the long-term costs might be, or what their projection of what the long-term costs might be, when in fact we have before us the opportunity to engage in a competition where we have fixed pricing, which is unprecedented.

Mr. ROTH. Well, we will have to take a look in terms of whether the so-called fixing will hold up to analysis and scrutiny. Again, what we do know is it is going to take more money to invest in another engine. What we are not sure of is whether the savings will ever materialize. So that is our concern.

Mr. TIERNEY. Thank you.

Mr. Sullivan, did you want to respond to the competition?

Mr. SULLIVAN. I think that you may be correct. I don't think that there was a competition on the Joint Strike Fighter for the engine. I think the competition was at the prime contractor level, and GE happened to be a part of that team. But they never competed the engine.

Mr. ROTH. That is true. I won't dispute that. I meant the program in general. Absolutely. I agree.

Mr. DRIEHAUS. Thank you.

Mr. TIERNEY. Thank you, Mr. Driehaus.

Thank the panel on that.

Mr. Foster, you are recognized for 5 minutes.

Mr. FOSTER. Thank you.

I was wondering if you think that, as a general principle, it would be a good idea to carry alternatives farther into the project cycle, so that when you get to the final design review, if you say, oh boy, we are facing a real cost growth here, if we had to repeat the analysis of alternatives, we would have gone down another path. If you make the investment so that other path is still viable later than the project design cycle than we currently do, if there is a merit do that or whether you would end up wasting more R&D money. If you have any reaction to that?

Mr. SULLIVAN. Yes. In fact, I think the legislation drives at that a little bit. They have competitive prototyping now before milestone B at the subsystem level and, in fact, the department itself has expressed an interest in trying to compete prototypes all the way up to a critical design review for the exact reason that you point out. The problem with that is that it could get very costly depending upon the size and the complexity of the weapon system.

But going back to this knowledge-based process that we talk about, if you do incremental kind of development, much like the F–16, where you do block upgrades, it becomes much more palatable to do that, and then usually you will have some competitive viable alternatives. You don't get held hostage as easily.

Dr. SPRUILL. We agree. We think that competitive prototyping makes sense. Obviously, as Mr. Sullivan said earlier, you have to do a business case. In some cases you are probably not going to do competitive prototyping of an aircraft carrier, but of subsystems and smaller weapons, it probably makes sense. And carrying them through longer than we had previously, it is a policy change, which we think is the right way to go.

Mr. FOSTER. Any comments, Mr. Roth? No? OK.

Are there any countries that get this right? I mean, people talk fondly about the Israelis as having a lean, mean military. Does every country that you know of have fiascos?

Dr. SPRUILL. I don't know. That is a good question. I just don't know.

Mr. SULLIVAN. That is a good question, and I hear similar horror stories, but I don't know if there are any that do it really well.

Mr. FOSTER. OK. In terms of lessons learned, if you find that you have gone down what, in retrospect, seems like the wrong path, and that you wish you could back up to the analysis of alternatives and use it with correct data, what turns out to be correct data, do you ever do retrospective analysis of alternatives to try to figure out how you could have done the analysis of alternatives in such a way that you would have gotten the right answer?

Dr. SPRUILL. I am not aware of that. I know that for weapons that have not made it through the process, for example, the Presidential helicopter, we spent a lot of time figuring out where the problems were. We were aware of them. I don't know that we went back to the AOA, but we surely laid out where we had gone down the wrong path so that next time, when we try to do it, we won't have that same problem.

Mr. FOSTER. Well, I was referring not to the specifics of a case, but the design of the AOA process; whether you could actually go

back and say, OK, here is why the AOA was structured wrong. Or in some cases you simply won't have technical information and then you are dead. But there are other times when you say, look, we didn't ask the right question perhaps because of the design of the AOA process. I was wondering if there is a systematic effort to improve that or just lessons learned applied to the AOA process.

Mr. SULLIVAN. If I could, we did a report on that not too long ago, looking at how well the AOA process was operating for the department, and we found a lot of problems with it. Most of it had to do with not choosing enough alternatives. A lot of times, there may be a bias to the AOA if a certain service is looking at it.

Mr. FOSTER. Someone has some specific product that he has in mind.

Mr. SULLIVAN. Yes. That was one problem, perhaps not looking at a full universe of alternatives. And another key problem was that they would do them too late. Oftentimes, we found cases where AOAs were done after the program had started.

Dr. SPRUILL. However, I would say, as a result of WSARA, we have refocused on AOAs. They have now been given to the Cost Assessment and Program Evaluation folks, the CAPE folks, to work on. So I think we are taking the AOA much more seriously. I don't know about a feedback mechanism yet. I know we do try to have Defense Acquisition University look at programs, for example, that are canceled or that had problems, but I don't know if it feeds back to the AOA process. But I think that is probably a good idea.

Mr. FOSTER. Thank you.

Yield back.

Mr. TIERNEY. Thank you.

Mr. Murphy, you are recognized for 5 minutes.

Mr. MURPHY. Thank you very much, Mr. Chairman.

Thank you to the panel for being here today. I wanted to talk briefly with you for a moment about one of the most common and increasing ways to cut costs on acquisition, and that is foreign sourcing of parts. The numbers of waivers to the Buy American law have grown, to my mind, a very disturbing pace. From 2007 to 2008, the number of waivers to Buy America increased by 450 percent in just 1 year. The numbers for 2009 are due to come out very shortly and, unfortunately, I expect that there will be a similar jump.

Obviously, the foreign sourcing of parts for weapon systems is an easy and quick way to cut cost, but it adds tremendous cost to the overall amount of money that the U.S. Government has to throw in to compensate for the jobs that are lost.

So I guess my first question is when we are analyzing reasons for cost overruns, when we are analyzing the full cost of weapons programs, how does the amount of foreign sourcing of parts for a particular product come into play, and is it something that DOD looks at when evaluating the overall long-term cost?

I can imagine clear reasons why it would lead to lower costs; it is often cheaper to buy parts overseas than it is to buy parts in the United States, but there are reasons why it could be a factor in cost overruns. As you create a much more diffuse and decentralized sourcing system for a particular product to DOD, it is much harder to track where the overruns may come from.

So I wanted to ask Mr. Roth and Dr. Spruill how do we factor in the increasing degree of foreign sourcing when we are evaluating the potential cost of a system.

Mr. ROTH. Mr. Congressman, the short answer is I am not aware where it is. I don't work at that level. We would have to get back to you on that. I don't know to what extent it works into the cost estimates.

I defer to you if you have a better idea.

Dr. SPRUILL. I would say that the tradeoff should be made that it is cost-effective for the program. I am not aware of any of the root cause analyses that are looking at the cost growth. I am not aware of this being raised as one of the potential sources of cost growth.

I just saw a report come through and I will have to get you more details, it may be the Buy American report that is due to you, but it talked about, yes, we make the tradeoffs, but often we get, in return, something from the country and they look at the overall economic effect.

So I would have to get back to you on that. It is an issue that is raised. I am not aware of it being identified in, for example, the Nunn-McCurdy cost growth analysis. And we now have an organization, the Parker Organization, that looks at root cause analysis. I am not aware of that as being identified as a source of cost growth, but we can ask.

Mr. MURPHY. In the award process today, is there any ability to factor in the amount of supply sources coming from domestic sources versus foreign sources in the award process? Or does it work inversely in that to the extent that more foreign sourcing can lead to lower price, the existing award process effectively creates an incentive for more foreign sourcing? Is there any ability to give a bonus in the award process to companies that agree to do more domestic sourcing?

Dr. SPRUILL. I don't know. I would have to get back to you on that. I just don't have the facts. I am sorry.

Mr. MURPHY. Mr. Roth.

Mr. ROTH. [No audible response.]

Mr. MURPHY. Well, I would appreciate your getting back to me on this subject. I think a 1-year jump in waivers to the Buy America provisions of 450 percent is something that should concern every Member of Congress, especially as we seek to grow jobs here in the United States.

We are spending more and more of our taxpayer dollars within the Department of Defense budget overseas. I think that there is a very strong argument that can lead to the increased cost of acquisition for many of these products as you create a source network that is much harder to track from DOD's perspective. And I would hope that we could have a conversation about this issue going forward and we can talk about the reasons and the causes for an increasing amount of work being done overseas and the extent to which that is part of the problem that we are seeing within the overall acquisition costs.

With that, I would yield back.

Mr. TIERNEY. Thank you, Mr. Murphy.

I ask unanimous consent that all Members be given 5 days to submit additional questions for the record.

You may choose, Mr. Murphy, to do just that. I think that is a good line of questioning, along with that in the industry base aspects of that.

Any objection?

[No response.]

Mr. TIERNEY. No objection.

We are not letting you off the hook. Those are written questions that are coming, but we do have a couple more questions. We will do another round for those that are interested in that.

Mr. Sullivan, I notice one of the comments that the Government Accountability Office has previously made, and you mention again in this report, is the Department of Defense should work to balance its weapons systems portfolio with available funding.

So my question to Mr. Roth is what do you determine is available funding, just whatever gets appropriated?

Mr. ROTH. No. We clearly, in any given fiscal year, we operate within well defined fiscal controls. First and foremost, as we build the budgets, we work with whatever the current administration is to build a budget within the fiscal controls they have, general fiscal controls.

Mr. TIERNEY. Who sets the fiscal controls?

Mr. ROTH. Well, it is worked collaboratively with the Office of Management and Budget, and ultimately the Office of Management and Budget, at the behest of the White House, sets those fiscal controls. Then, as you well know, the budgets come to the Congress and it goes through the appropriations process.

Mr. TIERNEY. I make the point because I am parroting a little bit of what Secretary Gates said just the other day. This Defense budget in this country has doubled in the last decade. Things like 11 aircraft carrier units out there. The next country in competition with us has one. That is $11 billion a year to build those.

My real wondering is who determines that is available? Or do we just keep building as long as we can get Congress to think it is a jobs program and keep appropriating, as Mr. Welch said? And going back to Mr. Sullivan's comment about leadership, somebody has to step forward, and I think Secretary Gates has been stepping forward.

It is incumbent on Congress to kick in as well and start saying we have a defense system that is so much larger than all of our allies and protagonists combined. At some point, what are the other needs of the country on that?

