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HEARING

ON

NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2009

AND

OVERSIGHT OF PREVIOUSLY AUTHORIZED PROGRAMS

BEFORE THE

COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

SECOND SESSION

AIR AND LAND FORCES SUBCOMMITTEE HEARING

ON

BUDGET REQUEST ON ARMY ACQUISITION PROGRAMS

HEARING HELD
APRIL 10, 2008

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FISCAL YEAR 2009 NATIONAL DEFENSE AUTHORIZATION ACT—BUDGET REQUEST ON ARMY ACQUISITION PROGRAMS

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
AIR AND LAND FORCES SUBCOMMITTEE,
Washington, DC, Thursday, April 10, 2008.

The subcommittee met, pursuant to call, at 2:07 p.m., in room 2118, Rayburn House Office Building, Hon. Neil Abercrombie (chairman of the subcommittee) presiding.

OPENING STATEMENT OF HON. NEIL ABERCROMBIE, A REPRESENTATIVE FROM HAWAII, CHAIRMAN, AIR AND LAND FORCES SUBCOMMITTEE

Mr. ABERCROMBIE. Thank you very much for coming today. The Air and Land Forces Subcommittee meets today to receive testimony on major Army acquisition programs. In addition, the panel will hear from the Department of Defense Inspector General (DOD IG) about a recent report on body armor contracting.

The panel includes Lieutenant General Stephen Speakes, Deputy Army Chief of Staff at G–8. General Speakes, thank you for the hospitality and for your service and for your always being at the ready to answer and observe and create perspective for me.

Lieutenant General N. Ross Thompson, Military Deputy to the Assistant Secretary of the Army for Acquisition, Logistics and Technology. And I wonder, do your children say that to you when you come home at night? That is something of interest to me. "Here comes the Assistant Secretary of the Army for Acquisition, Logistics and Technology."

Janet St. Laurent, from the Government Accountability Office (GAO). Thank you very, very much indeed. Once again, the GAO meeting its standards, with the reports coming in.

Paul Francis, also from the GAO. They put your name on there, Paul, I think, so they knew who to blame. Right?

Mr. FRANCIS. Yes. Would you like to know what my kids call me? [Laughter.]

Mr. ABERCROMBIE. Words with somewhat shorter syllables?

Mr. FRANCIS. Exactly, yes.

Mr. ABERCROMBIE. And Mary Ugone from the DOD Inspector General's Office. Mary, nice to see you, and thank you for coming today.

In its fiscal year 2009 budget request, the Army has asked for $35.1 billion for procurement and development of new equipment, and the committee expects the 2009 supplemental budget request to include billions more. The charge of this subcommittee is to en-

sure that the requested funding is allocated in the most efficient and appropriate manner based on its judgment of the Army's stated needs.

While the Army's desire for some systems is a key issue, recognizing that desire is not where this subcommittee's responsibility to soldiers and the American people end, nor is it the admonition of Chairman Skelton to us, in terms of what the subcommittee recommends to the committee as a whole.

Instead, this subcommittee has always taken an approach that focuses on ensuring that scarce tax dollars are not wasted on programs that are not performing as planned, are being poorly managed or are simply a lower priority than other needs the Army may have.

Right now, the needs of the Army are many. It is fighting two major wars.

Please forgive me, ladies and gentlemen, if I am stating what seems to be the obvious to you. This is, in fact, for the record, and it is the basis upon which we make our formal decisions. And while many of these things may be well-known to many people in the room, not everybody in the country obviously has the same access.

But, I am sure you all know, the interest is very high. And to the degree and extent, by virtue of these hearings, that we can create interest where there should be interest so that people are better informed, that is obviously our goal. So, again, I ask your indulgence if I am saying things either that you have heard before or are well-known to you.

Again, the Army is fighting two major wars; trying to complete a comprehensive reorganization program, the modularity program; improve the capability of the Reserve forces; grow in size by 74,000 soldiers; implement the latest base realignment and closure (BRAC) round, the base realignment round; repair and upgrade its equipment damaged in combat; and fix serious readiness problems of some units.

Now, that is, by anybody's measure, an extraordinarily deep and heavy challenge. And, while doing all that, the Army is expected to maintain additional ready troops for other combat missions and domestic emergency response.

Each of these efforts, even in peacetime, would be a major undertaking requiring many billions of dollars. The fact that the Army is trying to do all these things at once during two major wars requires this subcommittee and Congress to look at the big picture, not just the merits or demerits of any one particular program.

Finding the proper balance between the many needs of the Army is an ongoing challenge but has perhaps never been as difficult as the situation the Army now faces. In the American system of government, making choices and finding balance is the primary duty of elected officials.

President Eisenhower said in 1961 just before leaving office—and I am repeating a portion of the speech that I read into the record when we first began our deliberations with the new Congress. And I quote President Eisenhower: "Each proposal must be weighed in the light of a broader consideration—that is, the need to maintain balance in and among national programs, balance between the private and the public economy, balance between cost and hoped-for

advantage, balance between the clearly necessary and the comfortably desirable, balance between our essential requirements as a Nation and the duties imposed by the Nation upon the individual, balance between actions of the moment and the national welfare of the future. Good judgment seeks balance and progress. Lack of it eventually finds imbalance and frustration," unquote.

And in a situation, I would like to say that I hope that that is going to be the guiding thesis of our deliberations. And in a situation like the one the Army finds itself in today, leaders in the Army and in the Congress have to have clear priorities so that informed and wise choices between many different opinions and options are possible.

While the Congress reviews one budget year at a time, choices are made in any given year that can have significant implications in the future. For example, by the end of the fiscal year 2008, the Army will have spent $15 billion on the Future Combat Systems (FCS) program, a program with great potential in the future but one which has yet to develop and field pieces of operational combat equipment up to the mark.

Initial funding for the FCS began in 2003, so it is reasonable to ask what else the Army could have spent that $15 billion on over the past 6 years. Perhaps the Army could have started to add combat brigades in 2003 so that troops in Iraq today would not have to stay as long or go to Iraq as often. Perhaps the Army could have instead invested in more rapid upgrades and current research and development (R&D) equipment so that troops in combat today would have better versions of tanks and other equipment than is currently available. Perhaps the Army could have begun years earlier the ongoing effort to provide more and better equipment to the Army National Guard and the Army Reserve.

My point is not to argue with what has been done where the FCS is concerned nor to argue about the efficacy of the FCS, but, rather, that choices have consequences. So it is vitally important for this subcommittee to take into account the big picture, which requires looking beyond advocacy of any individual program, no matter how desirable it may seem if looked at in isolation.

While members of this subcommittee have different priorities, they all share the same goal: an Army that is ready and properly equipped for all the missions the Nation has asked it to accomplish. However, divining what those future missions will be or what those future missions might have been in retrospect and how often they may happen is a critical first-order question that must be addressed as Congress reviews the Army's budget request and one that is sometimes overlooked in Congress's zeal to support the Armed Forces.

For example, the Army Chief of Staff foresees an environment, and I quote, "of persistent conflict" over the next 20 years that he believes will require the U.S. Army forces to be constantly deployed in a very large number all over the world, conducting both combat missions and other tasks. I want to repeat that. He believes over the next 20 years there will be an environment of persistent conflict that will require constant deployment of the United States Army.

While that is one possible future, there are other possible futures as well, including one where the United States, as a result of its experience in Iraq, chooses to put fewer U.S. troops on the ground in hostile countries worldwide, not more. If one assumes this different perspective on the future, or any different perspective on the future than one of persistent conflict, then the Army's budget request may need major adjustments.

Obviously, a great deal rests upon the Army and the Congress getting these assumptions about the future right. If the Army and the Congress are wrong—and you notice I say the Army and the Congress. I do not put the Army in conflict with the Congress here. I think we have a common duty here to act in the best strategic interests and national interests of the United States. If the Army and the Congress are wrong, the Nation might either spend too little or perhaps too much on the Army and other Armed Forces or spend it in the wrong places. Or, even worse, we may spend money on the wrong kinds of forces, even if we spend ever more money on defense.

One might say all the military services constantly overstate and worst-case the potential threats to the Nation, not out of any effort to deceive the American people but, instead, as a result of the constant fight between the armed services for funding inside the Pentagon's budget. It is probably not too far-fetched to say that the worst struggle the Army has at the moment is in the Pentagon, not necessarily elsewhere in the world.

Another view would be that the Congress, in effect, encourages leaders of the military to imagine the worst-case scenarios in an endless effort to reduce risk to as close to zero as possible, no matter what the cost.

Regardless of one's view on the issue, having created and maintained a massive defense establishment, Congress must constantly remain on guard, and Congress is responsible to ensure, that the demands of maintaining the military industrial complex as first described by President Eisenhower in 1961 do not overwhelm Congress's capacity to make clear judgments between what is truly necessary for our defense and what is simply desirable.

One example of a possible choice between what is desired versus what is truly necessary is the Army's current plan to field, maintain and modernize four different types of Army combat brigades: infantry, Stryker, heavy, and Future Combat Systems. The cost of maintaining one fleet of vehicles is not small, so it is a question whether or not the Army will be able to afford to maintain four different types of brigades, three of which have different combat vehicles over the next decade or, if the Army Chief is to be believed, over the next two decades, given the Army's many other expensive initiatives.

Many of the most expensive elements of the Army's plan to maintain these four types of brigades are not even in the Army's current five-year budget plan. For example, the full cost of and funding for all the FCS spinouts—upgrading Stryker vehicles, procuring the next-generation M1 tank and M2 Bradley vehicle, and replacing the current wheeled vehicle fleet—are simply not yet known or not yet in the budget.

In addition, the Army also has ambitious plans to continue to modernize its fleet of aircraft, helicopters and unmanned aerial vehicles, as well as major investments in new communications equipment, all of which are set to coincide in the next decade with plans to upgrade ground combat vehicles.

I hope you are beginning to see that we are trying to take a comprehensive look here at what our actual responsibilities are in terms of the dollars that are going to be available and the programs that are contemplated.

As supplemental budgets may decline—and this is another factor that we have to take into account. We are dealing with, maybe by default, congressional default especially, falling into a pattern of budgeting and supplemental budgeting, which causes havoc, I think, in our being able to make sensible judgments, especially where weapons systems are concerned. And supplemental budgets may decline over the next four years. They may not expand, as they have been doing to this point. What if they start declining?

Choices between these different efforts will be forced upon the Army and the Congress—again, I am saying Army and the Congress, because both the Pentagon in the person of the administration, regardless of the administration, Democrat or Republican, and the Congress, again, regardless of who is in control of the Congress, they are all guilty in this open conspiracy against, from my point of view, good budget order.

And if these supplemental budgets decline, we are immediately going to be in all kinds of budget trouble, I can tell you, because we have gotten used to it, that supplemental budgets cover all sins of omission. So it is imperative to begin to consider these issues now, rather than to continue to put billions into programs that may be desirable but are not realistic or affordable, given the Army's many other needs in coming years.

We also plan today, as an addendum to—and I feel the necessity of addressing this, because we have to constantly deal with the media looking for sensation—the findings from a recent Department of Defense Inspector General report that determined there were deficiencies in some of the Army contract awards for body armor, and states that we cannot be given assurances that body armor procured under these deficient contracts have met required performance specifications.

The Army has acknowledged there were some documentation errors but maintains that all body armor has been adequately tested and meets required performance specifications. This represents a major disagreement between the two parties that gives me some cause for concern. We need to understand the facts regarding this report as well as the required test procedures used to qualify body armor systems. We can then determine a way forward. It is my hope the witnesses today will clarify this issue for us and for the public and we can get it settled once and for all.

Before we continue further, I would like to turn to my good friend and colleague from New Jersey, the Honorable Jim Saxton.

STATEMENT OF HON. JIM SAXTON, A REPRESENTATIVE FROM NEW JERSEY, RANKING MEMBER, AIR AND LAND FORCES SUBCOMMITTEE

Mr. SAXTON. Mr. Chairman, thank you very much.

And to our witnesses, thank you for being here. We appreciate your participation. We are very fortunate to have each of you serving our country, and it has been good to get to know you and to experience your high levels of dedication.

Lieutenant General Thompson, nice to see you again.

Lieutenant General Speakes, I guess the 12 hours we spent last Friday going to Fort Bliss wasn't enough. Here you are, back again for more of the same. Thank you for being here. And thanks for taking us out to Fort Bliss, by the way.

And, by the way, Silvestre Reyes, thank you, my great friend, for escorting the Chairman and I. We appreciate it very much. It was a great trip, and the Chairman and I both agree that we learned a great deal. And thanks for your help in getting us to do that.

To our GAO witnesses, thank you for being here. Mr. Francis, Ms. St. Laurent and Ms. Ugone, thank you for your participation. We appreciate that as well. I know it was short notice, and I appreciate all of you taking your time to come before our committee to discuss the very important issues of DOD's procurement policy of body armor. It was great for you to be here.

Given the overall national fiscal realities that the Chairman mentioned, the challenges of simultaneously funding the global war on terror and resetting our current force, the question has been in the past, and is still valid today, how do we reduce the risk of developing complex weapons systems, such as the Future Combat System, so that we can afford to provide the necessary funding without sacrificing the capability of the current force?

And just because we ask hard questions on the committee does not mean that we have a fundamental objection to modernization requirements. We ask hard questions because it is our responsibility to provide oversight of DOD programs and ensure taxpayer dollars are spent productively.

Today, we are here to discuss many important Army programs. However, there are at least two areas that I would like to mention in this statement. The first is in regard to the DOD Inspector General's report on body armor.

It should be no surprise to anyone that any time this committee learns about potential issues with force protection ramifications, we immediately engage. Nothing is more important to us than the force protection of our soldiers and Marines.

I am not an expert, and that is why our witnesses are here today. But what I have been told, it appears that the Army and the IG had, or have, a difference of opinion in terms of what constitutes proper testing in accordance with the Federal Acquisition Regulation. In addition—and I don't believe the Army questions this—the Army failed to provide certain documentation. It is also my understanding the Army and the IG are continuing to work this issue in terms of the Army providing the proper documentation.

Here is a problem. Given the sensitivity of this subject, why is the dialogue taking place after the final report was released? I must say that I don't understand why that needs to be a question.

Should it have happened before the report was published? I think it probably should have. Surely both organizations have a review process. And while I know that hundreds of reports are always in play, given the nature of this subject, shouldn't have both organizations worked out these issues before it was published? Shouldn't this have happened before it found its way into the press and possibly planted doubt in the minds of soldiers and their families that we are not providing the best body armor? Which, I believe we are.