And I don't think it comes to your level on that, but it does come in to Congress and the Executive Office trying to decide what it is we are doing here in terms of that, and then looking at those programs that have some of the deficiencies you talked about here today and weeding out the ones that aren't really relevant in today's fighting systems and needs on that, and moving forward and getting rid of those that just aren't working and being done right. So your testimony on that has been helpful.

How do you assess affordability of a new program, Mr. Roth or Dr. Spruill, whichever? That is another thing they were talking about. You assess the affordability. We know that is a little bit

above your pay grade and we have responsibility to do that with the White House, but how do you assess capabilities in the context of the overall Department of Defense spending?

Mr. ROTH. Well, as you may be aware, we actually go through a very systemic structured process, as Mr. Sullivan alluded, the planning, programming, budgeting, and evaluation, the so-called PPBE process, where we, first of all, set up the strategic plan and we take a look in terms of what are the threats out there, what are the requirements out there. What do you need to resource?

Then we go into an extensive programming and budgeting process where we try to balance off the needs between the various and sundry mission areas that we have, and we look at where you can manage risk and where you don't want to take additional risk, and those types of things. So, for better or worse, it is a fairly long, comprehensive, convoluted in many ways, process where you take a look and say, OK, what are my needs in a tactical air community? What are my needs in the ship building area? And within those fiscal controls you try to get as balanced a program as you possibly can.

Mr. TIERNEY. Well, exclusive of GAO's good work here, does the department itself have a system where somebody raises the red flag at some point and says what GAO has said well before they have said it: look, we have a program that is way over schedule, way over budget; they are not following the protocols that we have set up in our own systems, they are certainly not following the laws that Congress passed; and let's start weeding these things out? It seems like we are waiting all the time for GAO to come out with a report and then reacting, but I hope that is not the case.

Mr. ROTH. No, I think Dr. Spruill can answer. We have a very well documented acquisition process as well, but in terms of resources, again, frankly, there is competition virtually every day of the week, so to speak, for resources, so those programs that are underperforming, those programs that aren't meeting a need frankly are at risk against those programs that demonstrate they are.

Mr. TIERNEY. Well, I wonder, I guess, because I don't see the decisions being made, I see the budget doubling. So it seems to me that they are all competing with each other and they are all at risk, so what do we do? We throw a little more money and we keep them all going. I hope that is changing. I think the Secretary has indicated that he has a mind to change. But if we don't, where does this thing go, a trillion dollars a couple of years from now?

Dr. SPRUILL. Could I jump in on affordability?

Mr. TIERNEY. Yes, sure.

Dr. SPRUILL. Because I really think it is important. I think that, at least from the acquisition perspective, we try to do two things. But when programs start at system development, when they are coming to their milestone B, the certifications that Congress has laid out for us, we must say that it is affordable, OK? So we look at the entire program.

And what we did last year, AT&L, along with the comptroller and the CAPE folks, when we got to the program budget review, when we were developing the President's budget, we looked at all the programs that had come through the process and were new. We looked at were they funded as the service committed. The service

must commit to fund when they go through milestone B. Were they still funded like that in the program? If not, why not? And if not, were there changes that need to be made?

So I think we are stepping down the affordability road. And it is clear from what the Secretary said "the budget will not continue to grow, so we must make sure that we live within our means, and that means some programs will not get started; some programs, as demands change, will have to be terminated."

Mr. TIERNEY. The indulgence of Mr. Flake for 1 second.

I think that is right as a statement, but then I look back at what the Secretary did. He basically made his recommendations with respect to the Army's Combat Systems Program; and that was smart, it was about $87 billion on that. But all of a sudden we look up and there is the portfolio growing again. They are going to reintroduce it under new names, new size programs. So here we go again as the $47 billion cost growth on this.

Mr. Sullivan, do you have any comment?

Mr. SULLIVAN. In fact, that is a good point, because one of the things we are concerned with right now, and, in fact, we testified at the Armed Services Committee on this, is that new Brigade Combat Team, the initial increment, after all this acquisition reform and everything else, it looks like the Army has made a decision to commit to producing that increment before all the testing is complete. So that gave us great pause, and we testified to that. That was not a good signal to us.

Mr. TIERNEY. And I would hope, Dr. Spruill, it would give you great pause. I expect to find the F–22 back at this pace. I mean, if the decision is made, $87 billion, you should be hopping all over that when it starts coming up as little animals along the way for a little bit of money but the same darned thing over again, without the right procedures in place, on top of that.

Dr. SPRUILL. Yes, sir. The Army does have a need for the capability, so we are trying to address it. We are trying to address it in an affordable way. I will have to go back and look at more detail, but it was clear that the FCS program was not started out under the recommendations or the policies that GAO recommends.

But we still have to meet the need, so there will be additional dollars spent in that area. Hopefully not anywhere near what we were talking about in FCS.

Mr. TIERNEY. Well, is there any exercise when you look at the budget having doubled in the last several years, this defense budget, you say, well, if that is a need and we determine that we are going to kill the program, then bring it back to life, where else in the Department of Defense are we going to free up the money to do that? What else ought to die?

Dr. SPRUILL. And that is what the Secretary has challenged us to do as we develop the budget.

Mr. TIERNEY. It would be real nice if the challenge was you don't get the money for the new thing until we see something else fall off the table.

Dr. SPRUILL. And that may be the case. And I don't know what will fall off the table between now and the next budget that comes over.

Mr. TIERNEY. Hopefully, it will fall off before we start spending the next amount of money for something else.

Mr. Flake.

Mr. FLAKE. Just a statement to echo what has been said here. I mean, we are talking about rules and regulations to implement the process in acquisition, but it is new weapon systems or the failure to get rid of old ones that we are talking on the margins here, with all due respect. So it is not just this Defense Secretary who made these noises; the last one did as well.

Mr. TIERNEY. Same guy.

Mr. FLAKE. We heard the same things.

Mr. TIERNEY. It was the same Secretary. I was just teasing him on that.

Mr. FLAKE. No, no, I am just saying the one before him under the previous administration. We heard from Secretary Rumsfeld some of these same noises, but yet we have seen a doubling in the last couple of years. And that fault does not lie at your feet, obviously; we have to make some decisions here. But what the chairman said, when we decide we are going to kill these systems, we need to make sure that they remain so.

Mr. TIERNEY. Mr. Driehaus.

Mr. DRIEHAUS. Thank you, Mr. Chairman.

I would just like to followup on this issue of competition, because one of the challenges that is faced by, I think, Armed Services and this committee, quite frankly, is access to information. Just yesterday there was an article in the paper about the Department of Defense not giving access to certain documentation and estimates that are being made at the Department for Members of Congress to review. It is estimated that the alternative engine by the Department of Defense will need another $2.9 billion. What we are getting from the contractor is far, far less in terms of the estimate.

It is difficult for us to make decisions in terms of authorization and appropriation when we know that the department isn't following its own guidelines in terms of waiving competition standards; when we know there hasn't been competition for major propulsion systems; and now we are being told by the department that engaging in competition will cost us a tremendous amount of money, yet we don't have the documentation to show that. And we are supposed to just take at face value the department's assertion that we should put competition aside in major weapons acquisition when we know that is not the policy of the department overall.

So this is an ongoing challenge, I believe, for us to do our job in terms of oversight when it comes to cost of weapon systems if access to information is held up by the department itself. And, Mr. Roth and whoever else, I would like you to comment on that.

Mr. ROTH. I am not familiar with the specific request for information; I would have to look into it. I would argue if we have a case, we should make our case, and I don't have any basic fundamental problem with that. But in terms of your specific request for information, if I can, let's get back to you, because I am not familiar with it.

Dr. SPRUILL. And I am not aware of it either. In fact, I thought we were sharing everything that Congress had asked us on the Joint Strike Fighter. So I would have to go back and ask.

Mr. SULLIVAN. The information that we received on that issue, it was difficult to get information I think mainly because the department took a position that was no longer part of the budget, so they didn't have the numbers for that; they had excluded it.

But we worked with the Program Office a little bit. And the other thing is the Joint Strike Fighter program just went through a major shakeup, so all of the buys, the annual production buys and how they are going to buy the engines and everything, changed quite a bit. So that was real shaky data as well.

We eventually got what we thought we needed, but it was hard to get it.

Mr. DRIEHAUS. Can you speak a little bit, Mr. Sullivan, about your own assessment of the Joint Strike Fighter and the competitive engine over time and what you see as we move forward in terms of the various scenarios that you have laid out in terms of cost savings over time?

Mr. SULLIVAN. Well, we have done studies for other committees. The House Armed Services asked us to look at that and we can't say with any authority at all. We don't forecast the future.

But what we did do was make some assumptions based on historical data, which was, I think you referred to earlier the F–15, F–16 when they infused competition into that. And given those assumptions, if we looked at what happened historically on that, we found that it was possible to achieve enough savings through the life cycle to get a return on the investment for the competitive engine.

Mr. DRIEHAUS. And those savings occur because of the competition. And if there is a failure of the single engine, then obviously there is tremendous cost associated if you don't have that competitive engine.

Mr. SULLIVAN. The savings that we assumed were as a result of having competition, yes.

Mr. DRIEHAUS. Thank you, Mr. Chairman.

Mr. TIERNEY. Thank you.

Mr. Murphy.

Mr. MURPHY. Thank you, Mr. Chairman.

I would just quickly note that for those of us that support the current policy, the administration's policy on the single source engine, we note that some of the costs are very hard to estimate at this time. To have two single source engines with all of the end-use cost to the operators is hard to evaluate at this time, but I think has real consequences for the ongoing defense budget.

My question is just back to my line of questioning on the true cost of acquisition. A quick one to Mr. Sullivan. My contention is obviously that when we look at the cost of purchasing a weapons system or a product for the Defense Department that has a heavy emphasis on foreign sourcing versus domestic sourcing, that there is a cost to that is outside of the defense budget, that the additional cost to the government of unemployment benefits, the lost revenue that comes with foreign jobs rather than domestic jobs, that the true cost of acquisition, when you are looking at a product that is made in majority overseas, is not seen within the confines of the defense budget.

So just a question, Mr. Sullivan. Has GAO ever undertaken an estimate of the overall holistic costs to the government of the increased foreign sourcing within DOD's budget?

Mr. SULLIVAN. Congressman, I just don't even know the answer to that, but I can definitely take that back and get back to you on that, see if we do have anything along those lines.

Mr. MURPHY. To the extent that it has not been done, it seems like an analysis that is long overdue, and I would appreciate a further conversation on that.