The second area I would like to briefly mention is in reference to the Future Combat System. In years past, the House Armed Services Committee legislative provisions in funding reductions in regards to the Future Combat System were meant to provide better oversight of the program and to steer the program in the right direction.

For example, the committee highlighted three years ago that the Army had traded off too much survivability in order to fit the vehicle into a C–130 aircraft. Consequently, the Army has added more survivability back into the vehicles, and the current requirement is to put three on a C–17.

In addition, the committee was concerned that the program entered the system development phase too early, with immature technologies and undefined requirements, and thus directed the Secretary of Defense to conduct a go/no-go review of the FCS program following its preliminary design review in 2009.

I believe this congressionally mandated review in 2009 will be a critical event for the Army and for the program. I would like to hear assurances from both the Army and the GAO witnesses that the Army is setting the conditions necessary to complete this review. And, if they have any additional thoughts about the review, we would like to hear them.

Thank you for being here again today, and I look forward to all of your testimony.

Thank you, Mr. Chairman.

Mr. ABERCROMBIE. Thank you very much.

We are going to proceed to the panel's testimony, including the testimony on the armor. We will go right down the line, if that is all right, so that we can handle everything at once rather than separate out the armor, because you were kind of an added starter to this, but we will do it that way.

Because I think there are lots of questions and only a few members here at the moment, and they are senior members—we were going to go by order of seniority today anyway. You know, we alternate between least seniority to top seniority in hearings. If you could limit your testimony to the five minutes, I would be grateful. You have senior members here who are serious-minded individuals, and I assure you that the questions will illuminate anything else you might not have been able to get into.

General Speakes, we will start with you. And thank you, again, for your many kindnesses, courtesies and always your willingness and ability to be an advocate.

STATEMENT OF LT. GEN. STEPHEN M. SPEAKES, DEPUTY CHIEF OF STAFF, G–8, U.S. ARMY

General SPEAKES. Sir, I thank you.

Chairman Abercrombie, Ranking Member Saxton and distinguished Members of Congress, on behalf of the United States Army, it is General Thompson's and my great pleasure to represent the Army at today's hearing. As requested, sir, I am going to terminate my remarks with just a couple of key points that I would like to make.

First, you brilliantly summarized the challenges we face. You obviously have a deep understanding of the challenges that we are going to address in the immediate moment and in the future.

Congressman Saxton, you also highlighted the challenges that have been identified to us by the GAO. We identified the GAO and the DOD IG as key partners in a process that ensures we are accountable to the taxpayer and to you to deliver the best that we can. We believe, in that sense of responsible partnership, that we are better. And we thank them for their help.

I would like to also highlight the importance of the recent publication of FM3–0 as a key hallmark in terms of the Army's affirmation of the role that doctrine plays in helping us to understand the operating environment today and in the future. That doctrinal role that we have to fight in today's operating environment and plan for the future is never more important than as we look at the modernization programs of our Army. And I would assure you gentlemen that we are looking very carefully at those, that we are trying to balance exactly the issues that you illuminated as we weigh investments in the current with the need to also plan responsibly for the future.

We also are aware of the many elements of Army capability. Specifically, I would like to single out our responsibility to provide for the Army Guard and Army Reserve. Those are two key components of our force that are never more important than they are today. We count on them from the sense of homeland defense, in the case of the Army Guard. We count on them as a part of our operational force. We, therefore, have to properly outfit, equip and train them. We take that seriously, and I think you have witnessed, with your support, the incredible improvements we have made in support.

Sir, we look forward to your questions.

And I will pass this off to Lieutenant General Thompson, asking that my statement be admitted for the record.

Mr. ABERCROMBIE. Without objection.

[The prepared statement of General Speakes can be found in the Appendix on page 47.]

Mr. ABERCROMBIE. General.

STATEMENT OF LT. GEN. N. ROSS THOMPSON III, MILITARY DEPUTY TO THE ACTING ASSISTANT SECRETARY OF THE ARMY (ACQUISITION, LOGISTICS AND TECHNOLOGY), AND DIRECTOR, ACQUISITION CAREER MANAGEMENT

General THOMPSON. Chairman Abercrombie, Congressman Saxton and distinguished members of the subcommittee, I want to thank you for holding this hearing today because the Army's acquisition programs are absolutely essential to preparing our soldiers for a future persistent conflict.

Every day, our soldiers make great sacrifices to help win this global war on terror and to fulfill our other worldwide commitments.

I want to thank you, as General Speakes said, for your strong and steadfast support of our men and women in uniform. We are meeting the equipping demands of our soldiers because of the guidance and the resources that are provided by this committee and the Congress.

I have a longer written statement that I respectfully request be made a part of the record for today's hearing.

Mr. ABERCROMBIE. Without objection.

General THOMPSON. We are a high-technology Army, Mr. Chairman, and we have a comprehensive strategy to modernize. Of all high-priority programs, force protection is our number-one priority, including the joint light tactical vehicles, rotocraft technology, research and development, and lightweight enhanced performance systems, to include ammunition and body armor.

Our Future Combat Systems, as we have discussed in the previous hearings and in one-on-one dialogue with you and your professional staff members and personal staff members, is the foundation of our Army transformation and, really, the cornerstone of the Army's future modular force.

The FCS program is structured to bring advanced capabilities to today's force as rapidly as possible in a process known as spinouts. The first spinout equipment set—you witnessed some of that last week at Fort Bliss—is currently in the hands of our soldiers in the Army Evaluation Task Force. The FCS program is currently undergoing 75 tests, and each test is a precursor to the fielding of capabilities to our soldiers.

Just yesterday on the House side and today on the Senate side we have demonstrated some of those capabilities here on the Hill for those Members of Congress and staffers that were not able to go to Fort Bliss or haven't been out there on a Congressional Delegation (CODEL) in order to see some of those great capabilities that are being fielded to soldiers today.

We have demonstrated the credibility of our cost estimate in FCS over time by consistently operating within the budget. One of the questions that I know may come up today is the synchronization with the Joint Tactical Radio System and the Warfighter Information Network-Tactical (WIN-T), and we will discuss that as the questions arise. But we are delivering FCS Joint Tactical Radio System and Warfighter Information Network-Tactical on a phased approach and making sure those programs are all synchronized.

The Army is continuing to conduct our wartime operations in preparing for future commitments. I really do appreciate the quote that you made from President Eisenhower about balance. It really is all about balance, not just in modernization programs, but balance between the current and the future.

Mr. Chairman, that concludes my opening remarks, and I look forward to your questions.

[The prepared statement of General Thompson can be found in the Appendix on page 56.]

Mr. ABERCROMBIE. Thank you very much.

Ms. St. Laurent.

STATEMENT OF JANET A. ST. LAURENT, MANAGING DIRECTOR, DEFENSE CAPABILITIES AND MANAGEMENT, GOVERNMENT ACCOUNTABILITY OFFICE

Ms. ST. LAURENT. Chairman Abercrombie, Ranking Member Saxton and Members of Congress, I am pleased to be here today to discuss equipping issues related to the Army's efforts to restructure and rebuild the force while supporting ongoing operations.

The Army has established four key initiatives that have significant implications for equipment costs. These initiatives include: establish and equip modular units; expanding the size of the Army; resetting equipment damaged or worn beyond repair during operations; and replacing prepositioned equipment.

My statement today is based on numerous GAO studies and reports that have been published on these topics during the past few years, and I would like to focus my comments on two issues: the cost of the Army's plans to implement these initiatives, and actions needed to improve their management.

With regard to cost, our work shows that restructuring and rebuilding the Army will require many billions of dollars for equipment and take many years to complete. However, the total cost of these efforts is uncertain.

Based on our analysis of Army data, it appears that the cost of implementing these four initiatives alone is likely to cost at least $190 billion from fiscal years 2004 to 2013. These estimated costs include $43 billion for new equipment for modular units; $18.5 billion to equip six new additional brigades and additional support units; about $118 billion to reset equipment; and at least $10 billion to replace prepositioned equipment.

However, these cost estimates have some limitations and may change as a result of the unknown length of operations in Iraq and Afghanistan. Further, the Army is likely to request additional funds for some initiatives beyond 2013.

Several factors are contributing to the uncertainty about future equipment costs and the potential for costs to increase. Although the Army's $43 billion estimate to equip modular units is a significant downpayment, it will not fully equip modular units because it was based on some outdated assumptions and conditions and was developed in 2004.

For example, the Army's estimate was developed before some modular unit designs had been finalized. The Army has since added requirements for force protection and other equipment. Second, the Army did not fully consider requirements at the time for National Guard units, which had longstanding equipment shortages and which the Army now wants to equip similar to active units given their important roles in supporting overseas and domestic operations. Third, the Army assumed initially that significant quantities of equipment would be returned from Iraq in good enough condition to help equip modular units. This assumption may no longer be valid. As a result, the Army now plans to request additional funds to meet equipment shortfalls in modular units through fiscal year 2017.

Also, the Army's equipment reset costs have the potential to change, perhaps significantly. Reset costs have grown from about $3.3 billion in fiscal year 2004 to more than $17 billion in fiscal

year 2007. However, the Army has reported that future reset costs will depend on the amount of forces committed overseas and the amount of equipment destroyed or damaged. The Army has also stated it will need reset funds for at least two to three years after operations cease.

Finally, the Army has estimated that it will need $10 billion to $12 billion to replace prepositioned equipment that it used to support operations and accelerate the creation of additional brigades. However, it is not clear whether these costs have been reflected in DOD's funding request to date, and this amount could be modified.

Turning to management issues, we have identified a need for the Army to develop a more integrated plan for equipping that promotes greater transparency in its cost estimates and ensures that funding requests are based on sound plans with measurable goals, realistic time frames, prioritized resource needs, and performance measures to gauge progress.

The Army currently lacks aspects of such an overall plan. For example, we have reported that the Army lacks a comprehensive plan for equipping modular units that clearly shows equipment requirements, the progress made to date, and how additional funding requests will help to address unmet requirements.

In addition, oversight of the Army's equipment initiatives has been complicated by multiple funding requests that make it difficult to obtain the full picture of Army equipment needs and to track how the funds were actually used.

As a result of these problems, it is very difficult to determine progress overall that the Army is making with funds already appropriated. For example, despite a significant amount of funds appropriated to date, our readiness work has shown that DOD is still struggling to meet the equipment needs of next-deploying units and that nondeployed units continue to have significant equipment shortages to the point that senior military leaders have recently expressed concerns about ground units' ability to perform other missions if required.

What is needed is an integrated equipment plan that will position the Army, first, to achieve measurable improvements in near-term readiness. In addition, the Army needs to find a way to better identify and report on its equipping needs over the next decade so that it can balance requirements for the modular force with other longer-term modernization initiatives.

Thank you, Mr. Chairman.

[The prepared statement of Ms. St. Laurent can be found in the Appendix on page 67.]

Mr. ABERCROMBIE. Thank you very much.

Mr. Francis.

STATEMENT OF PAUL L. FRANCIS, DIRECTOR, ACQUISITION AND SOURCING MANAGEMENT, GOVERNMENT ACCOUNTABILITY OFFICE

Mr. FRANCIS. Thank you, Mr. Chairman, Mr. Saxton and members of the subcommittee. I appreciate your having me here this afternoon to participate in the discussion of Army modernization.

I am going to focus my remarks on the Future Combat Systems. And I think I will be giving you, I think, a more somber assess-

ment of FCS than the Army would, but I think our differences are really more in how the Army is going about it versus what they are trying to do. Because on what they are trying to do, I think the Army deserves a lot of credit for what they are trying to do. Because, with FCS, they have decided to do what is hard and not what is easy.

It would have been much easier, I think, on to embark on replacements for all the "big five" systems and, kind of, do business the way they used to. But they didn't. They came up with a vision on how they want to do things in the future, which cut across their own cultural lines. And they had the courage and the leadership to do it, and I think they deserve credit and our admiration for that.

With that, and maybe at the risk of being labeled a Luddite, I will talk a little bit about, I think, a pretty——

Mr. ABERCROMBIE. You know how to strike an empathetic note, don't you?

Mr. FRANCIS. Yes. You are a fellow Luddite?

Mr. ABERCROMBIE. Start at the top of the alphabet. I would prefer we did everything with parchment and quill pens. How does that strike you? [Laughter.]

Mr. FRANCIS. You don't have an iPod yet then?

Mr. ABERCROMBIE. What is that? [Laughter.]

Mr. FRANCIS. On FCS, I want to just talk a little bit about where we have come. I think, while much progress has been made—and we can talk about requirements, technology, design, software; a lot has been done—but we need to put this in context. Cost and schedule on the program has doubled. Technology is going to take about twice as long as we thought it would. Software code estimates, depending on how you measure them, are going to double or triple. Vehicle weights are up by about 50 percent.

And I think, to me, what that means is things haven't gone as planned. And that is not to say we think they should have gone faster or smoother, but I think that accurately reflects the maturity of the program. We are in, still, a period of discovery; yet this is our basis for predicting how the program is going to finish. I think at this point, about halfway through, we still don't know yet if FCS is going to work, and the stakes for it working are quite high.

I will talk a little bit about some of the specific program challenges.

Right now, the program is maturing about 44 critical technologies. At this time, many of those are still not mature. The Army is developing an unprecedented ad hoc mobile network, which I think is largely to be invented at this point. It is developing several small and light combat systems whose performance depends on the success of the technology efforts and the success of the information network. The Army has defined the unit of analysis as the brigade combat team, that I think is so large they are having to make some real breakthroughs in modeling and simulation.

All of this is proceeding simultaneously. All of these challenges are attempted to be met at once and within a schedule that is faster than a single system normally takes. And the Army is doing this

right now with the lead system integrator, which is innovative, for both development and now production.

The approach that the Army is taking on this I think put decisions phase ahead of where the information is. So let me give you an example. In 2003, when we had the Milestone B to begin the program, I think the information at that time was more like a Milestone A. In 2009, as we approach the go/no-go decision, I think we are looking at a decision that is more like a real Milestone B, even though at that point we will be about 60 percent through our schedule and our costs, our funding.

Much actual demonstration is going to follow production commitments. So, relative to decisions, I think development is going to finish late but production commitments are going to start early. And as tight as the Army's schedule is, I think your schedule, that of the Congress, is even tighter.