Thank you, Mr. Chairman.

Mr. TIERNEY. Thank you, Mr. Murphy.

Mr. Sullivan, one of the recommendations that you made going forward, observations that you made was that it might make sense to set some limits on a reasonable length of time for developing a system. How would that happen? How would that be done?

Mr. SULLIVAN. Well, we don't press this hard because it would be taken as somewhat arbitrary, but what we found when we did a lot of work in the commercial work and at some world class technology firms is that they enforce a schedule and they do it for a couple of reasons: No. 1, it limits the amount of time that people have to change requirements and things like that; No. 2, it gets products to market quicker, before the world changes; it gives people a piece of time that is more manageable.

And in terms of the department, we think that it would be good to operate within what the Department calls its Future Years Defense Plan, which is typically a 5 to 6 year plan, and fully fund the development of weapon systems in that plan.

You were talking earlier about why there is no control. A lot of times when programs are 10, 12 years long, the Future Years Defense Plan plans the first 5 or 6 years of them and then things start happening outside of those years. So that would be a constraining mechanism too.

Mr. TIERNEY. What happens, last year we moved to get rid of part of the intercontinental ballistic missile, the Missile Defense Program. It was $188 million. Not a big item by terms of the defense budget, but an item that the Missile Defense Agency [MDA] didn't want, so they wanted to see it cut. The Secretary wanted to see it cut; the White House wanted to see it cut. Everybody wanted to see it cut. And the argument in return for that was we have all this money invested, so some of it survived on that.

So my question was really how do you avoid that? Are you going to say, if a program is done in 5 years or it gets cut, at the end of 5 years aren't we going to hear back from everybody, look at all the money you put in for 5 years; how can you just end this thing?

Mr. SULLIVAN. It is a good question. That is why we move slowly with those kind of things. But if you keep the requirements in line with what is doable in a 5-year increment, which is what world class firms do——

Mr. TIERNEY. Stop it at that stage where it doesn't meet the requirement.

Mr. SULLIVAN. Yes. The F–16 was built that way, as I mentioned earlier. One of the key premises of all of this is that you have to separate technology development from product development. You can't be trying to invent technologies while you have the factory

running. In essence, that is what the department has been doing for years. F–22 was a technology product and they had an entire army to feed in terms of factory going and suppliers going. So it is all in the requirement setting, I think, is the answer.

Mr. TIERNEY. Is there any contemplation going on within the department about setting lengths of time, reasonable lengths of time on that? Is that something that is discussed?

Dr. SPRUILL. It has been discussed more in the IT world than in the weapon systems world. However, I think the department is very aware of the need, most of the development is within a 5 or 6 year period. There are some that are not. It would be more that would be set at the beginning of the program, but I am not aware of, except in the IT area, talking about limiting the time, say, 5 years, 3 years, whatever, before you try to lay out a reasonable program. Obviously, once you lay out the program, you should stick to the program.

Mr. SULLIVAN. Your point is well taken, though, on MDA, because MDA, as a Presidential directive back whenever it was started, was given its own rules, and it is kind of like a technology development program at large.

Mr. TIERNEY. It is the most ridiculous concept, spiral development.

Dr. SPRUILL. I am sorry, I didn't realize you were talking specifically about missile defense.

Mr. TIERNEY. No, no, we were not. Your answer was fine. But I think he makes a good point.

Is there a plan to deal with the situation on the software and all of the additional lines that are always required on that? I see it noted by Mr. Sullivan. I think we all recognize it as a problem, but I am not sure how we get on top of that, or if you have any ideas or the department does on what we are going to do about that.

Dr. SPRUILL. Well, again, we would look to both the systems engineering folks, the new folks that we are bringing in as a result of WSARA and the developmental testers, to get a handle on it up front. It is a big issue for the independent cost estimators. They have developed data bases and they will bring in what they think is a best estimate.

I am not aware of any special emphasis. I know it is an important component and becoming a bigger component of most of the weapon systems and, therefore, it requires a lot of attention, especially from the cost estimators and the scheduling folks.

Mr. TIERNEY. Thank you.

Mr. Flake.

Mr. FLAKE. [No audible response.]

Mr. Driehaus.

Mr. DRIEHAUS. I will take one more shot, Mr. Chairman.

I want to continue this discussion about the Joint Strike Fighter and the competitive engine because it is important. It is one of the most expensive systems that we are funding right now, and, by Pratt & Whitney's own estimate, the F–135, the design and development has gone from $4.8 billion to $7.3 billion.

That is without competition. We don't know what it will be next year or the year after that, or the potential increases. We have a major manufacturer coming in that we have already invested bil-

lions in for an alternative engine that is now coming through with a fixed price, so we know there won't be cost increases in the future.

Yet, the department is aggressively trying to kill the very competition that we know has worked in the F–15 and the F–16. We have already learned these lessons. By the department's own standards, we should be pursuing competition. When you look at the waiver requirements, it doesn't meet any of them in terms of the justification being made by the department.

So I am continuing to struggle with this idea that, while competition is good almost across the board, we make major exceptions, and we make major exceptions when we know the weapon systems is already over cost significantly, and we don't pursue competition. I need better justification for this from those in procurement that understand it.

So I would love to hear a reasonable explanation other than just short-term investment in competitive engine. Yes, it is going to cost more in the short-term, because you are investing in two engines. But the idea is that over the long term we will improve the competition, we will improve the engine, and we will reduce costs. Help me understand why this exception is being made in this specific case.

Mr. ROTH. Again, in this particular case, I am going to have to defer to the contracting community. I hear you. Again, it is my understanding of the program that the projected savings would only take place if in fact you really had true competition throughout the life of the program, and that apparently is problematic. That may or may not occur.

But let me not get into areas that are outside my bailiwick. You have raised some legitimate contractual sorts of questions. I think the best course is let's get back to you. To the extent we haven't provided you some of this information, in my humble view, we should. It is, I think, an issue that needs to be debated and needs to be sorted out.

Dr. SPRUILL. I believe we need to get back to you also. The department's argument about the up-front costs being real and concern about the savings, but we should share with you those numbers, and I don't have them off the top of my head, so we will have to get back to you on that.

Mr. DRIEHAUS. But is it safe to say that given that the primary contractor is already well over budget, that, in the future, we might expect them to continue to go over budget? I mean, isn't that a safe assumption? And that the whole idea of cost containment through competition is to disincentivize those cost overruns and to provide the competition so that those costs are held in check?

Dr. SPRUILL. I would not say that we expect them to have further cost overruns. The cost estimates that we are providing, that we provide for the budget and we are providing here for Joint Strike Fighter, are best estimates of the actual occurrence, so I would not expect additional cost growth. One never knows, obviously, but the estimates we are giving are not showing additional cost growth.

Mr. DRIEHAUS. But, Dr. Spruill, I assume that you would admit that this is a significant exception to the policy of the Department

of Defense through procurement to encourage competition in major weapons acquisition?

Dr. SPRUILL. It was a special consideration by the department to look at the costs and benefits along the business case line that Mr. Sullivan talks about, and the decision was that it was not cost-effective and, therefore, they are going with a single engine.

Mr. DRIEHAUS. Thank you, Mr. Chairman.

Mr. TIERNEY. Thank you.

Not to jump on your issue on that, but I know two things. One, I know we put the cost estimates and didn't think they were not going to grow, but we only had $300 billion worth of cost overgrowth in the last report GAO did. And if we had gotten the information from the department, we would know what it was more recently on that.

Dr. SPRUILL. Could I say something about that?

Mr. TIERNEY. Sure.

Dr. SPRUILL. And Mr. Sullivan and I arm-wrestle over this periodically. We have 102 programs in our portfolio. Many of those programs are older programs that did have cost growth since their initial start; however, a lot of them are now performing very well. So to take that number and apply it to the department's acquisition today may be just a little bit overly harsh.

Mr. TIERNEY. It might, but I remind you again if we had had the information given to GAO that could give us that assessment of what it was last year, then we would be able to make that kind of measurement on that. So it is not helpful to us to judge whether or not there is accuracy on that. I know there are good intentions.

Can you tell me, Mr. Roth or Dr. Spruill, what changed between February's budget rollout and now that the Secretary decided to make the alternative engine an issue?

Mr. ROTH. I don't think this is a new issue. We made the same issue when we submitted the fiscal year 2010 budget as well and, frankly, in previously budgets as well. We have not funded an alternative engine for the last 5 or 6 years; the program has lived on congressional ads over the last 5 or 6 years. So the decision was made years ago. This is not a new position on the part of the department at all.

Mr. TIERNEY. Let me wrap up just by asking one question about personnel on that. You have recognized it, you seem to be working on that. The rise in contractor work shows a hollowing out of a capacity for management and oversight which isn't just unique to the Department of Defense, it is the Department of State, it is the USAID, it is a lot of agencies down the line.

Do you think we are on a glide path to correct that situation? How long do you think it will be before we have the inherently governmental functions back in-house so that, when we are looking at a contractor who otherwise wouldn't necessarily have any incentive to be concerned about some of the things that the government, whose money it is, might be concerned about? What is the glide path there?

Dr. SPRUILL. Well, we have an initiative, as you know, to grow the acquisition work force by 20,000 folks. Those are in-sourcing to the department; they will be government folks.

Mr. TIERNEY. By when?

Dr. SPRUILL. In the next 5 years, over the fit up period. And we have already started that in 10 and have made good progress. I will quote a number that is probably wrong, but it was about 4, I believe; 4 of the 20 would be in the first years. And so we have been going through the jobs, looking at them, deciding which ones we can in-source.

Now, some of that we are in-sourcing comes from taking contractors that are doing the job today and no longer doing them with contractors; others we are bringing in new people because, as you know, over the last 10 years, we cut the acquisition work force quite a bit, and we believe we cut it too much. So we have an active initiative.

Now, the department is also doing some in-sourcing beyond the acquisition work force, but we are definitely looking to bring those inherently governmental functions in, and at a reasonable rate. We didn't think we could do 20,000 in a year, so it is over a 5-year period.

Mr. TIERNEY. Do we have the work force development capacity to get those people up to where they need to be on their skills and education levels?

Dr. SPRUILL. Yes. And we have the Defense Acquisition University. We sent over a strategy for human capital initiatives and plans for the acquisition work force. I think it just came over a couple weeks ago. So we have laid out a process. I happen to be the functional leader for the business portion of the acquisition work force that is about 7,000 folks. But we have increased the training requirements and the experience requirements for those folks and we are moving people into and through that process so that they will be level 3 certified acquisition professionals.