So, for example, at this time in 2010, the spring of 2010, you will be just a few months after the go/no-go decision. We will not have developed any manned ground vehicle prototypes yet, and we will not have gone through critical design review. But you will be asked to provide the first year of advanced procurement money for FCS core systems.

The next year, 2011, when we will just be getting to take delivery of the first manned ground vehicles, and possibly still before critical design review, you will be asked to provide the second year of advanced procurement for FCS.

And then, in 2012, when the manned ground vehicle prototypes are just about halfway through qualification testing and before the network demonstration that you have mandated, you will be asked to provide the first year's funding of FCS core systems. So that will be your Milestone C.

Mr. ABERCROMBIE. You mean the system of systems, at that point?

Mr. FRANCIS. Yes. So the first couple years is advanced production for long-lead items. That third year is actually funding the produced and delivered items. So that is——

Mr. ABERCROMBIE. For purposes of the record, we know what we are talking about when we say "system of systems." Could you elaborate just a moment on that, as to what we mean in relation to what you were just providing as an example?

Mr. FRANCIS. Certainly. The system of systems relates to the fact that, while we are buying 14 individual systems, which I think in the old days, when we weren't Luddites, would have been individual acquisition programs, but FCS is being conceived in such a way that all of these systems are related to one another and integrated with the network.

So what the FCS requires is a system comprised of all these individual systems. But when we get into the actual production, we will be producing individual vehicles and sensors and so forth.

In 2013, when DOD makes its Milestone C production decision, Congress will have appropriated about $39 billion and possibly up to $47 billion for FCS. So if you are thinking about waiting until that production decision, I think that is going to be too late, because we will be very heavily invested, to think about what you can do.

So I see you as really having about two years of oversight leverage, looking at the program, right now. And I think a real key point will be next year, 2009, the go/no-go decision.

And I think there is two things that you will have to look at there, if I may. One is there will have to be a demonstration that the FCS can work as planned. If there are some questions remaining, significant questions, then I think we need to be looking at what alternatives we may have. And they may not be rivals to FCS, but different ways of proceeding forward.

If FCS does show that it can deliver what it needs to deliver, then I think we have to take a serious look at the remaining part of development. Because, as I said, right now only about 40 percent of the schedule and money will be left in 2009, yet the latter half of development is often the most expensive and difficult part of an acquisition. And so I think our analysis of past programs shows about two-thirds of your cost growth occurs in that phase of a program. And both the Institute of Defense Analysis and the Cost Analysis Improvement Group I think are estimating that FCS are $12 billion to $13 billion more then.

Mr. ABERCROMBIE. I am not trying to trap you in anything. Do you know just who is in or what institutional elements are in the group? Because that is a Pentagon group, right?

Do you know, General Speakes, who constitutes the group or what institutional entities within the Pentagon constitute the group?

Mr. FRANCIS. The Cost Analysis Improvement Group (CAIG)?

Mr. ABERCROMBIE. Yes.

General THOMPSON. Yes, sir. The Cost Analysis Improvement Group works for the DOD head of Program Analysis and Evaluation. And their charter——

Mr. ABERCROMBIE. They are an independent group, ostensibly, are they not?

General THOMPSON. Yes, sir.

Mr. ABERCROMBIE. I am not sure what that means inside the Pentagon. Does that mean they have to come in a separate door?

General THOMPSON. No, sir. I know the head of the Cost Analysis Improvement Group, and he usually comes in the same door that I do. But they do——

Mr. ABERCROMBIE. But you are not allowed to eat together, though, right? No, no, that is Members of Congress. I am sorry, I forgot.

General THOMPSON. We do talk to one another, surprising as that may be.

Mr. ABERCROMBIE. Oh, okay.

General THOMPSON. But, no, seriously, they work for the PA&E, the Program Analysis and Evaluation, director in the Pentagon, which is designed to provide that independent analysis——

Mr. ABERCROMBIE. Sort of like your own GAO where cost is concerned?

General THOMPSON. They are focused on cost of programs. They are focused on looking at historical programs, looking at the content that we are trying to——

Mr. ABERCROMBIE. In any event, their charge is to come up with analysis and conclusions independent of a particular service or something of that nature, right?

General THOMPSON. On every program, FCS being a large program, the program office makes an estimate of what it is going to cost. And then the Army and the other services have an independent cost organization that grades that paper, if I can put it in that parlance, and then the CAIG grades the services paper.

So it is the reconciliation of those three views on cost. And at the end of the day, you know, the CAIG, being positioned at the Office of the Secretary of Defense (OSD) level, has more of a vote in how that paper is graded.

Mr. ABERCROMBIE. Okay. The reason I worry about that a little bit, again, for purposes of the record, is that this is not just a pro forma operation in there. This is something that is taken seriously. And so we need to take into account what they are saying, because, certainly, the Secretary of Defense does. Is that correct?

General THOMPSON. Yes, sir, he does, as well as the defense acquisition executive, who looks at the cost estimating that is done by the CAIG as part of his decision review process.

Mr. ABERCROMBIE. Would that be Mr. Young?

General THOMPSON. Yes, sir.

Mr. ABERCROMBIE. Okay. Thank you.

Sorry, Mr. Francis. You can conclude now.

Mr. FRANCIS. Mr. Chairman, that concludes my remarks.

[The prepared statement of Mr. Francis can be found in the Appendix on page 90.]

Mr. ABERCROMBIE. Oh, okay. I didn't mean it literally, necessarily.

By the way, just for purposes, speaking of Luddites, the current context, I think, in which it might be appropriate is because we are trying to get rid of the modern alchemists.

Mr. FRANCIS. Ah.

Mr. ABERCROMBIE. Food for thought.

Mr. FRANCIS. Yes.

Mr. ABERCROMBIE. Thank you.

Ms. Ugone, thank you for being here.

STATEMENT OF MARY L. UGONE, DEPUTY INSPECTOR GENERAL FOR AUDITING, OFFICE OF THE INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

Ms. UGONE. Thank you very much, Mr. Chairman.

Chairman Abercrombie and distinguished members of the House Armed Services Subcommittee on Air and Land Forces, thank you for the opportunity to appear before you today to address our audit report on DOD procurement policy for body armor.

The report is in response to a congressional Member request to review DOD procurement of body armor to determine whether officials followed contracting policies. The report addresses the contract documentation supporting the award of 28 Army and 12 Marine Corps contracts with a total value of more than $5.2 billion for various body armor components during the period January 2004 to December 2006. We also reviewed the contract documentation and information provided by the Army supporting the adequacy of first

article testing. We did not review other testing requirements or safety issues.

Body armor components include the outer tactical vest, deltoid and axillary protectors that provide protection to the shoulder area, small arms protective inserts that provide ballistic protection to the torso, and enhanced side ballistic inserts that provide ballistic protection to the sides of the torso.

The Federal Acquisition Regulation requires contracting organizations to maintain adequate contract documentation to provide a complete acquisition history. This includes documentation to support acquisition planning, market research, source selection planning, and testing and evaluation of the products.

First article testing is used to test a first article from production and verifies the manufacturing process has generated an acceptable item and corrects any defects in the manufacturing process before more items are produced.

The Marine Corps awarded 12 contracts for inserts and side inserts, valued at about $248 million. The files for the 12 contracts reviewed contained a complete history of the contracts, including first article test acceptance.

The Army awarded 28 contracts, valued at about $5 billion. Of these 28 contracts, we had concerns on the adequacy of first article testing on 13 contracts based on our review of the documentation. For example, three contracts for vests used 15-inch-by-15-inch pieces of material to conduct first article testing rather than the complete vest as required by the purchase description.

Another example is where a contract for deltoid protectors, which protects the shoulder area, did not contain specifications to test against. However, documentation showed a first article test as completed by relying on the previously mentioned tests of 15-inch-by-15-inch pieces of material for a vest instead of testing a protector.

Another example where we had concerns with first article testing was on a contract for inserts where the documentation showed support for only 2 of 24 required first article tests.

Finally, for side inserts, an example was where 1 contract used product samples instead of the contractually required 35 units for first article tests.

As a result of this and other work to date on body armor, we plan to initiate an audit of the sustainability and durability of body armor used by our Armed Forces.

This concludes my oral testimony. I will be happy to answer any questions that you may have.

[The prepared statement of Ms. Ugone can be found in the Appendix on page 107.]

Mr. ABERCROMBIE. Thank you very much, Ms. Ugone.

General Thompson, I think what I would like to do, without holding you to specifics, is I will take my time that I would have taken to ask questions, and I would like to turn it over to you, not so much for a response or rejoinder, but if you have any observations at this stage. I saw you taking notes, and I would like to give you the opportunity to do that at this point, if that is all right. If you would rather not, that is okay, too.

General THOMPSON. No, Mr. Chairman, I would like to do that, and I welcome that opportunity.

Mr. ABERCROMBIE. Okay. Then why don't you take my time to do that, and then we will go to Mr. Saxton, all right?

General THOMPSON. You brought up in your remarks at the beginning of the hearing the concern that we are having this discussion in the public without reconciling the different view between the DOD IG report and the Army. I, too, regret that that reconciliation wasn't done prior to the report being issued to a Member of Congress and then put out in the press.

Mr. ABERCROMBIE. Well, I would like to take credit, but I think it was Mr. Saxton that made that point specifically. But I certainly agree with it.

General THOMPSON. The meeting at the higher levels of the Army between the DOD IG and the Army unfortunately did not occur before the report was issued. There is a meeting this afternoon at the conclusion of this hearing, at 5:30 tonight, between the Under Secretary of the Army and senior representatives of the DOD IG. And then tomorrow afternoon the Secretary of the Army and the DOD IG, Lieutenant General Kicklighter, are meeting to understand the differences between the report and the Army's view on the testing.

The Army does stipulate there were items that were missing from the contract files. I think the issue boils down—I spent about an hour and a half with the professional staff members both on the House and the Senate side and a lot of personal staff members the other night, explaining where we think the difference is in the interpretation of the Federal Acquisition Regulation (FAR).

The Army has tested all of the body armor, and all of the body armor that is issued to the soldiers in the field today has passed a rigorous test, and it is the best body armor that is available in the world today. And I can say that without qualification.

The scope of the DOD IG audit—and you can see that in the audit report—was on the presolicitation and the solicitation. They did not look at the postsolicitation, postcontract, so they did not look at the totality of the testing process that goes on with body armor.

And if I can quote here from the Federal Acquisition Regulation, because the essence of the difference of opinion comes down to what constitutes a first article test. And I am going to quote from the First Acquisition Regulation here: "First article means a preproduction model, initial production sample, a test sample, first lot, pilot lot, or pilot models. First article testing means testing and evaluating the first article for conformance with specified contract requirements before or in the initial stage of production."

We conducted the first article test or preproduction test before the contract was awarded. The DOD IG interprets the regulation as we should have conducted it after the contract award. But the testing was done. We offered the DOD IG the complete documentation on all of the 28 contracts they looked at for first article testing and also the lot acceptance testing, because the testing for body armor is done by the manufacturer in order to just come to the table with a qualified product. We do the first article of preproduction testing before we let a contract. We test it before we buy it.

And then after we go into production we do lot acceptance tests. And lot acceptance tests are different in size, but every manufacturer of any of the components on the body armor, either the vest or the deltoid protectors or the plates, we test the lot samples, and any lot that fails the ballistic testing that we put it through is rejected. And there are some cases where they are rejected. And if two lots are rejected in a row, the manufacturer has to go back and do the complete first article testing over again.

So the documentation is there. The contract files that they looked at were with the contracting officer, which was in the Acquisition Center at Aberdeen Proving Ground, Maryland. The rest of the contracting file, which included the testing documentation, was with the program executive officer and the project manager.

And so part of the difference of opinion is they looked narrowly at the contracting officer file. We do have the testing documentation. And the contracting file, in our view, is the entire file. It is not all physically located with the contracting officer.

There were errors in the file where the contracting officer should have put a statement in there that waived the first article testing because it had already been done. Those pieces of paper were missing. That has been reconciled. That was an error by the contracting organization, and we don't disagree with that.

But the testing on the body armor was done, and we have got volumes of books—and I brought an example of that to show the staffers the other day—where there was at least four or five binders of testing on just one contractor.

Mr. ABERCROMBIE. Thank you, General. I would hate to have to contend with you when you actually have time to prepare. Very good.

General THOMPSON. Sir, I will say that there is about almost 700 programs in the Army. Every week or so, there is one or two that consumes about 50 percent of my time. In the last week, since that report was issued, this has consumed probably 50 percent of my time.

Mr. ABERCROMBIE. You obviously absorbed a lot. And we can understand why. I appreciate that. And we will go on with the questions, but it is distressing if it turns out to be—and I don't mean to diminish its importance—a paper issue or a process issue, as opposed to a substantive qualitative issue, with regard to whether or not something was neglected to be done that was fundamental or necessary to the certification of the product.

But I take it from your answer or your observations that that is not the issue, in your point of view.

General THOMPSON. And one of the professional staffers the other night pointed out that maybe it would be good for us to codify in a written policy the way we are doing this and the way we are interpreting the FAR so that becomes a matter of the record for future DOD IG or other——

Mr. ABERCROMBIE. Maybe something good will come of all this then. Thank you.

Mr. Saxton.

Mr. SAXTON. Mr. Chairman, thank you.

Let me just divide my questions into two areas: one regarding the modernization program that the Army is presently preparing to

field; and, second, the subject of how the Army is working to equip or re-equip the Army National Guard and the Army Reserve, as well as the Army's plan to pay back Reserve component equipment that was taken and left in Iraq.

Let me start with the modernization program. And let me begin, Mr. Chairman, my question by saying that I think Mr. Francis's characterization of the situation was very frank and very objective and very fair. This is, in fact, a difficult modernization program to put together.

And, Mr. Chairman, you and I have served here together for a long time, along with many other members of the committee. And we have observed and helped to resource several very difficult modernization programs. In fact, in some cases, I would call them revolutionary. I would call the FCS program a program with revolutionary objectives and goals.

We have had other programs that have been similar in nature, in terms of their difficulty. When I was elected to Congress, Mr. Chairman, in 1984, one of the first weapons systems that I saw, which was in the design program at the time, was a C–17. It was different because it provided capabilities that no other airlifter had ever provided. It was said to be able to take off on a 3,000-foot runway, paved or unpaved. It was said to be able—they were developing the capability to back up on the tarmac and configure itself without having to be pushed or towed around. It was to have redundant systems. In case one system suffered a breakage from fire or military activity, the other system would work to provide safety for the people who were in the airplane. It was a revolutionary system.