Mr. TIERNEY. Great. Good.

Well, thank you all very, very much. I appreciate your testimony here today and your exchange of ideas. People will be submitting questions, I assume, within that 5-day period. If you would be kind enough to respond to those when you can as well. This is helpful to us and I appreciate both the progress that is being made at the Department of Defense and the work of the Government Accountability Office.

I see a number of people from both of those areas sitting behind. I want to thank them as well for their good work on this. It is good to see people working together in this sense. You take what you can learn from GAO and decide on that. Push back on them and arm-wrestle with them if you have to to keep it in line.

But the idea is that, with what we have passed in the department for new regulations, we have to get a grip on this, and we appreciate the guidance and the work. So thank you all very much.

Meeting adjourned.

[Whereupon, at 11:45 a.m., the subcommittee was adjourned.]

[Additional information submitted for the hearing record follows:]

CHARRTS No.: HOGR-04-001
House Government Reform Committee
Hearing Date: May 19, 2010
Subject: Defense Acquisition: One Year after Reform
Congressman: Congressman Tierney
Witness: Dr. Spruill
Question: #1

Weapon System Acquisition Reform Act of 2009 (WSARA)

Question: Please provide an update on the status of the Department of Defense's (DOD's) implementation of each requirement of the Weapon System Acquisition Reform Act of 2009 (WSARA).

Answer: Please find the requested information attached.

QFR 1 Attachment -
WSARA Implementati

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WSARA ACTION STATUS

SECTION 101: Cost Assessment and Program Evaluation				
REFERENCE		**STATUTE DIRECTION**	**ACTION REQUIRED & DUE DATE (if applicable)**	**RESPONSIBLE ORGANIZATION**	**STATUS**
1.	101	Codifies the position of Director of Cost Assessment and Program Evaluation (D,CAPE), formerly PA&E, as a Senate confirmed official.	**Personnel Action & Organizational Change**	**D, CAPE & ADMIN**	**Complete;** CAPE Director on board.
2.	101	Assigns the Director two deputy directors, one for cost assessment (**DD,CA**) and one for program evaluation (**DD,PE**).	**Personnel Action & Organizational Change**	**D, CAPE & ADMIN**	**In progress;** Interim solution implemented. DD, PE on board. Official DD, CA waiting confirmation.
3.	101	Personnel of the Cost Analysis Improvement Group (**CAIG**) transfer to the new DD,CA	**Personnel Action & Organizational Change**	**D, CAPE& ADMIN**	**Complete;** CAIG personnel are under the CAPE umbrella.
4.	101	Remaining personnel of PA&E transfer to the DD,PE	**Personnel Action & Organizational Change**	**D, CAPE & ADMIN**	Complete; PA&E personnel are under the CAPE umbrella.
5.	101	Issue policy, procedures & guidance for the conduct of independent cost estimates, cost analyses & program evaluations, including establishment of cost estimate confidence levels & full consideration of life-cycle management & sustainability costs.	**Policy/Guidance Issuance**	**D, CAPE**	**In progress;** D, CAPE will issue policies, procedures, and guidance throughout FY2010 – FY 2011. Top-level requirements related to the acquisition process are included in DTM 09-027.
6.	101	Assess and update Department's cost indexes	**Review & Update** (periodically)	**D, CAPE**	FFRDC study to be completed in FY 2010.
7.	101.	Director has an **annual reporting** requirement to Congress. Must also be posted on a public website	**Annual Report** (within 10 days of budget submittal)	**D, CAPE**	**Complete;** CAPE has posted the report https://www.cape.osd.mil/index.asp as required. Released to the Defense Committees on 6/4/2010.
8.	101	Requirement for a **one-time report** providing recommendations on tracking operating and support costs	**One-Time Report** (due May 2010)	**D, CAPE**	**Complete;** Approved by SECDEF May 26, 2010.

(6/22/2010)

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SECTION 102: Directors of Developmental Test & Evaluation and System Engineering (D, DT&E and D, SE)				
REFERENCE		STATUTE DIRECTION	ACTION REQUIRED & DUE DATE (if applicable)	RESPONSIBLE ORGANIZATION	STATUS
1.	102	Requires the Secretary of Defense to select officials to serve in the newly created roles of Director for Developmental Test & Evaluation (D,DT&E) and Director for Systems Engineering (D,SE)	Personnel Action & Organizational Change	USD(AT&L) & ADMIN	Complete; On 6/23/09 USD (AT &L) memo established DDT&E & Director, SE reporting through DDR&E. 7/01/09 ODDR&E memo stating oversight of DT&E and SE. Director SE appointed on 9/21/ 2010. Director, DT&E appointed March 2010.
2.	102	Allows the Director, DT&E, to also serve as the Director, Test Resources Management Center (TRMC, an existing position) -- OPTIONAL	Personnel Action & Organizational Change	USD(AT&L) & ADMIN	No action required—this was optional. Director of TRMC and DDT&E remain two separate organizations.
3.	102	D, DT&E, SE, & PARCA issue joint guidance relating to the integration of developmental test and systems engineering	Policy/Guidance Issuance	D,DT&E, D,SE, and PARCA	In work.
4.	102	Directors for DT&E and SE are required to submit a joint annual report to Congress.	Annual Report (1st due March 31, 2010)	D,DT&E and D,SE	Complete; The Directors DT&E and SE delivered the report March 31, 2010 to the Hill.
5.	102	SAEs develop and implement plans to ensure they have the appropriate resources for developmental testing and systems engineering	Plans	MIL DEPTs and Defense Agencies with MDAPs	Complete; Initial reports submitted to DT&E and SE. Information was included in annual report to Congress (3/31/2010).
6.	102	SAEs submit one time report to D, SE & D, TE on resource adequacy & implementation	One-time Report (due 180 days after enactment – November 22, 2009)	MIL DEPTs and Defense Agencies with MDAPs	Complete; Reports received November 2009.
7.	102	DT&E and SE joint assessment of Mil Dept & Defense Agency implementation plans	Report Assessment	D,DT&E and D,SE	Complete; Initial assessment of Service & Agency DT and SE capabilities in process. Assessment results included in 1st Annual Report (March 31, 2010).

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| 8. | 102 | D,DT&E approves DT portion of TEMPs for MDAPs | **Policy/Guidance Issuance** | **D,DT&E, D,SE, DPAP & ARA** | Complete; Processes in place. D, DT&E is approving TEMPs. Included in DTM 09-027. |
| 9. | 102 | D,SE approves SE Master Plan for MDAPs | **Policy/Guidance Issuance** | **D,DT&E, D,SE, DPAP & ARA** | Complete; Processes in place. D, SE is approving SEPs. Included in DTM 09-027. |

SECTION 103: Performance Assessments and Root Cause Analyses for MDAPs					
REFERENCE		**STATUTE DIRECTION**	**ACTION REQUIRED & DUE DATE (if applicable)**	**RESPONSIBLE ORGANIZATION**	**STATUS**
1.	103	Designate a senior official as the principal official for conducting performance assessments and root cause analysis for major defense acquisition programs.	**Personnel Action & Organizational Change**	**USD(AT&L) (ARA & ADMIN)**	Complete; DPARCA designated January 4, 2010 by DEPSECDEF.
2.	103	Issue policy, procedures & guidance for the conduct of performance assessments & root cause analyses.	**Policy/Guidance Issuance**	**USD(AT&L) (PARCA)**	Requirements included in DTM 09-027.
3.	103	Submit an annual report to Congress on his/her activities	**Annual Report** (1st due March 1, 2010)	**PARCA**	Complete; Report signed 2/26/2010 & delivered to the Hill on March 1, 2010.

SECTION 104: Assessment of Technological Maturity of MDAPs by DDR&E					
REFERENCE		**STATUTE DIRECTION**	**ACTION REQUIRED & DUE DATE (if applicable)**	**RESPONSIBLE ORGANIZATION**	**STATUS**
1.	104	Conduct an assessment of the technological maturity and technological integration risk of programs at key points during the development of a major defense acquisition program	**Policy/Guidance Issuance**	**D,DR&E (S&T, in consultation with the D,DT&E**	DDR&E is conducting TRAs and integration risk assessments and is revising/assessing methodology for the future. Included in DTM 09-027.
2.	104	Submit an **annual report** to Congress on his/her activities	**Annual Report** (1st due March 1, 2010)	**D,DR&E**	Complete; Report delivered to the defense committees 4/16/2010.

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| 3. | 104 | Submit a **one time report** to the Defense committees describing any additional resources that may be needed to carry out certain responsibilities | **One-Time Report** (due 120 days after enactment –September 22, 2009) | **D,DR&E** | **Complete;** Report delivered to the defense committees 4/16/2010. |
| 4. | 104 | Develop knowledge-based standards against which to measure the technological maturity and integration risk of critical technologies on these programs | **Policy/Guidance Issuance** (due 180 days after enactment – November 22, 2009) | **D,DR&E** | **Complete;** Best practice standards exist--TRA desk book published July 09 and Defense Acquisition Program Support (DAPS) methodology. Will assess both for potential revision and update. |

SECTION 105: Role of the commanders of the combatant commands in identifying joint military requirements

REFERENCE		STATUTE DIRECTION	ACTION REQUIRED & DUE DATE (if applicable)	RESPONSIBLE ORGANIZATION	STATUS
1.	105	JROC Consult with COCOMs during joint requirements development and approval	**Update JROC Charter** (CJCSI 3170 JCIDS already includes.	**Joint Requirements Oversight Council (JROC)**	**Complete;** JROC Charter was updated April 17, 2010.
2.	105	Review of recent legislative changes to the functions of the JROC to assess how these requirements are being implemented	**Report** (May 2011)	**GAO**	Not due until May 2011.