Mr. Chairman, you and I sat here in this room, along with many of our other colleagues, and watched as McDonnell Douglas had a difficult time putting that system together, engineering it and making it work properly. As a matter of fact, it was probably 5 to 10 years into the development system when I first learned about it in 1984, and the first production model came off the line in 1991. And it was because it was, as the Army is doing now, trying to produce something with capabilities that reach far beyond what we have now.

The other short example that I would like to use, and this involved one of our great colleagues that you and I were very fond of, Curt Weldon, who is no longer here. In 1986, Curt Weldon—you can feel his presence? Right.

The V–22. The V–22 was a revolutionary system. It was a fixed-wing aircraft that could take off vertically and fly at 300-plus miles per hour and carry a heavy load. That was a capability that we had never had before, and it was difficult to put it together. As a matter of fact, in 1986 or 1987, I can't remember which, Mr. Weldon and I went to the Pentagon to visit with Secretary Cheney at the time, because Secretary Cheney favored canceling the system because it was too difficult.

We today have that capability, in a revolutionary sense. The FCS is difficult, but it provides capabilities that we don't have today. It will have a command vehicle that will be available to small units, where soldiers will be inside and be able to see the enemy, be able to see our own soldiers, be able to direct fire over a 40-kilometer

distance with precision fire munitions, and just many other networked capabilities that none of our weapons systems today are fortunate enough to have.

And many people who are not familiar with this system, as we are because we have looked at it and studied it, people don't have a clue. And why should they, because nobody has made this information available to the public yet. But it is a revolutionary system.

So let me ask this. Several years ago, this committee wrote language into an authorization bill as to the necessity of making decisions on how we were going to go forward at some point—turned out to be 2009—on a go/no-go review of the program. And my question is, how is the Army planning to conduct this successful go/no-go review of this program? And how is the Office of the Secretary of Defense involved?

Generals, would you like to take a crack at that?

General SPEAKES. Congressman Saxton, what I would like to do is ask for clarification. You asked us two questions. One was the role of Army modernization focused on FCS. The other element was the discussion on Reserve component equipment. Would you like me to take on Reserve component equipment first, take care of that, and then move on?

Mr. SAXTON. Actually, I was going to ask that question second.

General SPEAKES. Okay, sir. I apologize.

Let me start it off. The reason I am going to start it off is my responsibility is to set the conditions for General Thompson to be successful. Let me begin by going back in recent history.

The Army Chief of Staff and the Secretary of the Army have placed more time with us on the subject of Army modernization than we have had, probably, with the Army leadership over the past several years. It is their personal focus. We are accountable to them.

What they asked us to first of all do is to find an integrated modernization strategy. That has four elements: first, continue to field the best equipment to forces in combat; second, to continue to improve our existing or legacy equipment—we can't let the existing platforms that are in combat get behind; third, field FCS spinouts; and, fourth, bring the future combat brigade system as a brigade entity into the Army.

Within that, we have the responsibility to set conditions for FCS.

First, the question is, what is FCS? Because that is very important for us all to understand. First, it is a system that provides a network-based capability to operate. We view the network, as Mr. Francis said, as absolutely essential to our concept for being successful.

Second, it is a common platform. The benefits of a common platform are realized by all of us. Instead of stovepipe systems, we now have an integrated concept where we have a 70-percent common platform with enormous efficiencies that enable us to leverage other capabilities. That platform is specifically designed to operate in a modern operating environment, not the last decade.

Third and fourth, unmanned air and ground systems. It is absolutely essential we separate the soldier from the thing that is seeking to cause the soldier harm. We have seen the benefit of robotics

in all of our operating environments in both Iraq and in Afghanistan. They have proven out as a concept.

And then, finally, the concept of bringing capability across the force in spinouts, so we have an integrated approach that brings an integrated set of capabilities. And you saw on Friday what we are talking about: the concept of a sensor, the primitive version of the network, and then the ability through that network to trigger precision fires. That is the illustration of what Spin Out 1 will bring to us, and you saw it, as its preliminary form is already taking shape at Fort Bliss.

So the next obligation I have, then, is to set the fiscal conditions for success. The fundamental issue with FCS is we have to make it affordable so that we can bring the maturity to the program over time by a steady application of fiscal resources. Our plan right now says that we have an integrated strategy that provides for FCS is never more than a third of our basic research, development and acquisition strategy. So it is a third of our overall investment program in the base budget, now through 2015. We are putting the specific trajectory on that program here as we update it through fiscal year 2015 in our Project Objective Memorandum (POM) bill that is under way now.

The other element of all this, then, is we have to separate that element of it from the volatility of supplemental funding. In other words, concerns over funding should not address the basic trajectory of what we are doing right now in our base program. So we have set conditions where we are bringing FCS and its complementary systems along the desired rates of maturity to support the development of the program as a part of our base program. And that is my responsibility to resource those, as the resourcer of the Army who builds the POM, the integrated approach.

Let me turn now to General Thompson to address the specifics of the kinds of technology and the preparation for technology that Mr. Francis addressed in his report that General Thompson now is addressing.

General THOMPSON. Sir, just to amplify some of the things that General Speakes said, when he is talking about the common platform, he is really talking about the manned ground vehicle part of FCS. So when you look at the FCS program, it is a systems of systems. It is not just a vehicle. And that is a part of the misperception that is out there. It is eight different manned ground vehicles, it is a couple of unmanned aerial vehicles, it is the network, it is the unmanned ground vehicles, and it is a lot of these sensors that are out there. So there are major components of FCS.

Your specific question, I think, was about the 2007 authorization language on section 214. Every year since 2003, we have had an annual review with the Defense Acquisition Executive—in this case, this year, it will be Mr. Young—working at the FCS program. Even though Milestone B was in 2003, we have an annual review at that level where we look at all aspects of the program.

As a matter of fact, I will meet next week with General Cartwright, the program manager for this year's annual review, to lay out the timeline of meetings with all concerned organizations inside the Office of Secretary of Defense—the testers, the people that

look at networks, the people that look at manned ground vehicles, the people that do the costing.

We will do this for this year's annual review. And we will begin to set the conditions for, as you pointed out, the go/no-go decision that was put in the authorization language for the 2009 review, which the culminating event prior to that review is going to be the preliminary design review on the systems of systems on how all these things are going to work together.

So we are working that on an annual basis. We will work that for the 2009 review with the Office of the Secretary of Defense. And I am confident that, just like we have done in the last couple of years, we will have our disagreements, they will point out some things that we could have been doing better, and we go back and make adjustments, and we balance the risk across the program.

One other thing I would like to say, and then I will let General Speakes answer the Reserve component equipping question.

On the complementary systems, there are the 14 major systems inside of the FCS program, but we looked at, a number of years ago, in 2004, to find then the 58 other modernization programs in the Army that had to align themselves and synchronize with FCS. We have increased that number. And in the last year, we have done a deep dive into 67 of those programs that we label as "complementary systems" to make sure that, operationally and technically—my concern is on the technical acquisition side—that those systems all work together, not just work together at the end state, but work together over time.

And we have done those deep dives. And that was part of the realignment of the WIN-T program that was done last year, now broken up into four increments. We have done that deep dive with the Joint Tactical Radio System, which has had some concerns, another major part of the complementary systems that have to be aligned with FCS. And then there are 65 other systems that we have looked at, as well.

Mr. SAXTON. Thank you.

Let me just turn to the second question.

General Speakes, you know that we are, as you are, very concerned about Army readiness. Could you explain what the Army has done to increase the commitment to equipping the Army National Guard and the Army Reserve, or re-equipping I guess I should say? And I guess I would say, "comma," can we do it faster?

General SPEAKES. Sir, I appreciate the chance to address the question of the Army's commitment to properly equip the Army Guard and the Army Reserve. Let me recapitulate what has happened over the course of the past several years.

As we entered into the events of post-9/11, what we quickly realized is that, as a part of the reorganization of the Army and the execution of the transformation of the Army in modular designs, we created one standard, and that is the modular Table of Organization and Equipment (TO&E), or documentation for a standard unit across the Army applied to everybody. It wasn't something that was applied differently, Active Guard and Reserve.

That is important, because, as you know, prior to the start of this decade, we had a different way of approaching the organizational requirements for Guard and Reserve formations. We believe we

had more time to get them ready, that they didn't need to have a full set of equipment as a part of their peacetime training requirements.

Now we see it very differently. We see common application across the total force of the modular design. That is very important, because now what we have is one measuring stick to use for everybody. It is the same.

The second thing we created was an Army campaign plan that essentially put the Army as an entity through a phased execution of the modular transformation of the Army. We are set now to complete that modular transformation of the Army by reorganizing our units in 2013. That is important, because it means the blueprint of success is now going to be effective universally across the Army by 2013. We are about two-thirds of the way through that transformation right now, as we realign units in accordance with this new standard.

The next thing we did is developed a plan that said that the other evil practice of the past that was something we wanted to abandon was the concept of cascading equipment. You know the deal, which is we took the new stuff, gave it to the active component, and then we took the older stuff that was deemed still serviceable and useful and sent it to the Reserve component.

That was a very negative practice for a bunch of reasons. We now send new equipment to whatever unit is in the transformation process or is in the Army force-generation process, getting ready to go to war. That is vital, because it means that all are treated equally with respect to their access to new equipment.

The next thing we had to do was address the legacy of the previous generations. We had a disparate share of what we call "holes in the yard" or missing equipment in the Guard and Reserve. So what we had to do was try to make up that differential. So what we are now seeing, thanks to the incredible support we have achieved from this committee, among others, is enormous progress in terms of our overall ability to equip the Guard.

We just completed an Army equipping and reuse conference this January. What we do is specifically apply known distributions of items that have already been authorized and appropriated to the Army, which we now can base a specific document flow to enable us to project the arrival of equipment at the unit level. Based upon that, as we look out for the next two years, we see incredible benefits occurring to our Reserve component. What we saw, for example, is that——

Mr. ABERCROMBIE. Excuse me, General. I think we are slipping a little past the question at this point.

General SPEAKES. Yes, sir. Let me go ahead then and focus it.

What we are doing then is distributing the capabilities that the Army Guard and Army Reserve to execute their missions, and we are doing it on an accelerated basis. At this point, 54 percent of our equipment is going to the active component, but 46 percent is going to the Reserve component. Over 60 percent of the trucks that we are distributing right now are going to the Reserve component this year and next year.

So what we believe is, in the next 2 years we will source 93 percent of the equipment that went to replace the theater-provided

equipment that was left in-theater. So the idea that we have got enormous amounts of Guard and Reserve equipment now still over in-theater will no longer be in effect, because, thanks to you, we have been able to replace it with new equipment, 93 percent in the next 2 years.

So the overall end state then is that we believe we will achieve the needs we have to support both an active role in force generation and homeland defense. At this point right now, we see the Army Guard at about 79 percent of equipment on hand against current organizational designs. That is a substantial improvement over where we stood even a year or two ago.

Mr. SAXTON. Just one follow-up, Mr. Chairman. On medium trucks, I understand this is one of the big needs. And I understand that the production capacity is pretty much maxed out, however it might be possible to increase production, but it would increase costs fairly dramatically as well, is that correct?

General SPEAKES. Sir, at this point for the next 24 months, 16,000 trucks are going to the Army Guard. We are approaching max capacity right now for medium trucks. We have realigned some of our priorities with available dollars to go after heavy trucks because of the fact we are approaching max production.

Mr. SAXTON. Mr. Chairman, thank you.

Mr. ABERCROMBIE. Mr. Gingrey.

Dr. GINGREY. Mr. Chairman, thank you.

Mr. ABERCROMBIE. Mr. Reyes will defer to you. I understand you have a time problem.

Dr. GINGREY. Mr. Chairman, I really appreciate that courtesy. And I want to thank Mr. Reyes for his courtesy as well. And gentlemen, I want to direct my question primarily to General Speakes and General Thompson. Since the submission of the President's Budget Request, certain media reports indicate the Army may be reviewing plans for major changes to Future Combat Systems programs, including the acceleration of some elements and additional delays for others. Can you elaborate on this and which systems may be cut, how it may change the cost of FCS?

General SPEAKES. Sir, in general terms, the Army is always looking to accelerate the benefits of capabilities to the force once they prove themselves. Right now we have Spin Out 1 in evaluation this summer. We will make every effort to deliver it as fast as we can within existing processes to the Army. We are also evaluating the other capabilities that are a part of FCS. At this point, we do not have any definitive plans to do that, but the issues that have been identified by the GAO are first and foremost in our mind, that is the stability of requirements, the readiness of technology, and therefore our ability to pass tough testing before anything goes to the soldier. We assure you that nothing will happen without compliance with those processes.

Dr. GINGREY. General Thompson, did you want to comment on that? If not, let me do a follow-up and maybe you can respond to this. What was the basis for terminating the Land Warrior Program? And if the demand and positive feedback for Land Warrior exists, then why not consider restoring that program?

General THOMPSON. Sir, we will do a tag team on this one probably. In my previous job as director of Army Program Analysis and

Evaluation, General Speakes's previous job as the head of Force Development, when we built the program objective memorandum for fiscal year 2008 to 2013 we were resource constrained. It gets back to the question of balance that Chairman Abercrombie brought up at the beginning. We had so many dollars to apply to the Army's investments, their modernization accounts. The Land Warrior Program at that time had some negative reports from the testing. And because of budget constraints we terminated that program.

We had enough of the individual systems to outfit one battalion, a Stryker battalion, fourth battalion second infantry, the four nine infantry, I am sorry. That battalion has been in Iraq, has used that capability very successfully. The soldiers love it, the commanders love it. We have had the program manager for that program, Lieutenant Colonel Cummings embedded with that unit almost the whole time that they have been there. We now have an operational needs statement, which is a statement from the operational commander that says I would like to have a brigade's worth of that capability for the 5/2 Stryker Brigade, which is getting ready to deploy. We have in the supplemental request a request for around $100 million for a brigade's worth of the Land Warrior capability.

We will continue to evaluate not just the weight reduction, but how that system works. And right now we are working as we build the program objective memorandum for 10 to 15 for the follow on to Land Warrior, which is the incremental capability that we will call Ground Soldier System. So in short, you got a battalion's worth that we are using today. We would like to be able to buy a brigade's worth and continue to learn. And that becomes the learning point that we springboard into the Ground Soldier System for the future.