SECTION 201: Consideration of trade-offs among cost, schedule, and performance objectives in Department of Defense acquisition programs

REFERENCE		STATUTE DIRECTION	ACTION REQUIRED & DUE DATE (if applicable)	RESPONSIBLE ORGANIZATION	STATUS
1.	201	JROC ensure consideration of trade-offs among cost, schedule, and performance objectives in consultation with JROC advisors.	**Update JCIDS Manual**	**JROC**	**Complete;** July 31, 2009

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2.	201	JROC consult with COCOMs and USD(AT&L) to establish projected Initial Operational Capability	**Establish projected IOC in conjunction with ICD approval. Update JCIDS Manual**	**JROC**	**Complete;** July 31, 2009
3.	201	Ensure that each new JROC recommended requirement is reviewed to ensure the JROC consulted with the COCOMs; considered trade-offs of cost, schedule, and performance objectives; considered joint portfolio management including mat'l and non-mat'l solutions.	**Policy Review/Revision**	**JROC/USD(AT&L) /USD(C)**	**Complete;** Responsibility is shared among the JROC and its advisors. Updated JCIDS Manual July 31, 2009 and JROC Charter April 17, 2010. No other policy changes are required.
4.	201	Issue guidance in advance of all Analyses of Alternatives (**AOA**), which are due prior to a Milestone A certification.	**Policy Review/DOD 5000.02 Chg**	**D,CAPE and USD(AT&L)**	**Complete;** D, CAPE will use full authority to issue study guidance for all AoAs. Included in DTM 09-027.
5.	201	Milestone decision authority (**MDA**), prior to granting a **Milestone A** certification, to certify that appropriate trade-offs among cost, schedule, and performance have been made to ensure that the program is affordable	**Policy Review/DOD 5000.02 Chg**	**USD(AT&L)**	Included in DTM 09-027.

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SECTION 202: Acquisition Strategies to Ensure Competition Throughout the Lifecycle of MDAPs				
REFERENCE		STATUTE DIRECTION	ACTION REQUIRED & DUE DATE (if applicable)	RESPONSIBLE ORGANIZATION	STATUS
1.	202	Ensure that the acquisition strategy for each program includes measures to preserve the option of competition, at both the prime and subcontract levels, throughout the life of the program	Policy Review/DoD 5000.02 Chg/DFARS Chg (within 60 days [July 22, 2009] after enactment)	USD(AT&L) DPAP	Implemented real-time for each program in the current review cycle. Included in DTM 09-027. Included in Interim Rule, DFARS Case 2009-D014. No comments were submitted in response to the interim rule implementing this section of WSARA. On 4/28/10, the DAR Council agreed to a draft final rule and sent to DAR editor. On 06/21/2010 DAR editor requested DOD approval to publish draft final DFARS rule.
2.	202	Ensure "make-buy" decisions made by a prime contractor are fair.	Policy Review/DoD 5000.02 Chg/DFARS Chg (within 180 days [Nov 22, 2009] of enactment)	USD(AT&L) DPAP	Implemented real-time for each program in the current review cycle. Included in DTM 09-027. Included in Interim Rule, DFARS Case 2009-D014. No comments were submitted in response to the interim rule implementing this section of WSARA. On 4/28/10, the DAR Council agreed to a draft final rule and sent to DAR editor. On 06/21/2010 DAR editor requested DOD approval to publish draft final DFARS rule.
3.	202	Ensure that maintenance and sustainment contracts are awarded competitively and that public sector performance of maintenance and sustainment is fully considered.	Policy Review/DOD 5000.02 Chg/DFARS Chg	USD(AT&L) DPAP	Implemented real-time for each program in the current review cycle. Included in DTM 09-027. Included in Interim Rule, DFARS Case 2009-D014. No comments were submitted in response to the interim rule implementing this section of WSARA. On 4/28/10, the DAR Council agreed to a draft final rule and sent to DAR editor. On 06/21/2010 DAR editor requested DOD approval to publish draft final DFARS rule.

(6/22/2010)

WSARA ACTION STATUS

SECTION 203: Prototyping Requirements for MDAPS				
REFERENCE	**STATUTE DIRECTION**	**ACTION REQUIRED & DUE DATE (if applicable)**	**RESPONSIBLE ORGANIZATION**	**STATUS**
1. 203	Modify acquisition guidance to require competitive prototyping prior to a Milestone B decision	Policy Review & Policy Memo (NLT 90 days [Aug 22, 2009] after enactment)	USD(AT&L)	**Complete.** Already included in December 2008 DoDI 5000.02 as policy; also included in DTM 09-027.
SECTION 204: Actions to identify and address systemic problems in major defense acquisition programs prior to Milestone B approval. (Applies to existing and new programs that are pre-Milestone B.)				
REFERENCE	**STATUTE DIRECTION**	**ACTION REQUIRED & DUE DATE (if applicable)**	**RESPONSIBLE ORGANIZATION**	**STATUS**
1. 204	Notify the Milestone Decision Authority, if at any time prior to a Milestone B decision, the estimate of the total program cost grows by more than 25% or the program schedule for initial operational capability grows by more than 25%.	**Policy Memo**	USD(AT&L)	**Complete.** Included in DTM 09-027.
2. 204	Retroactively applies certification criteria to pre-MS B programs that began prior to enactment of the 2366a certification requirements, but have not yet received MS B approval.	**Policy Memo & Completion of Certifications** for all impacted programs (due one year after enactment – May 22, 2010)	USD(AT&L)	Policy included in DTM 09-027. 16 pre-MS B programs have been identified for "catch-up" certifications and will be conducted in priority order based on available resources. Status letter sent to Defense Committees 6/18/2010.
3. 204	Invokes Nunn-McCurdy "like" review. "Breach" must be reported to Congress and termination considered.	**Policy Memo**	USD(AT&L)	**Complete.** Included in DTM 09-027.

WSARA ACTION STATUS

SECTION 205: Additional requirements for certain major defense acquisition programs. (Applies to existing programs, as well as new programs.)				
REFERENCE	STATUTE DIRECTION	ACTION REQUIRED & DUE DATE (if applicable)	RESPONSIBLE ORGANIZATION	STATUS
1. 205	Amends section 2366b certification criteria to include mandatory Preliminary Design Review (PDR) to occur before MS B.	Policy Memo	USD(AT&L)	Complete. Included in DTM 09-027.
2. 205	Retroactively applies certification criteria to post-MS B programs that began prior to enactment of the 2366b certification requirements, but have not yet received MS C approval.	Policy Memo & Completion of Certifications for all impacted programs (due 270 days after enactment – February 22, 2010)	USD(AT&L)	Policy included in DTM 09-027. 35 programs were identified in this category. These programs have been placed on a "catch-up" certification list and will be conducted in priority order based on available resources. Status letter sent to Defense Committees 6/18/2010.
3. 205	Require that programs entering into system development (i.e., receiving Milestone B approval) on the basis of a waiver to any of the statutory criteria for Milestone B, must be reviewed by the milestone decision authority at least annually until they meet all of the criteria. It also requires that these programs be flagged in any budget documents that come to Congress.	Policy Memo	USD(AT&L)	Complete. Included in DTM 09-027.

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| 4. | 205 | Require a semi-annual review, by the official in charge of performance assessment, of programs that have not been terminated following a Nunn-McCurdy breach, until one year after the date that such programs receive a new milestone approval (pursuant to the new requirements established in section 206 of this bill). | Policy Memo | USD(AT&L) | **Complete.** Included in DTM 09-027. |

SECTION 206: Critical cost growth in major defense acquisition programs

REFERENCE		STATUTE DIRECTION	ACTION REQUIRED & DUE DATE (if applicable)	RESPONSIBLE ORGANIZATION	STATUS
1.	206	Requires assessment to perform a root cause analysis following a critical Nunn-McCurdy breach.	Policy Memo	USD(AT&L)	Included in DTM 09-027.
2.	206	Critical breach MDAP termination or restructuring, with rescission of the most recent milestone approval and requiring a new milestone approval prior to proceeding	Policy Memo	USD(AT&L)	Included in DTM 09-027.
3.	206	Clarifies the definition of "major defense acquisition program"	Policy Memo	USD(AT&L)	Included in DTM 09-027.

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SECTION 207: Organizational conflicts of interest in major defense acquisition programs				
REFERENCE	STATUTE DIRECTION	ACTION REQUIRED & DUE DATE (if applicable)	RESPONSIBLE ORGANIZATION	STATUS
1. 207	Provide Panel on Contracting Integrity recommendations to SecDef	**Panel Review and Recommendations/DFARS Chg NLT 90 days after enactment (August 2009)**	USD(AT&L)	**Complete.** DFARS Case 2009-D015 was opened on July 21, 2009. The DoD Panel on Contracting Integrity released their recommendations on September 30, 2009. Report went forward from USD(AT&L) to DepSec Lynn on Feb 9th.
2. 207	Revise regulations dealing with contractors' organizational conflicts of interest, considering the recommendations of the existing DOD Panel on Contracting Integrity and the Administrator of the Office of Federal Procurement Policy.	**DFARS Chg NLT 270 days after enactment (March 2010)**	USD(AT&L)	DFARS Case 2009-D015 - The proposed DFARS rule was published in the Federal Register on April 22, 2010 with a comment period to end on 6/21/2010. On 6/15/2010, the comment period was extended to 7/21/2010. Comments will be reviewed and adjudicated prior to issuance of the final rule. If there are substantial recommendations, the case may need to go back to the DAR Council and be resubmitted to OIRA. It is difficult at this point to estimate when the DoD regulations will be finalized.
SECTION 301: Awards for Department of Defense personnel for excellence in the acquisition of products and services.				
REFERENCE	STATUTE DIRECTION	ACTION REQUIRED & DUE DATE (if applicable)	RESPONSIBLE ORGANIZATION	STATUS
1. 301	Commence a program to recognize excellent performance by individuals and teams of personnel in the acquisition of products and services at DoD	**Establish an Awards Program**	USD(AT&L)	**Complete.** A program already existed to recognize teams (Packard Award). New program established this year (the USD(AT&L) Workforce Achievement Award) to recognize individuals for superior performance in the acquisition of products and services for DoD. Eight individuals received the award this year.

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SECTION 302: Earned Value Management				
REFERENCE		**STATUTE DIRECTION**	**ACTION REQUIRED & DUE DATE (if applicable)**	**RESPONSIBLE ORGANIZATION**	**STATUS**
1.	302	Adds four elements to a study on the use of earned value management that the Secretary of Defense was already required to do, per the FY09 NDAA, and also extends the due date of that report.	**Report to Congress Due October 14, 2009**	USD(AT&L)	**Complete.** USD(AT&L) sent report to Congress on November 2, 2009. Report includes the four additional EVM elements required by WSARA.