Dr. GINGREY. I am encouraged to hear that. Regarding the Joint Cargo Aircraft (JCA), the NDAA for 2008 restricted the program from obligating funds until submission of six DOD-initiated studies to the Congressional Defense Committee. What is the status of providing those six studies to Congress regarding the JCA?

General SPEAKES. Sir, at this point, as you know, we have a joint effort, us and the Marine Corps—us and the Air Force linked together. We have moved through the submission of the six studies. And at this point now we are prepared to move forward. We are waiting the actual ability to obligate the money.

General THOMPSON. Sir, it is my understanding right now that both the Army acquisition executive and the Air Force acquisition executive have sent a memo to Mr. Young to approve the acquisition program baseline now that studies are done. So I think the actual award of the dollars and moving forward in that program is imminent.

Dr. GINGREY. Real quickly in the remaining few seconds I have got, the total acquisition unit costs of $6.6 billion for development and procurement of 78 JCA is about $84 million per each. A new C–130 J costs approximately $62 million. Given that the JCA is one half the capability that the C–130 J can provide, why should the taxpayer pay 1.4 times the cost and purchase JCAs?

General SPEAKES. Sir, the first issue that we have is a common basis for calculating. At this point the basic cost of the aircraft

itself that the Army and Air Force are procuring, which is the same aircraft, is about $33 million. We believe that compares with a figure for the C–130 of in the mid–60's.

Dr. GINGREY. Did you say, General, $33 million?

General SPEAKES. Yes, sir. The basic cost of the aircraft is 33. The additional figure that you have accounts for other items in life cycle costing beyond the actual purchase price of the aircraft.

General THOMPSON. Items, Mr. Congressman, such as the training base, the depot maintenance, the way we sustain the aircraft. But it is a joint program. Everything that we are doing in that program is together between the Army and the Air Force. There is a common view of the production costs of the aircraft, which is the $33 million that General Speakes quotes.

Dr. GINGREY. Thank you, gentlemen. Mr. Chairman, thank you again for your hospitality and letting me go ahead. I thank Mr. Reyes for that, and I yield back.

Mr. ABERCROMBIE. Thank you. Before we go to Mr. Reyes, General Thompson, I am not quite clear on the answer you gave to Mr. Gingrey about the Land Warrior and the Ground Soldier System with regard to why it was eliminated from your request for this year.

General SPEAKES. Sir, that is my responsibility overall. Let me explain what happened. When we built the 8–13 POM we had a limited users test that was just underway. We went informally and surveyed soldiers in the field, to include the command sergeant major of that outfit who was here in the last couple days demonstrating its capability. The results were very lukewarm. Soldiers did not endorse the capability at the time, he among them.

Mr. ABERCROMBIE. This is part of the Army Battle Command Network?

General SPEAKES. Sir, they had basic problems with size, weight and capability. It was cumbersome, bulky, and ineffective. And so soldiers voted and said no.

Mr. ABERCROMBIE. You are talking about the Land Warrior at this stage or the Ground Soldier? Which?

General SPEAKES. Land Warrior, sir.

Mr. ABERCROMBIE. Okay.

General SPEAKES. And so we didn't have a completed task, but we had preliminary results. We sent senior officers off to talk to the soldiers on the ground to see what they thought. The results were lukewarm. We had a cash squeeze. We had only limited programs we could support as we did the final planning for 8–13. That was a program terminated based on two issues: Number one, initial results in the local user terminal (LUT), and number two, the issue of affordability. We couldn't keep the program going. As General Thompson covered then in execution in combat the program number one changed significantly in terms of the minor issues that soldiers were finding with it. It became much more compatible to soldiers, much more usable. They voted enthusiastically for it. We have taken——

Mr. ABERCROMBIE. What took place to change it from lukewarm to enthusiasm?

General SPEAKES. Sir, first weight.

Mr. ABERCROMBIE. You made some changes?

General SPEAKES. Yes, sir. Weight in terms of the overall originally about 19 pounds, then down to 12, now down to about 7 pounds overall.

Mr. ABERCROMBIE. So you weren't going ahead until you got something that you could use?

General SPEAKES. Yes, sir.

General THOMPSON. And received the positive endorsement from the soldiers that use it.

Mr. ABERCROMBIE. And by that time your 2008 budget cycle had passed in terms of——

General THOMPSON. And it was terminated, and therefore didn't show up in the 2009 budget.

Mr. ABERCROMBIE. All right. Fine. So now you are looking at a supplemental budget, is that correct?

General SPEAKES. That is correct, sir.

Mr. ABERCROMBIE. Now, is the supplemental budget principally an equipment question?

General SPEAKES. Yes, sir. It is to specifically outfit one brigade combat team worth of equipment. The price that we have asked for is $102 million.

Mr. ABERCROMBIE. Okay. In that context then I am not concerned—not concerned—so now we are moving from—that is the Ground Soldier System or Land Warrior?

General SPEAKES. Sir, that is Land Warrior?

Mr. ABERCROMBIE. Or are they interchangeable?

General SPEAKES. No, sir, they are not. This would be the first increment. What you have, for example, is legacy radios, for example, not Joint Tactical Radar Systems (JTRS).

Mr. ABERCROMBIE. I was going to ask that next. In other words, this is the Ground Soldier System then.

General SPEAKES. This is the precursor to Ground Soldier System, sir.

Mr. ABERCROMBIE. Okay. Land Warrior is now a relic of the past.

General SPEAKES. Sir, the program that we are asking for support in this supplemental is Land Warrior. It is an intermediate solution to Ground Soldier System.

General THOMPSON. If it would help, Chairman Abercrombie, I would categorize the Land Warrior as the early program. As we do with all programs, we continue to improve it, drop the weight, make it more operable. This is an improved Land Warrior that is in the supplemental request.

Mr. ABERCROMBIE. You are calling it Ground Soldier.

General THOMPSON. No, sir. I am calling it improved Land Warrior. And Ground Soldier System will be what we evolve to after this brigade set up capability.

Mr. SAXTON. May I ask one quick question, Mr. Chairman?

Mr. ABERCROMBIE. Sure.

General THOMPSON. We are not very good at naming conventions.

Mr. SAXTON. Generals, would you one of you or both of you describe the evolutionary process that is taking place with—this is high-tech equipment, essentially, with high-tech equipment involving soldiers so that everybody can understand how soldiers play an important role in developing the configuration of these systems?

General SPEAKES. Yes, sir. As General Thompson was mentioning, this is Army Evaluation Task Force kind of a demonstration. We were forced to take this to soldiers on their way to combat, have them evaluate it, and then try to derive Army lessons learned. We didn't get the answers on the right timeline. What the Army will do now with Army Evaluation Task Force is move into a process by which we cycle programs over to Fort Bliss to a formal evaluation is the proper way to evaluate equipment, and not give it to soldiers incident to deployment.

Mr. SAXTON. The soldiers get input during the developmental stage of these systems.

General SPEAKES. Absolutely, sir. And as you saw on Friday, soldiers are going to help us determine, for example, what the basis of issue plan is, the specifics of what we call the TTP, or tactics, techniques and procedures to operate the equipment are that enable us then to field it right when we actually go through this evaluation.

General THOMPSON. And Congressman Saxton, if I can just add a little bit here, this gets back to sort of the FCS argument. Not just are the capabilities transformational, the whole acquisition approach is transformational. And it is hard for the existing processes in the Defense Department. And I would submit part of the difference in view between the GAO and the Army is that we are embedding soldiers in this process, constantly evaluating. We are not doing things in the traditional way. So the soldier evaluates it, we make changes. We are in a constant cycle of making improvements to this thing, not that we don't have a stable acquisition baseline, but we are always looking for improving the capability so that when we do get it out there the soldiers accept it, it works. And that is really transformational in my view.

Mr. ABERCROMBIE. All right. But I am still not clear, and I want—we got to move on, still not clear what this Ground Soldier new start is in the context of the Land Warrior. Is the Ground Soldier, the position that you are now supporting here, part of the Land Warrior or not?

General SPEAKES. No, sir, it is not.

Mr. ABERCROMBIE. That is what you are asking for funding for now, though.

General SPEAKES. Yes, sir, it is. This will be incident to the needs of war as a concept right now that is not a formal Army program that has been evaluated in combat and now——

Mr. ABERCROMBIE. Okay. Then what is the Fourth Stryker Brigade the second infantry division now doing? Is that part of the Land Warrior System or is it part of the Ground Soldier System?

General THOMPSON. Sir, the one battalion of Land Warrior was bought with fiscal year 2008 and prior year funds. The brigade's worth of improved Land Warrior capability is in the request for the 2000—is in the request for the supplemental for 2008 in the main supplemental. The Ground Soldier System, which new term——

Mr. ABERCROMBIE. You guys are messing yourself up with this stuff. You know there is an iron rule in politics if you are explaining you are losing. They ought—people ought to be able to grasp what you are talking about when you say it. They don't have to know the details, but they got to figure it out.

General THOMPSON. Yes, sir. And——

Mr. ABERCROMBIE. And right now you are in the explanation stage and you are losing.

General THOMPSON. Right. And we do a poor job of naming things.

Mr. ABERCROMBIE. All right. Now, that said then, say for me you got your Army Battle Command Network. Help the soldier with position and all the rest of that, right? And the whole argument behind the Land Warrior System, among other things, as I understand it, is you got multiple capabilities, like you were showing me the other day. You got the wearable computer, you have got the network radio, right? Now is this connected then, what your Land Warrior and/or your Ground Soldier System, how are they connected to the FCS Joint Tactical Radio System and the Warfighter Information Network? And does that come in the context of the Army Battle Command Network?

General SPEAKES. Sir, across the Army right now we are operating Army Battle Command Network. What you saw is Spin Out number one is the first preliminary elements of what will be the FCS-enabled network. What we are asking for the authority to do is to continue to take legacy capabilities based upon ABCS, Army Battle Command Systems, put them in the hands of soldiers, and take them to a war. We then as a part of our 10 POM will go ahead and develop and bring into reality Ground Soldier System, which will be linked with the future vision of the network, which is JTRS-enabled and is supportable and compatible with FCS.

Mr. ABERCROMBIE. So now they are using your existing systems. Are they supposed to be using this JTRS system, this WIN-T system if and when they ever come into being?

General SPEAKES. Yes, sir, but that will be in Ground Soldier System. See that is the difference. Right now you are dealing with the last of the old. We are validating concepts. We are ensuring we got——

Mr. ABERCROMBIE. Are they working?

General SPEAKES. Yes, sir they are.

Mr. ABERCROMBIE. They are working?

General SPEAKES. Absolutely.

Mr. ABERCROMBIE. That's why the soldiers like them.

General SPEAKES. Absolutely.

Mr. ABERCROMBIE. Okay.

General SPEAKES. Yes, sir.

Mr. ABERCROMBIE. Mr. Reyes, your patience is now to be rewarded by unlimited time.

Mr. REYES. What about the Admiral down there? He is waiting his turn too.

Mr. ABERCROMBIE. The Admiral's middle name is Mr. Patience. He is waiting for the next hearing to occur, when he gets the first question.

Mr. REYES. Thank you, Mr. Chairman. I want to thank both you and Ranking Member Saxton for agreeing to go to El Paso to see firsthand the Future Combat System on the ground that is being actually utilized by soldiers. I always think that soldiers are the best ambassadors, as both of you saw. The Future Combat Systems we got a chance to see both indoor sensors, outdoor sensors, the

robot, the UAV. We even got to see the remote controlled mule that is a couple of years down the road. Is that in Spin Out 2? The mule?

General SPEAKES. Spin Out 3, sir, is its formal.

Mr. REYES. And you saw that it is very capable even at this point. You also got to see the connectivity with the simulators where they are already training to be able to take the first delivery, I believe General Speakes, it is this summer of the vehicles coming in?

General SPEAKES. Sir, yes. The actual Manned Ground Vehicle (MGV) you are going to see here in Washington, D.C., in June for the Army birthday, the first prototype.

Mr. REYES. And then in Fort Bliss this summer as well? So we are a lot closer on this system, Mr. Chairman, than people had thought. And I guess the most impressive thing is the fact that soldiers have always told us, and I have been out there multiple times with different members, including Chairman Murtha, and the most important, impressive thing is the capabilities that these systems bring to our soldiers in places like Iraq and Afghanistan.

Mr. Saxton and I were together when we visited Fallujah at the height in September a couple years ago, at the height of the fighting. And we were there with Chairman Hunter. And we spoke to some of the Marines that had had to go down the alleys and were taking casualties that way both by Improvised Explosive Devices (IEDs), and also by snipers. The robots, and I asked them later when I went back there, the robots would have been lifesavers for them. And I think we saw in that demonstration in the building that the robot with its infrared (IR) capability can see into even those hiding places where the insurgents were taking the major casualties on our troops.

So I believe that the Future Combat Systems and just the Spin Out products that we were able to see and the way that it is evolving, and I know you and I, Mr. Chairman, had a discussion about the software. And that is really one of the—probably the only question that I will ask both General Speakes and General Thompson to address, because we want to make sure that any questions that the Chairman has is answered. I was telling him that the simulator is already connected with software where the command vehicle, the officer in charge on the small unit scale, and I will have to depend on you for the definition of small unit, I know that there is at least five other vehicles that are connected to the command vehicle, and he is able to direct them as he will be able to later this summer with the FCS capabilities to plan the operations. And at the same time, when they dismount they will be able to count on the sensors, the outdoor sensors that will be force multipliers that will all be connected back to the command vehicle so that there is a view of the battlefield by the officer in charge in that vehicle where he can direct the multiple vehicles, the ground forces that have dismounted, and also see the threat that is coming at him both by the cameras and also by the sensors. So I am a very ardent supporter of the Future Combat Systems because I have actually seen them, seen the soldiers using it. And they have told me, like they told Chairman Abercrombie, Chairman Murtha and Ranking Member Saxton, that these tools, these systems will save

lives in the future. And it is the way forward as we talk about the asymmetrical challenges that we think we are going to be facing with the global war on terror.

So again, thank you both for going, and I will continue to ask other members to go, because I think there is no substitute for them seeing the soldiers who come from the what I call X Box 360 generation, they take to these robotics and capability of controlling these multiple systems with the X box like ducks take to water.

So I just would like General Speakes and maybe General Thompson to talk about the software and where we are with it and anything else that maybe will clear it up for the chairman.

General SPEAKES. Sir, I would be delighted to do that. What we saw in the simulator at Fort Bliss on Friday was very important. It was about four-fifths of software build one. What was significant about that is we are on the path now to a totally new way of building a battle command architecture. Army Battle Command System or ABCS, which was referred to by Chairman Abercrombie, was the way we fought the war up until now. The problem is it is a set of stovepipes that have been loosely linked. What that means is intel, fire support, and maneuver, for example, all operate by different code and they are linked in a very awkward way. What it means is we don't have a universal operating picture. The COP, or common operating picture, is what every commander desires so that he has all staff officer synchronized. What you saw on Friday was the first of that synchronization, albeit in a primitive fashion. So now what we are doing is we are harmonizing all the elements of the staff into a common view so that the enemy, the fire support, the friendly situation is all brought into one picture. And that has enormous application for efficiency and effectiveness and avoidance of fratricide that are very, very important. Now the issue that has been raised by the GAO is are we actually on a path to build the code to do this on the right timelines to meet the requirements? That is a sophisticated answer. I will ask General Thompson to help me on that.

General THOMPSON. Sir, in the overall picture on software, one of the things that the GAO points out is there is roughly 90 million lines of code in FCS. Well, the first point is FCS is a system of systems, so it is somewhat of an unfair comparison in our view to compare that to an individual system, an individual aircraft system in this case. But the equivalent source lines of code, the new code that we are writing that is unique to the FCS program has actually gone down since we started this program. Right now we are at about 16.7 million equivalent source lines of code. Most of the code that we are using in the FCS program is commercial off the shelf code or operating system code that we are integrating with the FCS.

So it is not something we are starting from scratch to develop ourselves. We are using what is out there already that works in making sure that we incorporate it and include it with the FCS-developed software. That is the commercial best practice. And that is a key strategic point. We are just about through with the block one of the software build for about 5.1 million lines of the 16.7 million. We have got a software block two. We are managing the risk

in the software build by the test process that we have got right now.

There is another software block of code after that. And then we will finish up. And so every couple of years we put ourselves on a developmental path to develop the software. We test it, we test it with soldiers. When it proves out we go to the next software block. So I am very confident in the acquisition approach that we have got. And that gets looked at by the experts and the DOD IG. As I pointed out to Congressman Saxton, that is part of the annual review process and will be part of the 2009 review process.

Mr. REYES. Thank you, Mr. Chairman. You can follow-up if you want to.

Mr. ABERCROMBIE. Yes, just quickly on that, I am concerned. As I said, I am concerned about alchemy more than anything else. One of the reasons I am as suspicious as I am or reluctant as I am to fling myself into the Internet pool is that there are two people, not one, it used to be one, there are two people, I thought they were working for me. It turns out they are under contract. They are in my office virtually every week—maybe that is not right, maybe every 10 days—because the equipment in my office doesn't work. The computers don't work. They crash. The copiers don't work. The fax machine doesn't work. These are commercial enterprises. When we were down there at Fort Bliss, yes, I was at the simulation, I saw it, there was a roomful of computers, a roomful of activity going on there.

If I understood you correctly, what you are saying is you are taking pieces of commercial off the shelf code as embodied in one form or another of a modular instrument and you are combining them with freshly done code or contracted code from another outfit, another commercial outfit, and you are rigging this all together to come up with your Joint Tactical Radio System and your Warfighter Information Network. Is that right?

General THOMPSON. Sir, inside of the FCS program itself we are doing what I described on using and leveraging the commercially developed software that meets our needs.

Mr. ABERCROMBIE. Are you sure? The reason I am asking this is someone who is one of your contractors came to my office the other day and told me essentially that we were ready to go. That my concerns about the Joint Tactical Radio System and the Warfighter Information System, in fact he was so adamant that he was—I guess he put me in the Luddite category—he was condescending enough to tell me that this was already done and why I didn't understand that was a little bit beyond his imagination. Now, is that true then that you are essentially ready, that my concerns about whether or not you have accomplished what you need to do with the JTRS system and the WIN-T is essentially already accomplished? And you are ready to go I guess to start manufacturing soon? I didn't see that at Fort Bliss.

General THOMPSON. The WIN-T program, Congressman, was evaluated last year and broken into four increments of capability that will be delivered over time.

Mr. ABERCROMBIE. That's right. From what this guy was telling me, one of these subcontractors, that is essentially all over. Now is he taking a flight of fancy?

General THOMPSON. I don't know who that individual was.

Mr. ABERCROMBIE. You are paying him several hundred million dollars, so he was quite content to take the money. I am just trying to get it straight here, you know, because it is serious business. Is this ready to go or not? If you are telling me you are taking commercial code as embodied in existing systems from I don't know, Sony, Samsung, whatever, that I can go down and buy it at Wal-Mart, and then you are going to put this together with something that is supposed to protect soldiers, I want to know whether that in fact is going to work. I am suspicious of that. It sounds like alchemy to me.

General THOMPSON. Sir, it will work when it is designed to work. We put——

Mr. ABERCROMBIE. How fast is that? Are you close to doing that? I don't think so.

General THOMPSON. In block one of the software build, yes, we are. We have done the iterative testing. We are just about finished with the block one.

Mr. ABERCROMBIE. How many blocks to go? Three more, right?

General THOMPSON. There are three more blocks to go. And so when we need the code developed, it will be not just developed, but it will be integrated and tested and deliver the capability or it won't get to the next phase.

Mr. ABERCROMBIE. So we are not going to go into production then before that is done?

General SPEAKES. Correct, sir. And that is the value of what you saw out there, that whatever you saw soldiers doing, when you saw that picture being moved, that was on this essentially three-quarters of the first build. We will have the complete——

Mr. ABERCROMBIE. First build. You mean you are integrating the vehicles in the network.

General SPEAKES. Exactly. Yes, sir. And so the great news about this is none of this is going anywhere until soldiers operate it and we get a chance to see it increment by increment. That is a part of the issue——

Mr. ABERCROMBIE. Okay. If that is the case then wouldn't it make sense in terms of the vehicle then, because I was in the Bradley, wouldn't it make sense then to go with a modified Bradley that you also have on the drawing boards before you get to the—and go ahead and start building that before you get to the infantry fighting vehicle?

General SPEAKES. Sir, what we showed you out at Fort Bliss was the illustration of the Manned Ground Vehicle that will be the common chassis for the FCS. And then what we explained is that 70 percent commonality enables us to take not just to develop the cannon you will see this summer, but then the other elements of it, the infantry vehicle, the recon vehicle——

Mr. ABERCROMBIE. I understand that, General, but do you not already have on the boards right now funding for an upgraded Bradley?

General SPEAKES. Sir, we are investing in continued research and development to essentially maintain the survivability and viability of the tank and Bradley as we bring FCS on. So the research

and development you see in our current 2009 budget does that. It is not designed to take us all way through the future.

Mr. ABERCROMBIE. I didn't say that. I understand, General. Occasionally we do, in fact, understand up here. I am asking you in the context of, you know, block one, and then three blocks coming of code and all the rest of it that goes into the vehicle I saw in the drawing, but I was in a Bradley, and barely, with the equipment that you have now to start using the things that you already have now. I am trying to help you here. And we have choices that we need to make. And what I am asking is does it make sense to push for funding for an upgraded Bradley? I am saying upgraded, I may not have this exactly correct in the nomenclature, but and that Bradley can accommodate some—it is a legacy vehicle, I understand that, but from what I understand the people who drive it are damn glad to have it. I mean it is a good vehicle, is it not? Has it not served honorably and well for the United States Army to this point?

General SPEAKES. Yes, sir, it has.

Mr. ABERCROMBIE. And all I am saying is that pending the day when the new vehicle comes off from being a drawing to being a prototype to going to low production rate to being integrated with the off the shelf code, which apparently has taken on iconic proportions right now, pending that, do you want to stay just with the Bradley you have now or would the new and improved version of the Bradley that I understand you are ready to move on in terms of manufacture, is that something you could use?

General SPEAKES. Sir, the key element of this, before I turn it over to General Thompson, is what you saw put into the Bradley was the Internal Communications System (ICS). That ICS gives exactly what you are asking, which is it takes this primitive version of the new network and brings it into our existing legacy platforms.

Mr. ABERCROMBIE. That is the kind of thing your soldiers are now using, are they not?

General SPEAKES. Exactly. They are using it right now at Fort Bliss to essentially validate we can do this. You are exactly right, sir.

Mr. ABERCROMBIE. Good. Mr. Francis, I have a couple things I would to ask you and then I am going to go to Mr. Sestak. If you can just confirm this for me so I make sure I have my facts lined up. In fiscal year 2003, when the FCS program was initiated by the Army, the target date for fielding the first brigade for the 18 FCS element programs was December of 2010. Is that right?

Mr. FRANCIS. Yes, sir.

Mr. ABERCROMBIE. Okay. Since 2003 the Army has eliminated 4, I believe I got this right from your statement, eliminated 4 of the original planned 18 system elements, is that right?

Mr. FRANCIS. Yes, Mr. Chairman.

Mr. ABERCROMBIE. Two of the Unmanned Aerial Vehicles (UAVs) and two of the ground robots?

Mr. FRANCIS. I think one of those—yeah, I think that's correct, Mr. Chairman.

Mr. ABERCROMBIE. Okay. Of the original 18 system elements, 2 will be fielded by the 2010 date.

Mr. FRANCIS. Yes.

Mr. ABERCROMBIE. The remainder won't be ready until 2014 in the case of the four elements.

Mr. FRANCIS. I believe that is about the right schedule, yes.

Mr. ABERCROMBIE. Or 2015 for the remaining eight.

Mr. FRANCIS. Yes.

Mr. ABERCROMBIE. Okay. If everything goes right.

Mr. FRANCIS. Correct.

Mr. ABERCROMBIE. Overall the first brigade has been delayed five years then.

Mr. FRANCIS. Yes, sir.

Mr. ABERCROMBIE. I am not asking these questions because I am trying to go so there, I am trying to figure out when things get put down the line in terms of choices we got to make now where the funding goes. That's what I am trying to get straight. So again, in 2003, the Army said it would field 15 FCS brigades by 2020. Is it correct, do I have it correct that the figure is now 2029?

Mr. FRANCIS. I believe that's correct. The production rates have been lowered and stretched out.

Mr. ABERCROMBIE. Provided everything goes right.

Mr. FRANCIS. Correct.

Mr. ABERCROMBIE. Now this is important to me. Now, the cost estimate for all development costs and the 15 brigades 5 years ago was about $90 billion, a little over $90 billion.

Mr. FRANCIS. Yes.

Mr. ABERCROMBIE. Right? Now the Army cost estimate now is $161 billion. Right?

Mr. FRANCIS. Yes.

Mr. ABERCROMBIE. Now, this doesn't include all the funding for the Spin Outs. Is that your understanding?

Mr. FRANCIS. Yes, that is correct.

Mr. ABERCROMBIE. Okay. And now the independent estimates we talked to, that is why I went over this group thing from the Pentagon, there is at least two, right? One is—one of the think tank group.

Mr. FRANCIS. The Institute for Defense Analysis (IDA).

Mr. ABERCROMBIE. Who funds them? Do you know?

Mr. FRANCIS. I believe they are an FFR——

Mr. ABERCROMBIE. They aren't one of these Washington groups that you don't know where the money comes from?

Mr. FRANCIS. I think it is DOD-funded.

Mr. ABERCROMBIE. So they contract with an outside agency?

Mr. FRANCIS. No, actually this was—IDA was mandated by—well, DOD was mandated by law to have an independent estimate done, and they contracted——

Mr. ABERCROMBIE. So they chose these folks?

Mr. FRANCIS. Yes.

Mr. ABERCROMBIE. Do you know anything about them?

Mr. FRANCIS. We have had a number of dealings with them. They are generally very senior analysts who have been in and out of the defense industry. And I do find them independent.

Mr. ABERCROMBIE. Nonetheless they are a private entity?

Mr. FRANCIS. They are.

Mr. ABERCROMBIE. Okay. Then the other group, the cost group is an internal entity of the Pentagon?

Mr. FRANCIS. Correct. Works for the Office of the Secretary of Defense and reports to him.

Mr. ABERCROMBIE. And who expects them to give him or her an objective report regardless of their service affiliations previously or extent.

Mr. FRANCIS. Correct.

Mr. ABERCROMBIE. Okay. The reason I go into that, for the record, you have seen those. Now those two entities have come up with figures that are significantly higher, is that correct?

Mr. FRANCIS. Yes.

Mr. ABERCROMBIE. The outside figure I have is over 200 billion.

Mr. FRANCIS. Yes. That was the Cost Analysis Improvement Group's number.

Mr. ABERCROMBIE. Do you disagree with any of those questions? Rather than repeat them all, I am sure you heard them, I should have asked you to listen at the same time. Not that you wouldn't be listening, General.

General SPEAKES. Sir, we were certainly listening. The first point is that the technical discussion about the change in cost has to be balanced against the change in program content.

Mr. ABERCROMBIE. I understand all that. I am just asking am I accurate so far?

General SPEAKES. Sir, you are accurate, but the inferences are not accurate.

Mr. ABERCROMBIE. You may be drawing inferences. I am not.

General SPEAKES. No, sir. But the issue here is when you say they went from 90 to 160 billion, for example, we need to account for the change in scope of the program.

Mr. ABERCROMBIE. I quite agree. I understand.

General SPEAKES. Yes, sir.

Mr. ABERCROMBIE. In fact, I would say again trying to look at the basis the best I can understand, I know they are taking into account inflation. They think they are. But I don't think they are taking into account the depression we are now entering into, thanks to the great fiscal stewardship that we have had over the last seven years. So it may get even more difficult. Thank you. Ms. St. Laurent, to think you were inches from a clean getaway. I was struck by your—if I can quote from the summary from your work. Although I have read the rest of it, but the summary I thought was pretty trenchant. And I want to quote a couple things back to you because I want to make sure I understand the information. And you may draw inferences from this, General Speakes.

General SPEAKES. Yes, sir.

Mr. ABERCROMBIE. What we are dealing with here, or what you were dealing with with the modular restructuring, and I take that very, very seriously. This is not easy to do. And I am sure General Speakes will agree with this. That moving from the division concept to the brigade concept such as was done—is underway here is not an easy task organizationally. I am sure you agree with that.

Ms. ST. LAURENT. Yes, very much. It is a major change in the way the Army is structured.

Mr. ABERCROMBIE. Not only that, but that means a major change in thinking and it can mean changes right down to where they put the furniture.