SECTION 303: Expansion of national security objectives of the national technology and industrial base.				
REFERENCE		**STATUTE DIRECTION**	**ACTION REQUIRED & DUE DATE (if applicable)**	**RESPONSIBLE ORGANIZATION**	**STATUS**
1.	303	Modifies the requirement for defense capability assessments (which are performed pursuant to 10 U.S.C. 2505), to require that DoD consider the effects of the termination of major defense acquisition programs on the industrial base.	**Policy Review**	USD(AT&L)	Current policies and practices are under review; initial assessment is that additional guidance will be required as well as additional resources to comply with the statute.

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SECTION 304: Comptroller General of the United States reports on costs and financial information regarding major defense acquisition programs.				
REFERENCE		STATUTE DIRECTION	ACTION REQUIRED & DUE DATE (if applicable)	RESPONSIBLE ORGANIZATION	STATUS
1.	304	Report on growth in operating and support costs of major weapon systems	Report May 22, 2010	GAO	GAO exit conference scheduled for 5/11/2010. Completed May 2010.
2	304	Report on how DoD collects financial information relating to MDAPs (in consultation with the CMOs of DoD and the MILDEPs	Report May 22, 2010	GAO	Unknown

(6/22/2010)

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CHARRTS No.: HOGR-04-002
House Government Reform Committee
Hearing Date: May 19, 2010
Subject: Defense Acquisition: One Year after Reform
Congressman: Congressman Tierney
Witness: Mr. Roth
Question: #2

Section 8121 of Public Law 111-118

Question: At a March 31, 2009 meeting with Department of Defense (DOD) officials, Ranking Member Flake was informed that projects managed by the Department - including all projects earmarked by members of Congress - are competitively bid, as is consistent with the Federal Acquisition Regulation. Section 8121 of Public Law 111-118 states that all earmarks contained in the fiscal year 2010 defense appropriations bill intended for for-profit entities should be awarded using "acquisition regulations for full and open competition."How will the changes put forth in Section 8121 change the way DOD awards earmarks intended for for-profit entities?

Answer: The statutory competition requirements mandated by section 8121(c) are more stringent. It requires use of full and open competition for congressionally directed spending items and earmarks intended for award to a "for-profit" entity sponsored solely by members of the House, except any contract previously awarded using full and open competition that remains in effect during FY 2010 satisfies the section 8121(c) competition requirement. It does not allow DoD to apply exceptions to full and open competition provided for in the acquisition regulations.

CHARRTS No.: HOGR-04-002
House Government Reform Committee
Hearing Date: May 19, 2010
Subject: Defense Acquisition: One Year after Reform
Congressman: Congressman Tierney
Witness: Dr. Spruill
Question: #2

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CHARRTS No.: HOGR-04-003
House Government Reform Committee
Hearing Date: May 19, 2010
Subject: Defense Acquisition: One Year after Reform
Congressman: Congressman Tierney
Witness: Mr. Roth
Question: #3

Awarding of Earmarks

Question: During the March 31st meeting, Ranking Member Flake requested information from DOD on a subset of earmarks contained in the fiscal year 2008 defense appropriations bill. Specifically, he asked for information on which companies received contracts, what competitive procedures were used to award those contracts, and, when competitive procedures were not used, what the justification was. He has received this information for nearly all of the earmarks he requested it for, and has found that an overwhelming number of those earmarks were awarded to recipients listed in the Congressional certification letters filed by the Members of Congress who sponsored the earmark. DOD has informed him that the personnel responsible for awarding these earmarks do not see these certification letters. What are the circumstances that might lead to earmarks being awarded, seemingly coincidentally, to recipients intended by Members of Congress when the personnel responsible for awarding these earmarks don't know who those recipients are?

Answer: The basis for a particular contract award would have to be evaluated based on the facts surrounding that award. An example of a circumstance where a recipient intended by a congressional earmark actually gets an award would be where that recipient receives the contract in response to full and open competition.

CHARRTS No.: HOGR-04-003
House Government Reform Committee
Hearing Date: May 19, 2010
Subject: Defense Acquisition: One Year after Reform
Congressman: Congressman Tierney
Witness: Dr. Spruill
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CHARRTS No.: HOGR-04-004
House Government Reform Committee
Hearing Date: May 19, 2010
Subject: Defense Acquisition: One Year after Reform
Congressman: Congressman Tierney
Witness: Mr. Roth
Question: #4

Relationship between Program Officers and Defense Contractors

Question: It is Ranking Member Flake's understanding that program officers who are responsible for managing contracts work closely with the defense contractors who were awarded contracts to perform the work.To what extent does this working relationship facilitate earmark requests that favor those specific defense contractors with whom the program officer works, that might not otherwise have been requested? In other words, does having immediate access to a program officer make it easier for defense contractors and their lobbyists to get Congressional support for earmarks that favor those defense contractors?

Answer: We do not see a nexus that would facilitate contractors and lobbyists getting congressional support for earmarks.

CHARRTS No.: HOGR-04-004
House Government Reform Committee
Hearing Date: May 19, 2010
Subject: Defense Acquisition: One Year after Reform
Congressman: Congressman Tierney
Witness: Dr. Spruill
Question: #4

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Answer: We do not see a nexus that would facilitate contractors and lobbyists getting congressional support for earmarks.

CHARRTS No.: HOGR-04-005
House Government Reform Committee
Hearing Date: May 19, 2010
Subject: Defense Acquisition: One Year after Reform
Congressman: Congressman Tierney
Witness: Mr. Roth
Question: #5

Weapons Systems Acquisition Reform Act of 2009 (WSARA)

Question: The Weapons Systems Acquisition Reform Act of 2009 (WSARA) was a good faith effort aimed at reforming the excessively complex acquisitions process that DOD undertakes. Unfortunately, many of the major pre-existing programs, which continue to cause problems, are not affected by these reforms because the reforms are not backdated.Of our total planned commitments at this point, what percentage of that investment is committed to projects that actually fall under the purview of WSARA?Given the number of pre-existing programs and the huge dollar amounts associated with them, does DOD have any plans to make these common sense reforms retroactive?

Answer: While it is true that newer programs will garner the largest benefit from the reforms, older programs will see some of the benefits. WSARA did not contain a "grandfather provision" that exempted existing programs from the reforms. On the day it was signed (May 22, 2009), the Department immediately applied the provisions of new law to each existing and emerging Major Defense Acquisition Program. As an example, the changes to the critical cost breach review process are applicable to all programs post-Milestone (MS) B, including those past MS C and beyond. Additionally, the statute requires the Department to perform "retroactive" 2366 certifications for all MDAPs in pre-Milestone C status that received either a MS A or MS B approval prior to the enactment of the requirement for 2366a and 2366b certifications. Those programs requiring retroactive certifications have been placed on a prioritized list which the Department is actively working to process.

CHARRTS No.: HOGR-04-005
House Government Reform Committee
Hearing Date: May 19, 2010
Subject: Defense Acquisition: One Year after Reform
Congressman: Congressman Tierney
Witness: Dr. Spruill
Question: #5

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CHARRTS No.: HOGR-04-006
House Government Reform Committee
Hearing Date: May 19, 2010
Subject: Defense Acquisition: One Year after Reform
Congressman: Congressman Tierney
Witness: Mr. Roth
Question: #6

Impact of Acquisitions Reform Legislation

Question: Some experts have assessed that both WSARA and the Implementing
Management for Performance and Related Reforms to Obtain Value in Every Acquisition Act of
2010, while well intended, will not have the desired effect of reforming DOD's acquisitions
process.Will the reforms instituted by this legislation simply be another added layer of
bureaucracy on an already overly-bureaucratic system?How will the addition of performance
management metrics and goals fix the problem inherent in defense acquisition of complex, hard
to price, weapons systems?How will awarding additional bonuses and providing other monetary
and career-oriented incentives to personnel under this legislation change the day-to-day
responsibilities of these DOD employees?Will the additional costs of these awards and
incentives impact the amount of savings DOD reaps from instituting these reforms?

Answer: 1. The reforms enacted in WSARA complement initiatives that the Department
firmly supports and is pursuing—starting programs right, improving program execution, and
strengthening the acquisition workforce. With regard to the IMPROVE Act (H.R. 5013), it is
difficult to judge as it remains to be seen which portions of that bill actually become statute as
part of the FY11 NDAA. We do have concerns with certain provisions of H. R. 5013 as
currently written. For example, we are concerned with the proposed expansion of the roles and
mission of the Director for Performance Assessment and Root Cause Analysis, a new
organization directed by WSARA and only recently established. Although we support the
concept of system-wide institutional metrics designed to measure the performance of the
acquisition system, we believe that the Secretary of Defense should be afforded the latitude to
assign this task to an organization of his choice. As another example, we are concerned that
imposing a requirement that cost or price be given at least equal importance as technical or other
criteria in evaluating competitive proposals for defense contracts unnecessarily limits the
flexibility of the source selection authority and the contracting officer—and severely impacts the
ability of the contracting officer to select the proposal representing the best value to the
Government.

2. Metrics and goals are not an end in themselves, but rather a way for DoD to provide status
and monitor projects during their execution and bring potential "bad news" early to senior
decision-makers. DoD management cannot fix problems they're not aware of and the current
processes have too often permitted issues and flaws in program execution and conception to go
unnoticed until they reach a point where they grow into major cost and schedule breaches. By
making project execution performance more transparent, and opening up the opportunity to make
proactive decisions before execution issues become major problems, DoD expects to improve
acquisition outcomes.

3. The bonuses and incentives will not change the responsibilities of these employees. However, such bonuses and incentives will motivate the acquisition workforce to achieve and sustain high levels of performance.

4. The significant responsibility associated with successfully implementing reforms and executing $1.6 trillion in defense acquisition programs merits appropriate use of incentives to achieve and sustain a high quality and motivated acquisition workforce.

CHARRTS No.: HOGR-04-007
House Government Reform Committee
Hearing Date: May 19, 2010
Subject: Defense Acquisition: One Year after Reform
Congressman: Congressman Tierney
Witness: Mr. Roth
Question: #7

Assessment of Additional Acquisition Process Reforms

Question: Given your expertise on the acquisitions process, what additional reforms would you institute on top of the ones Congress has approved to improve this process? Is Congress missing the mark, not going far enough, or going too far?

Answer: The Department is continuing to fully implement the changes directed by WSARA. We fully support them. It is premature to predict what total impact those reforms will have until we have some time to see them in action. We will also continue to examine our processes internally and initiate other reforms as necessary. We do not believe we need additional legislative direction at this time.