Ms. ST. LAURENT. Correct. It has personnel, equipping, facilities, and other implications.

Mr. ABERCROMBIE. Right. All of which costs money. Okay. Now, if I have you correctly, you found that the funding plan to grow the Army by 74,000 personnel, let's suppose we can actually do that, we got to take into account bonuses and recruitment expenditures and all kinds of things, so you don't really need to count that in. I am thinking about that. Okay. I am trying to figure out how much we are going to spend. Is $70 billion approximately what was set aside or is going to be asked for to grow the Army by that 70,000?

Ms. ST. LAURENT. That was the initial estimate. The Army I believe has revised it to about a $72 billion estimate right now.

Mr. ABERCROMBIE. Okay. Does that take into account—I wasn't clear from reading what you said, forgive me if you said it in there, but as I got to my second or third hour of reading I might have missed it. Does that take into account the transition from modularity? That transition is already taking place without the 74,000.

Ms. ST. LAURENT. Right. The $70 billion estimate is to add 6 additional brigades and some support units. And the equipment costs associated with that are about $18 billion. The rest of the $70 billion is for personnel and other costs. But on top of the expansion costs for adding the additional brigades, the Army is proceeding with its overall effort to restructure. And that effort is expected to call, just for the equipment alone, $43 billion or so. And again in our estimation, that $43 billion estimate is somewhat understated, in fact, probably quite a bit understated because it was developed so long ago. And when we look at beyond 2013 our analysis shows that Army units are going to continue to have fairly significant shortfalls in some of the key equipment items.

Mr. ABERCROMBIE. So are you saying that if they are successful, if the Army is successful in moving toward this acquisition of more personnel that this estimate will probably have to go up?

Ms. ST. LAURENT. Yes. Even without considering the expansion efforts——

Mr. ABERCROMBIE. Of the 70.

Ms. ST. LAURENT. Right—of the existing brigades prior to expansion, our analysis shows that it is going to cost significantly more to equip modular units.

Mr. ABERCROMBIE. Okay. Do you have an educated guess as to what that might be if you added the 74,000?

Ms. ST. LAURENT. It is very difficult to do because the Army has not really updated its estimate at all since the 2004 time frame. We have requested——

Mr. ABERCROMBIE. You mean the estimate of the cost of the equipment?

Ms. ST. LAURENT. Yes. We have recommended that they do that. The Army's perspective now is that modular equipping is just part of the overall modernization effort of the Army. And what they plan to do is request equipment item by item in their subsequent budgets. And that will help them address subsequent shortfalls, but they don't have any overall estimate of what it is going to take to equip these units. And of course, that has readiness implica-

tions. And what we are seeing at this point is money is flowing in toward procurement to buy additional equipment, but we have not yet seen any significant enhancements in the readiness, particularly the nondeployed forces.

Mr. ABERCROMBIE. Is that a fair assessment, General Speakes? You see where I am going. I am trying to be helpful here. My guess is that we need to start figuring that there is more money that is going to be needed in the context of moving to modularity, in the context of modularity and increasing the personnel at the same time. In some respects—in other words, you are going to be hurt if you are successful?

General SPEAKES. Yes, sir.

Mr. ABERCROMBIE. Or it will be more difficult for you if you are successful.

General SPEAKES. Yes. Exactly right. Ms. St. Laurent is exactly right. We have two different ways of looking right now at this challenge that we are facing. One is to grow the Army. Seventy billion dollars given to the Army, it was a fully burdened cost. It is fully resourced. We have a plan now that not only creates 6 infantry brigades, but also creates 13 support units, brigade size across the Guard and Reserve. That is a substantial capability that is on the books now, resourced appropriately, and is proceeding on plan.

The other element then that she identifies is the challenge we have of continuing the transformation of the Army over time so that by 2013 we have taken 300 brigade-sized units, Active Guard and Reserve, combat all the way to service support, and brought them to a new organization.

Mr. ABERCROMBIE. I agree with you, General. I am sorry just because we have got the vote. What about the money then? Where are you in trying to come up with another figure?

General SPEAKES. Sir, at this point what we have worked very hard is the issue of holes in the yard. And the holes in the yard challenge is basic because we are moving to a level now of equipping where we want to make sure everybody has got the stuff they are supposed to have. And we will continue the modernization issue over time. So at this point what we believe is that the Army Guard is owed about $9.9 billion after we have applied current plans through 13.

Mr. ABERCROMBIE. So the 70 goes to 80?

General SPEAKES. Sir, what we have to do is we have got to apply about $10 billion to the Army Guard, about $2.4 billion to the Army Reserve, about $10 billion to Army Pre-Positioned Stocks (APS), and about $10 billion to the active. That comes to a total of $33 billion beyond our current program.

Mr. ABERCROMBIE. So it is $100 billion you need.

General SPEAKES. Sir, this is right now in addition to our existing resource plan. So what I am saying——

Mr. ABERCROMBIE. $100 billion.

General SPEAKES. No, sir. You have a Unfunded Report (UFR) right now of $33 billion to fill the holes in the yard at the end of 2013. That does not count any supplemental finding in 2009. It only counts the planned supplemental funding in 2008.

Mr. ABERCROMBIE. To take care of your immediate needs.

General SPEAKES. Yes, sir.

Mr. ABERCROMBIE. But you don't have the 74,000 yet?

General SPEAKES. Yes, sir. We have already got that. That is in our base program. In other words, we are counting right now that you gave us all the money we need——

Mr. ABERCROMBIE. So you are telling me the $70 billion is okay. Why did you ask for 70 if you only needed 33?

General SPEAKES. No, sir. I am trying to draw a distinction. The $70 billion accounts for the growth of the Army, that delta, that new capability we are bringing on, 6 brigade combat teams and 13 support brigades. Seventy billion dollars total burden cost in our program resourced and fully funded. No problem. The next issue then is you got the whole rest of the Army.

Mr. ABERCROMBIE. Yes.

General SPEAKES. What I outlined to you is the remaining bill that is beyond our existing program to put the right equipment in the force.

Mr. ABERCROMBIE. Okay. Then that is $100 billion.

General SPEAKES. No, sir. That is $33 billion in addition to what you have already got planned. See the $70 billion you already talked about is already in the plan, you have already given it to us.

Mr. ABERCROMBIE. Yeah, I understand that. I am just asking what the overall cost is going to be. I know we have already given. I understand that part. So it is $100 billion all together.

General SPEAKES. Yes, sir.

Mr. ABERCROMBIE. Now, where does preposition stocks come into this?

General SPEAKES. Sir, that was $10 billion of the costs that I outlined. In other words, when I showed you the $33 billion shortfall, I said about $10 billion in APS that has not yet been resourced.

Mr. ABERCROMBIE. So $10 billion will cover all that?

General SPEAKES. Yes, sir, it will.

Mr. ABERCROMBIE. You think so.

Ms. ST. LAURENT. Mr. Chairman, if I could try to go over our overall numbers and talk about what has already been requested and appropriated and what is from here on forward.

Mr. ABERCROMBIE. Yes.

Ms. ST. LAURENT. And in our testimony we talk about a figure of about $190 billion for these four initiatives. Of that amount, the Department of the Army has probably already requested about $80 billion. So that means there are still $100 billion or more of expenditure through fiscal—or of requested moneys through fiscal year 2013. And beyond that there is likely to be significant additional requirements for equipment.

Mr. ABERCROMBIE. Would you say the last sentence? I was distracted for a moment. I beg your pardon.

Ms. ST. LAURENT. Certainly. There is about $110 billion more to come in terms of fiscal year 2009 to 2013. And beyond that point there is likely to be additional billions of dollars requested by the Army to support the modular force. What we can't do is estimate the amounts beyond fiscal year 2013 at this point based on the data we have seen.

Mr. ABERCROMBIE. Would you agree that that is in the ballpark, General?

General SPEAKES. Yes, sir. She has identified a total requirement. I have applied planned resources against it.

Mr. ABERCROMBIE. You say you have applied planned resources. You mean you can accommodate that kind of money?

General SPEAKES. Sir, what I can accommodate is everything less $33 billion.

Mr. ABERCROMBIE. So we should add $33 billion—so you accommodate approximately $150 billion in your planning?

General SPEAKES. Yes, sir.

Mr. ABERCROMBIE. So we still got to find $33 billion then. Okay. Now we are getting somewhere.

General SPEAKES. Or not fill the Army by 2013, sir.

Mr. ABERCROMBIE. Do you suppose we will have any other difficulties before 2013 that you have to address?

General SPEAKES. Potentially, sir.

Mr. ABERCROMBIE. Yes. Anybody want to make any final remarks? Because I am not sure we can bring any other Members back after the vote. And inasmuch as I would like to obey the rules, one Member can't do it.

Ms. UGONE. Mr. Chairman?

Mr. ABERCROMBIE. Yes.

Ms. UGONE. I would like to just address, and unfortunately Mr. Saxton has left, I would like to mention that we did afford 109 days when we first alerted the Army to this issue. We met with the Program Executive Officer (PEO) soldier twice. They provided information from their files. We considered them. And in fact, we scrubbed our draft report results and reduced the number of issues we had from 15 to 13. So I just wanted to address that issue.

Mr. ABERCROMBIE. So you think the situation—could you folks get together and continue to talk on this issue so that we can——

Ms. UGONE. Frankly, the Army did agree with most of our recommendations. And I think dialogue, continued dialogue is good.

Mr. ABERCROMBIE. In a short order?

Ms. UGONE. I don't see a real issue on this.

Mr. ABERCROMBIE. Okay. Could I ask you, I guess it is formally here, but could I ask you that when you finish up your talks and what you were talking about, General Thompson, in terms of your using that that you will let me know what the ultimate score is so we can then put something out that will hopefully relieve people's anxiety? In other words, as I said at the beginning, this is something that many people know about here and are familiar with and conversant with, but what happens is it gets translated to the public and to the republic in a manner that generally comes out oh, our soldiers are in danger and they are not being taken care of the way they should.

I don't think that is really the issue here, but it becomes one unless we are able to clear it up, which I would like to do. And I think we can as a result of what has been said here today. I appreciate the work that you all do.

[The information referred to can be found in the Appendix beginning on page 123.]

Ms. UGONE. Thank you.

Mr. ABERCROMBIE. Thank you all very, very much. I think I will conclude the hearing rather than hold you to this any further. Once

again, it has been very, very good, very, very enlightening for me. And I am grateful to all of you. Thank you.

[Whereupon, at 4:15 p.m., the subcommittee was adjourned.]

A P P E N D I X

April 10, 2008

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

April 10, 2008

STATEMENT BY

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DEPUTY CHIEF OF STAFF, G-8
UNITED STATES ARMY

BEFORE THE

HOUSE ARMED SERVICES SUBCOMMITTEE ON AIR AND LAND FORCES
UNITED STATES HOUSE OF REPRESENTATIVES

SECOND SESSION, 110TH CONGRESS

ON ARMY ACQUISITION PROGRAMS AND STRATEGY

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HOUSE ARMED SERVICES SUBCOMMITTEE ON AIR AND LAND FORCES

Introduction

Chairman Abercrombie, Ranking Member Saxton, and distinguished members of the committee, on behalf of the United States Army and our great Soldiers, I thank you for your invitation to appear before you today to discuss the Army's long-term Army Acquisition program and strategy, to include program funding for the President's fiscal year 2009 budget request.

The Army's mission is to provide ready land forces with full spectrum capabilities to the Combatant Commanders in support of the Nation Security Strategy, the National Defense Strategy and the National Military Strategy. We are engaged in the seventh year of combat against cunning, ruthless and agile enemies who abhor our basic values and threaten our way of life. These enemies take a long view of history and are quite willing to wait years to achieve their objectives. These facts have led us to conclude that we are in an era of persistent conflict; an era that will pose repeated challenges to our vital national interests. In order to prevail in such a conflict, we must ensure that our Army remains the preeminent Landpower on earth, capable of conducting missions across the full spectrum of operations. To maintain our dominance and ensure full-spectrum capabilities, we are committed to an Army Equipment Strategy – that restores and upgrades equipment during our Reset process, a Modernization program that stresses continuous improvement and responsiveness to the current threat, and ensures that our Soldiers have the best equipment for the next unforeseen contingency while prudently balancing current and future requirements and risks.

My testimony today will focus on long term Army acquisition programs and strategy. I will also respond directly to those specific questions that you have asked us to address.

The Army Reset program has sustained current operations for the last 6 years with equipment operational availability at 90% for ground and 75% for aviation platforms. Our equipment on hand posture, currently at 79% (85% AC, 79% ARNG, and 74% USAR) continues to improve as a result of the investment you have made in our Army.

The Army Modernization Strategy has as its primary objective the maintenance of the Army as the preeminent Landpower on earth, one with full-spectrum capabilities. To shrink from this goal in the current international security environment is to invite risk to our national security and other vital national interests. We never want our Soldiers to be in a fair fight. We seek to achieve this enduring objective of dominance by emphasizing four principal means or what we have called the four elements of modernization:

First, rapidly field the best new equipment to the *Current Force*.

Second, upgrade and modernize existing systems within modular formations to ensure all Soldiers have the equipment they need.

Third, incorporate new technologies derived from Future Combat Systems research and development as they become available.

Fourth, begin to field Future Combat Systems Brigade Combat Teams.

Army modernization should not be, and is not, done in a vacuum. On the contrary, it is an integral part of the Army's overall transformation efforts. Modernization is the equipment element of transformation. It complements our organizational redesign efforts that have taken us from large, rigid divisional structures to an emphasis on developing agile brigade combat teams beginning in January 2004.

The scope of Army modernization expanded in September 2007, when the Secretary of Defense approved the Chief of Staff of the Army's initiative to accelerate the Active Component (AC) and Army National Guard (ARNG) End Strength growth to FY 2010 and to accelerate the growth of a sixth additional AC BCT, completing BCT modular conversion and assisting in the restoration of balance in the force by 30 September 2011. At the end of September 2007, the Army had completed or begun conversion of 210 of 303 brigades (69%), to include 65 BCTs and 145 Support Brigades. Army modular conversion is on a schedule for completion by the end of FY 2013.

We have also rebalanced the force mix in the active and reserve components and, with the strong support of this committee, we have made

historic strides in improving the quantity and quality of equipment provided to our reserve components, enabling them to begin the transformation from a strategic to a true operational reserve. We are fielding more than 518,000 items to the Army National Guard and Army Reserve from January 2008 to December 2009. This represents 46 percent of all Army distributions. In addition, the equipment they are receiving is materially improving the capability of the Army Guard to conduct Homeland Security and Homeland Defense missions.