CHARRTS No.: HOGR-04-007
House Government Reform Committee
Hearing Date: May 19, 2010
Subject: Defense Acquisition: One Year after Reform
Congressman: Congressman Tierney
Witness: Dr. Spruill
Question: #7

Assessment of Additional Acquisition Process Reforms

Question: Given your expertise on the acquisitions process, what additional reforms would you institute on top of the ones Congress has approved to improve this process? Is Congress missing the mark, not going far enough, or going too far?

Answer: The Department is continuing to fully implement the changes directed by WSARA. We fully support them. It is premature to predict what total impact those reforms will have until we have some time to see them in action. We will also continue to examine our processes internally and initiate other reforms as necessary. We do not believe we need additional legislative direction at this time.

CHARRTS No.: HOGR-04-008
House Government Reform Committee
Hearing Date: May 19, 2010
Subject: Defense Acquisition: One Year after Reform
Congressman: Congressman Tierney
Witness: Dr. Spruill
Question: #8

Economic Impact of Foreign Sourcing when Analyzing Cost

Question: In analyzing the cost of a major weapon system or in assessing a bid for a contract on a major weapon system, to what extent, if any, is the economic impact of foreign sourcing assessed by DOD?

Answer: If a foreign offeror submits a proposal or if a U.S. company submits a proposal with substantial foreign content, the proposals are evaluated in accordance with existing laws and regulations governing foreign participation in the U.S. defense market. The relevant regulatory guidance is contained in FAR Part 25 and DFARS 225. The Department does not, however, conduct an independent analysis of the impact on the U.S. economy should the award be made, in compliance with all laws and regulations, to a foreign company or to a U.S. company with substantial foreign content.

CHARRTS No.: HOGR-04-009
House Government Reform Committee
Hearing Date: May 19, 2010
Subject: Defense Acquisition: One Year after Reform
Congressman: Congressman Tierney
Witness: Dr. Spruill
Question: #9

Foreign Bidders and Potential Economic Impact on Domestic Employment

Question: Does DOD have the ability to analyze the potential economic impact on domestic employment of awarding a contract to a foreign bidder?

Answer: Based upon the evaluations described in the response to question 8, the Department does not conduct a separate, specific analysis of the potential impact on domestic employment of awarding particular contracts to foreign bidders

CHARRTS No.: HOGR-04-010
House Government Reform Committee
Hearing Date: May 19, 2010
Subject: Defense Acquisition: One Year after Reform
Congressman: Congressman Tierney
Witness: Mr. Roth
Question: #10

Additional Information: Business Case Analysis of F135 and the F136

Question: In addition, during the hearing you agreed on the record to report back on the following points raised by Congressman Driehaus:You offered to provide detailed budget information concerning DOD's business case analysis for the F135 and the F136 engines.

Answer: An additional investment of $2.9B from Fiscal Year (FY) 2011 through FY 2016 would be required to mature the second engine sufficiently for true competition. This figure includes the costs to complete development of the second engine as well as conduct directed buys to prepare the second source for the competitive procurement of Joint Strike Fighter (JSF) engines beginning in 2017, and to create the necessary logistics support to operate and sustain two different engines on the deployed JSF aircraft variants. Based on analysis conducted by the Office of the Director, Cost Assessment and Program Evaluation (D, CAPE), these additional costs would not be offset by potential savings generated by competition. A recent update of the Department's 2007 business case for the JSF alternate engine, which accounts for the additional funding provided by Congress and more recent engine program actual cost performance, concludes that the second engine is at a break-even point in net present values.

The attached paper provides budget-level documentation of the remaining investment required to compete a second source engine. This paper was previously provided to the Senate Armed Services Committee.

QFR 13 attachment
JSF alt eng cost info ׀

From: F135/F136 Business Case Analysis with the SASC

DUE-OUTS #3: White paper on the procurement below the line costs directed buys associated with the $2.9B.

Response: The $2.9B is an estimate of the additional costs associated with development and procurement of the F136 alternative engine for the Joint Strike Fighter (JSF). A breakout of these costs are shown table 1.

Table 1. Breakout of F136 additional costs from fiscal years 2011 through 2016

TY$M GE F136 Costs		FY11	FY12	FY13	FY14	FY15	FY16	FY11-16
SDD	Δ$	+418	+321	+225	+128	+64	+32	+1188
Component Imp. Program (CIP)	Δ$		+56	+62	+81	+86	+60	+345
Development Total	Δ$	**+418**	**+377**	**+287**	**+209**	**+150**	**+92**	**+1533**
Engines for Installation	Δ$	-	-	+178	+161	+143	+106	+587
Initial Spares	Δ$	-	-	+48	+44	+38	+30	+160
Tooling	Δ$	-	-	+30	+45	+30	+28	+133
Support	Δ$	-	-	+125	+125	+125	+125	+500
Procurement Total	Δ$	**-**	**-**	**+381**	**+375**	**+336**	**+289**	**+1381**
Acquisition Total	Δ$	**+418**	**+377**	**+668**	**+584**	**+486**	**+381**	**+2914**

All costs in table 1 are delta costs associated with a dual source engine vice a single source engine program. Delta costs are shown for both development and production. The estimate assumes that directed buys of both engines begin in FY 2013 to prepare a second source for competitive procurement beginning in FY 2017.

The development deltas consist of System Design and Development (SDD) and Component Improvement Program (CIP) costs. The SDD cost line shows the additional RDT&E funding required to complete development, qualification and test of the F136 engine on a timeline consistent with the JSF schedule reflected in the President's 2011 budget. The CIP funding level is modeled after the CIP provided to the F135 program. CIP funding usually improves reliability and maintainability of engines resulting in a lower overall life cycle cost. Both the SDD and CIP deltas are direct costs associated with the alternative engine.

The procurement cost deltas are broken into four elements.

The 1st procurement element, Engines for Installation, shows the higher cost associated with directed buys of both the F135 and F136 engines. The costs of these engines are estimated using learning curves. The concept of a learning curve is that the initial unit is the most expensive and as successive units are produced, the cost for each unit is reduced. The Engines for Installation delta costs include the higher initial procurement cost of the F136 engine and the increase in average unit cost for the F135 engine due to reduced quantity per year.

The second procurement element in the table is the delta cost for Initial Spares. The cost of initial spares also is estimated using learning curves. Accordingly, the delta cost includes the higher initial procurement cost of spares for the F136 as well as an increase in the spares cost for the F135

due to reduced quantity.

The third procurement element in the table is the delta cost for Tooling. This cost is primarily due to the unique tooling associated with the start up of the F136 engine. In addition there is a minor cost associated with tooling duplication/inefficiency due to having two engine sources.

The fourth procurement element in the table is the delta cost for Support. This cost is for the unique support costs associated with the F136 engine. Support costs include the Government and Contractor costs to implement a unique engine support program including manuals, documentation, support equipment, training, reliability program, maintainability program (i.e. identification of troubleshooting, repair, servicing, alignment and adjustment, functional test and checkout, inspection, calibration, overhaul and the like).

The final row on the table is the total RDT&E plus procurement cost. The total delta cost for FY 2011 through FY 2016 is $2.9B as shown on the lower right hand corner of the table.

CHARRTS No.: HOGR-04-011
House Government Reform Committee
Hearing Date: May 19, 2010
Subject: Defense Acquisition: One Year after Reform
Congressman: Congressman Tierney
Witness: Mr. Roth
Question: #11

Additional Information: JSF Long-Term Savings

Question: You offered to provide detailed budget information concerning the long-term savings of the alternative engines for the Joint Strike Fighter.

Answer: An additional investment of $2.9B from Fiscal Year (FY) 2011 through FY 2016 would be required to mature the second engine sufficiently for true competition. This figure includes the costs to complete development of the second engine as well as conduct directed buys to prepare the second source for the competitive procurement of Joint Strike Fighter (JSF) engines beginning in 2017, and to create the necessary logistics support to operate and sustain two different engines on the deployed JSF aircraft variants. Based on analysis conducted by the Office of the Director, Cost Assessment and Program Evaluation (D, CAPE), these additional costs would not be offset by potential savings generated by competition. A recent update of the Department's 2007 business case for the JSF alternate engine, which accounts for the additional funding provided by Congress and more recent engine program actual cost performance, concludes that the second engine is at a break-even point in net present values.

The attached paper provides budget-level documentation of the remaining investment required to compete a second source engine. This paper was previously provided to the Senate Armed Services Committee.

QFR 13 attachment
JSF alt eng cost info |

From: F135/F136 Business Case Analysis with the SASC

DUE-OUTS #3: White paper on the procurement below the line costs directed buys associated with the $2.9B.

Response: The $2.9B is an estimate of the additional costs associated with development and procurement of the F136 alternative engine for the Joint Strike Fighter (JSF). A breakout of these costs are shown table 1.

Table 1. Breakout of F136 additional costs from fiscal years 2011 through 2016

TY$M GE F136 Costs		FY11	FY12	FY13	FY14	FY15	FY16	FY11-16
SDD	Δ$	+418	+321	+225	+128	+64	+32	+1188
Component Imp. Program (CIP)	Δ$		+56	+62	+81	+86	+60	+345
Development Total	Δ$	**+418**	**+377**	**+287**	**+209**	**+150**	**+92**	**+1533**
Engines for Installation	Δ$	-	-	+178	+161	+143	+106	+587
Initial Spares	Δ$	-	-	+48	+44	+38	+30	+160
Tooling	Δ$	-	-	+30	+45	+30	+28	+133
Support	Δ$	-	-	+125	+125	+125	+125	+500
Procurement Total	Δ$	**-**	**-**	**+381**	**+375**	**+336**	**+289**	**+1381**
Acquisition Total	Δ$	**+418**	**+377**	**+668**	**+584**	**+486**	**+381**	**+2914**

All costs in table 1 are delta costs associated with a dual source engine vice a single source engine program. Delta costs are shown for both development and production. The estimate assumes that directed buys of both engines begin in FY 2013 to prepare a second source for competitive procurement beginning in FY 2017.

The development deltas consist of System Design and Development (SDD) and Component Improvement Program (CIP) costs. The SDD cost line shows the additional RDT&E funding required to complete development, qualification and test of the F136 engine on a timeline consistent with the JSF schedule reflected in the President's 2011 budget. The CIP funding level is modeled after the CIP provided to the F135 program. CIP funding usually improves reliability and maintainability of engines resulting in a lower overall life cycle cost. Both the SDD and CIP deltas are direct costs associated with the alternative engine.

The procurement cost deltas are broken into four elements.

The 1st procurement element, Engines for Installation, shows the higher cost associated with directed buys of both the F135 and F136 engines. The costs of these engines are estimated using learning curves. The concept of a learning curve is that the initial unit is the most expensive and as successive units are produced, the cost for each unit is reduced. The Engines for Installation delta costs include the higher initial procurement cost of the F136 engine and the increase in average unit cost for the F135 engine due to reduced quantity per year.

The second procurement element in the table is the delta cost for Initial Spares. The cost of initial spares also is estimated using learning curves. Accordingly, the delta cost includes the higher initial procurement cost of spares for the F136 as well as an increase in the spares cost for the F135

due to reduced quantity.

The third procurement element in the table is the delta cost for Tooling. This cost is primarily due to the unique tooling associated with the start up of the F136 engine. In addition there is a minor cost associated with tooling duplication/inefficiency due to having two engine sources.

The fourth procurement element in the table is the delta cost for Support. This cost is for the unique support costs associated with the F136 engine. Support costs include the Government and Contractor costs to implement a unique engine support program including manuals, documentation, support equipment, training, reliability program, maintainability program (i.e. identification of troubleshooting, repair, servicing, alignment and adjustment, functional test and checkout, inspection, calibration, overhaul and the like).

The final row on the table is the total RDT&E plus procurement cost. The total delta cost for FY 2011 through FY 2016 is $2.9B as shown on the lower right hand corner of the table.

CHARRTS No.: HOGR-04-012
House Government Reform Committee
Hearing Date: May 19, 2010
Subject: Defense Acquisition: One Year after Reform
Congressman: Congressman Tierney
Witness: Dr. Spruill
Question: #12

Additional Information: Cancellation of the Future Combat System (FCS)

Question: During a discussion with Chairman Tierney, you offered to provide more details about the cancellation of the Future Combat System program and its piecemeal revival under a different name.

Answer:

In June 2009, Dr. Carter, Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)) cancelled the Future Combat System (FCS) Brigade Combat Team (BCT) acquisition program. Subsequent to reevaluation of capability needs and current Army priorities, development efforts previously under the FCS acquisition are being transitioned to separate acquisition programs.

Increment 1 Early – Infantry Brigade Combat Team (E-IBCT): In January 2010, the department baselined the Increment 1 Early Infantry Brigade Combat Team (Inc 1 E-IBCT) acquisition. This program acquires early increments of FCS developed products to support 9 IBCTs, and it includes the following components: Tactical and Urban Unattended Ground Sensors; Class I Unmanned Aerial Vehicle System Block 0; Small Unmanned Ground Vehicle Block 1; and a Network Integration Kit (Block 0). Low-Rate Initial Production for 1 IBCT set was approved in December 2009 with further production dependant on results of limited user testing planned for later this year.

Ground Combat Vehicle (GCV): The GCV program has been designated a pre-Major Defense Acquisition Program (MDAP). The Army completed an evaluation of ground combat vehicle deficiencies and has an approved Initial Capability document. The Army is conducting an Analysis of Alternatives to inform a decision on the acquisition path forward later this year.

Network Integration Kit (NIK): This follow-on to the E-IBCT NIK effort has been designated a pre-MDAP. A Material Development Decision (MDD) review on this program is planned for later this calendar year. This MDAP will be focused on the incremental delivery of integrated networking capability to the Army.

Multi-Mission Unmanned Ground Vehicle (MM UGV): The MM UGV program has also been designated a pre-MDAP with a MDD review planned for later this calendar year. This acquisition will include a lethal and a Counter-IED capability.

Follow-on to E-IBCT: It is anticipated that there will be additional acquisitions to support continued procurement of the E-IBCT unattended sensors and unmanned air and ground capabilities for additional IBCTs (beyond the 9 planned). The scope and content of those acquisitions will be finalized after the completion of the E-IBCT Initial Operational Test and Evaluation and the full-rate production decision for the E-IBCT.

The following elements of the FCS acquisition are not currently being pursued:

Non-Line of Sight – Launch System (NLOS-LS) – The Army conducted a Precision Fires Portfolio Review examining the balance of high-end precision munitions and lower-end near-precision munitions. The Army determined the NLOS-LS capability did not provide a cost-effective precision fire capability and was redundant with capabilities provided by existing precision fires programs. As a result, the Army concluded NLOS-LS was no longer required.

Class IV Unmanned Aerial Vehicle: The Army's modernization assessment concluded that continued investment in the CL IV UAV was not warranted at this time.

Multifunction Utility/Logistics and Equipment-Transport (MULE-T) and MULE-Countermine (MULE-CM): The Army's modernization assessment concluded that the MULE-T and MULE-CM did not meet rapidly changing threats. The FCS developmental efforts in the Armed Robotic Vehicle - Assault (Light), which leverages technologies derived from the MULE systems will transition to a Multi-Mission Unmanned Ground Vehicle acquisition.

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CHARRTS No.: HOGR-04-013
House Government Reform Committee
Hearing Date: May 19, 2010
Subject: Defense Acquisition: One Year after Reform
Congressman: Congressman Tierney
Witness: Dr. Spruill
Question: #13

Additional Information: JSF Long-Term Savings

Question: During a discussion with Congressman Driehaus, you offered to provide detailed budget information concerning the long-term savings of the alternative engine for the Joint Strike Fighter.

Answer: An additional investment of $2.9B from Fiscal Year (FY) 2011 through FY 2016 would be required to mature the second engine sufficiently for true competition. This figure includes the costs to complete development of the second engine as well as conduct directed buys to prepare the second source for the competitive procurement of Joint Strike Fighter (JSF) engines beginning in 2017, and to create the necessary logistics support to operate and sustain two different engines on the deployed JSF aircraft variants. Based on analysis conducted by the Office of the Director, Cost Assessment and Program Evaluation (D, CAPE), these additional costs would not be offset by potential savings generated by competition. A recent update of the Department's 2007 business case for the JSF alternate engine, which accounts for the additional funding provided by Congress and more recent engine program actual cost performance, concludes that the second engine is at a break-even point in net present values.

The attached paper provides budget-level documentation of the remaining investment required to compete a second source engine. This paper was previously provided to the Senate Armed Services Committee.

QFR 13 attachment
JSF alt eng cost info ⌐

From: F135/F136 Business Case Analysis with the SASC

DUE-OUTS #3: White paper on the procurement below the line costs directed buys associated with the $2.9B.

Response: The $2.9B is an estimate of the additional costs associated with development and procurement of the F136 alternative engine for the Joint Strike Fighter (JSF). A breakout of these costs are shown table 1.

Table 1. Breakout of F136 additional costs from fiscal years 2011 through 2016

TY$M GE F136 Costs		FY11	FY12	FY13	FY14	FY15	FY16	FY11-16
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The 1st procurement element, Engines for Installation, shows the higher cost associated with directed buys of both the F135 and F136 engines. The costs of these engines are estimated using learning curves. The concept of a learning curve is that the initial unit is the most expensive and as successive units are produced, the cost for each unit is reduced. The Engines for Installation delta costs include the higher initial procurement cost of the F136 engine and the increase in average unit cost for the F135 engine due to reduced quantity per year.

The second procurement element in the table is the delta cost for Initial Spares. The cost of initial spares also is estimated using learning curves. Accordingly, the delta cost includes the higher initial procurement cost of spares for the F136 as well as an increase in the spares cost for the F135

due to reduced quantity.

The third procurement element in the table is the delta cost for Tooling. This cost is primarily due to the unique tooling associated with the start up of the F136 engine. In addition there is a minor cost associated with tooling duplication/inefficiency due to having two engine sources.

The fourth procurement element in the table is the delta cost for Support. This cost is for the unique support costs associated with the F136 engine. Support costs include the Government and Contractor costs to implement a unique engine support program including manuals, documentation, support equipment, training, reliability program, maintainability program (i.e. identification of troubleshooting, repair, servicing, alignment and adjustment, functional test and checkout, inspection, calibration, overhaul and the like).

The final row on the table is the total RDT&E plus procurement cost. The total delta cost for FY 2011 through FY 2016 is $2.9B as shown on the lower right hand corner of the table.

Questions for the Record
Hearing: Defense Acquisitions: One Year After Reform
Subcommittee on National Security and Foreign Affairs
Committee on Oversight and Government Reform
May 19, 2010

1. To the extent that you have the necessary information, please provide an update on the status of the Department of Defense's (DOD's) implementation of each requirement of the Weapon Systems Acquisition Reform Act of 2009 (WSARA).

   GAO has not specifically reviewed the extent to which DOD has implemented each requirement in the Weapon Systems Acquisition Reform Act of 2009 (WSARA).[1] However, our March 2010 annual assessment of major weapon programs[2] discussed several WSARA provisions and made observations on DOD's implementation of them. Specifically, we noted that the majority of the systems that had not yet passed Milestone B planned to develop competitive prototypes and had scheduled a preliminary design review before Milestone B. In our ongoing work on developmental testing; the role of the Combatant Commanders in defining joint military requirements; and cost, schedule, and performance tradeoffs, we plan to include additional information on DOD's implementation of WSARA. We will also continue to include information on how DOD is implementing selected provisions of the WSARA in our 2011 annual assessment of DOD weapon programs.

2. In analyzing the cost of a major weapon system or in assessing a bid for a contract on a major weapon system, to what extent, if any, is the economic impact of foreign sourcing assessed by DOD?

   DOD would be in a better position to answer if and how it analyzes the cost or economic impact of foreign sourcing on major weapon systems. GAO has not issued any recent reports that address this specific issue.

3. Does DOD have the ability to analyze the potential economic impact on domestic employment of awarding a contract to a foreign bidder?

   GAO has not assessed DOD's ability to analyze the potential economic impact on domestic employment when it awards a contract to a foreign bidder.

4. Has the Government Accountability Office performed work on the overall cost of foreign sourcing within DOD? If so please provide the Subcommittee the report(s) and/or related finding.

   GAO has not performed work on the cost of foreign sourcing within DOD.

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[1] Pub. L. No. 111-23.
[2] *Defense Acquisitions: Assessments of Selected Weapon Programs*, GAO-10-388SP (Washington, D.C.: March 30, 2010).

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