Army modernization has evolved during the last seven years of war, continuously incorporating lessons learned from these operations, ensuring that our modernization efforts kept pace with the evolution of our most current doctrine embodied in Field Manual 3-0, *Operations*, which was just released in February 2008. This means that this new doctrine is already supported by our existing modernization programs. We ask that you continue to support our ongoing efforts to modernize with which you are intimately familiar and that have, indeed, been shaped by your wise counsel.

I would now like to focus on the specific concerns the Committee asked me to address in your letter of invitation to testify.

Existing Vehicles Upgrades. The Army's Combat Platform modernization is focused on standardizing 31 Heavy Brigade Combat Team (HBCT) sets with two variants of the Abrams tank and Bradley Infantry Fighting Vehicle. This modernization will provide 27 operational HBCTs, and 4 strategic HBCTs. The Army has almost completed fielding modularized HBCTs, which gives every brigade a common structure. The short term modernization goal is to populate these brigades with only two variants of the Abrams and the Bradley. The Abrams M1A2 Sep is being paired with its partner the Bradley M2A3 and the Abrams M1A1 AIM SA is being teamed with the Bradley M2A2ODS. This modernization plan aligns compatible Combat Platforms with common modular formations. Funding in Program Budget Review (PBR) 09-13 completes the Army's 2010 Abrams-Bradley 2-variant fleet strategy. The Army has requested $351 million for the Abrams Upgrade program and $172 million for Bradley in the FY09 budget request.

Stryker has planned procurement of 3,324 vehicles. The Stryker program received a Full Rate Production decision on eight of the ten configuration variants; these include the Infantry Carrier Vehicle, Reconnaissance Vehicle, Commander Vehicle, Mortar Carrier Vehicle, Fire Support Vehicle, Anti-tank Guided Missile Vehicle, Engineer Squad Vehicle, and Medical Evacuation Vehicle. The remaining two variants, the Nuclear, Biological and Chemical Reconnaissance Vehicle and the Mobile Gun System, are in Limited Rate Production. The Secretary of Defense authorized, and the Army has funded, the procurement and fielding of seven Stryker Brigade Combat Teams (SBCTs) to fulfill National security requirements. This will equip seven brigade-size units including maintenance floats, a strategic pool of ready-to-fight systems, Institutional Training Base, Test Articles, an Equipping Force Pool managed by the Army Materiel Command, other operational requirements, and Nuclear Biological and Chemical Reconnaissance Vehicles to fill non-SBCT armored Chemical, Biological, Radiological and Nuclear requirements.

The long term goal for the HBCT and SBCT Combat Platforms is to operate on the future battlefield and to be compatible with Future Combat Systems Brigade Combat Systems. Modernization upgrades to Current Force platforms are essential to increasing the capabilities of the Current Force. As part of modernization, the Army has a comprehensive plan to upgrade ground combat vehicles to the most modern variants while displacing the oldest and least modernized variants with FCS Manned Ground Vehicles

Tactical Wheeled Vehicles. Modernizing the Army's Tactical Wheeled Vehicle (TWV) fleet is a critical step in providing the Soldier the best possible protection, payload and performance in each vehicle of the fleet. The TWV strategy will balance competing factors including support to current operations and future readiness while synchronizing our wheeled vehicle procurement, recapitalization and sustainment efforts. The strategy seeks to strengthen fleet viability and combat effectiveness for the next three decades. A modernization plan is being refined for each category of the Tactical Wheeled Vehicle fleet: light, medium, and heavy wheeled vehicles and trailers.

The Mine Resistant Ambush Protected (MRAP) vehicle has proven to be extremely effective in protecting our Soldiers against improvised explosive devices (IEDs) and explosively formed penetrators (EFPs). The MRAP does have certain performance limitations and is not a replacement for the Up-Armored HMMWV. Rather, the MRAP will continue to be employed with units in the future to augment their capabilities where it meets mission requirements. As such, it is a component of the Army's Tactical Wheeled Vehicle Strategy and our continuing study.

Small Arms. The M-4 Carbine has proven its value in combat since its introduction in 1991. The M-4 is the primary individual combat rifle for the Army's BCTs, and Army Special Operations Forces. The Army began combat operations in 2001 with a mix of M16A2s, M16A4s, and some M-4 Carbines. All M-4s initially issued did not include the full suite of enhancements now available. Now, all have been updated to include current M-4 fielding (Adapter rails, collapsible butt stock, 3-point sling, back-up iron sight, close combat optic, and seven new magazines). The M-4 is the most requested item on theater Operational Needs Statements, meets all Army carbine requirements, and will continue to be enhanced with future technology improvements. The Army has requested $151.1 million as part of the FY09 President's Budget Request for 88,964 M4 Carbines and combat optics.

The Armed Reconnaissance Helicopter (ARH) Program. We have made great progress in Army Aviation modernization. The ARH program provides a robust reconnaissance and security capability for the Joint combined arms air-ground maneuver team and was established to correct OH-58D capability gaps for use in reconnaissance. As a result of Aviation Focus Group analysis, in February 2004, the Army Chief of Staff identified the need for 368 ARH aircraft to replace the existing OH-58D fleet. The requirement has since grown to 512 aircraft due to the conversion of four AH-64A National Guard Apache battalions to the ARH-70A.

The ARH program had its first flight on July 20, 2006. A Limited User's Test was conducted in November 2007 with a subsequent LUT expected in February 2009 followed by its Milestone C decision in May 2009. A Full Rate

Production decision review is expected in 1st quarter FY11 with the First Unit Equipped in 4th quarter FY11. The $358.1 million in FY08 funds the production of 10 production-representative aircraft ($185.6 million research, development, test and evaluation and $174.5 million in aircraft procurement). The Army has also requested $136 million in FY09 Army research, development, test and evaluation funds to complete the System Demonstration and Development phase of the program. In addition, we have requested $439 million in FY09 aircraft procurement funds to procure 28 Low Rate Initial Production aircraft, as well as long lead materials and items to support production.

Joint Life-Cycle Management of the Joint Cargo Aircraft. The Joint Cargo Aircraft is a joint Army/Air Force program to procure a small/medium aircraft to support Time Sensitive/Mission Critical resupply of Army forces. The Army will procure 54 JCA and Air Force 24 JCA. The Services have agreed upon a common aircraft configuration; no Service-unique aircraft variations are planned.

The Army and Air Force are procuring the same version of the C-27 for the same price - approximately $33 million each. The cost estimate in the draft Acquisition Program Baseline (APB) reflects a joint approach.

The primary factors driving the Average Procurement Unit Costs (APUC) calculations are essentially how differently the Services approach maintenance, training, engineering and stationing. Army training & sustainment are O&M funded – which are not part of APUC calculation

This funding approach was directed by the Office of the Secretary of Defense (OSD) for the APB. OSD has additionally directed the Services to conduct a Business Case Analysis during Low Rate Initial Production to establish a single support and training process. This long-term maintenance and training support is expected to be decided at the Full Rate Production decision in FY10.

The Services will benefit by sharing the same schoolhouse for training, the same depot structure, the same supply system, and the same maintenance certification standards, both FAA and military.

Modularity Unit Conversions. At the end of September 2007, the Army had completed or begun conversion of 210 of 303 brigades (69%), to include 65

BCTs and 145 Support Brigades. Army modular conversion is on schedule and will culminate in a total of 76 BCTs and approximately 227 Support Brigades across all three components by the end of Fiscal Year 2013. Although the Army will complete modular design by FY 2013, full fielding of some items of equipment will take longer.

Procurement Reset Funding. The Army has experienced a tremendous amount of wear and tear of its equipment in theater as well as substantial battle losses. Our successful efforts to replace, repair and recapitalize equipment as part of equipment reset would not be possible without the considerable support of Congress which has provided funding in response to previous Army's Supplemental requests. The budget request continues our investment in the programs of tomorrow. Our highest modernization priority, Future Combat Systems, continues to be funded in the base budget and will shape the Army of the future while spinning out technologies into today's fight.

Deleted: The Army's request for procurement reset funding will be included in the FY 2009 supplemental request, which has not yet been released by OSD.

Missile Modernization. The Army's missile capability is unsurpassed. However, the Army has initiated a missile capability gap analysis to address emerging capability gaps to make certain that the U.S. maintains the appropriate industrial base capacity to counter future emerging threats. In the realm of Close Combat missile capabilities, the Army will continue replenishing existing missiles. The FY09 budget requests $259.5 million for the Javelin program (920 Command Launch Units and 605 missiles) and $223.1 million for the Tube-Launched, Optically-Tracked, Wire-Guided Missile (TOW) program (206 Improved Target Acquisition Systems and 1,585 missiles).

Army Air Missile Defense (AMD) is currently transforming missile system capabilities so that they operate in an integrated manner. This will facilitate the Joint force commander's ability to fully leverage the family of sensors and shooters at his disposal, optimizing their capabilities while mitigating their inherent limitations. This strategy is necessitated by the complex and changing operational environment where increased ballistic and cruise missiles, manned and unmanned aerial vehicles, and rockets, artillery and mortars, coupled with

weapons of mass destruction (WMD) payloads are plausible for use against the homeland from inside and outside a Joint force commander's area of operation.

To prepare for these challenges, Army Air Defense is changing the way it organizes and fights with the development of composite ADA units that are modular, multifunctional and more readily provide the spectrum of AMD combat potential. These units offset the limitations of a single system, significantly increase the effectiveness of the area air defense commander's defense design, enhance modular or task force operations, reduce the limitations created by autonomous operations and the potential for fratricide, and increase the engagement battlespace against AMD threats. The Army will determine the way ahead based on the outcome of the missile capability gap analysis and address the requirements in future resources.

Mr. Chairman, Mr. Saxton, and Members of the Committee, on behalf of our Soldiers, we greatly appreciate the tremendous support we receive from this Congress and the American people. In order to successfully implement the plans we have shared with you today, we urge you to provide full, timely and predictable funding.

The Army is modernizing, while simultaneously conducting two major wartime operations, and preparing for the future defensive challenges. Our goal is to balance these current and future requirements and risks to make certain that we can defend the Nation today and tomorrow. With the continued support of this Congress and the American people, the United States Army will remain the preeminent Landpower on earth, an expeditionary Army, capable of full-spectrum operations – The Strength of the Nation.

RECORD VERSION

STATEMENT BY

LIEUTENANT GENERAL N. ROSS THOMPSON III
MILITARY DEPUTY TO THE
ACTING ASSISTANT SECRETARY OF THE ARMY
(ACQUISITION, LOGISTICS AND TECHNOLOGY)
AND DIRECTOR, ACQUISITION CAREER MANAGEMENT

BEFORE THE

SUBCOMMITTEE ON AIR AND LAND FORCES
COMMITTEE ON ARMED SERVICES
UNITED STATES HOUSE OF REPRESENTATIVES

ON

ARMY ACQUISITION PROGRAMS AND STRATEGY

SECOND SESSION, 110TH CONGRESS

APRIL 10, 2008

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UNITED STATES HOUSE OF REPRESENTATIVES

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Introduction

Mr. Chairman, Congressman Saxton, and distinguished Members of the Subcommittee on Air and Land Forces. Thank you for this opportunity to discuss Army acquisition programs and strategy and our mutual efforts to ensure that America's Army remains the preeminent landpower on earth. It is my privilege to represent Army leadership, the military and civilian members of the Army acquisition workforce, and the more than one million Soldiers – Active, Guard and Reserve – who comprise our Army and rely on us to provide them with world-class weapon systems and equipment.

We are a high technology Army. Our Soldiers are the most technologically advanced and capable in the world. This is possible in large measure, Mr. Chairman, because of the wisdom, guidance, and strong support we receive from this Committee and Congress. On behalf of our courageous, dedicated Soldiers and the families who support them, we thank you.

Our most important asset is our people. There is great concern about the steady decline in the number of Army acquisition workforce members while the workload continues to increase. Currently, there are less than 43,000 civilian and military members of the Army acquisition workforce. Still, this workforce manages roughly 25 percent of the Army's current budget, and a diverse portfolio of more than 600 programs that range from the Abrams tank to the Army combat uniform; from the Apache Longbow helicopter to the advanced combat helmet; and from life-saving medical equipment to our ongoing chemical demilitarization operations. Within the next few years, including the potential of early

retirements, almost one-half of all acquisition workforce civilians will be eligible to retire. One of our most critical issues is the age and size of the workforce. We need a well-trained and educated workforce that is focused on our mission to provide the Soldier with world-class capabilities.

America has been at war for more than six years. Our Army has been a leader in this war and has been fully engaged in Iraq, Afghanistan, and in nearly 80 countries worldwide. As we look to the future, we believe the coming decades are likely to be ones of persistent conflict – protracted confrontation among state, non-state, and individual actors who use violence to achieve their political and ideological ends. In this era of persistent conflict, the Army will continue to have a central role in implementing our National Security Strategy.

To achieve balance, the Army will require sustained, timely, and predictable base budget funding. The Fiscal Year 2009 (FY09) President's Budget requests $140.7 billion for the Army. This request is necessary to support current operations, fight the wars in Iraq and Afghanistan, sustain the All-Volunteer Force, and prepare for future threats to the Nation. The FY09 President's budget requests $24.6 billion to continue procurement of weapon systems and equipment for our Army, which include aircraft; missiles; ammunition; weapons and tracked combat vehicles; tactical and support vehicles; and communications and electronics. In addition, the FY09 President's Budget requests $10.5 billion for Research, Development, Test and Evaluation.

Acquisition Programs and Strategy

While fully engaged in the war on terror and sustaining the range of our global commitments, there is an increased emphasis on modernization and our plans for the future. Our strategy is designed to meet the Army's current and future equipping requirements through continuous modernization. Let me address, as requested, the following specific strategies.

The **Joint Light Tactical Vehicle** (JLTV) is a family of vehicles that will replace the High Mobility Multipurpose Wheeled Vehicle (HMMWV). It is a Joint Army/U.S. Marine Corps and U.S. Special Operations Command program that is currently in the Technology Demonstration (TD) phase. In September 2007, the Defense Acquisition Executive directed the program to begin at Milestone A with a robust TD phase to reduce System Design and Demonstration phase activities, costs, and technology risk. As planned, JLTV will provide significant and revolutionary increases in protection, performance, and payload capabilities to our warfighters starting in 2015. The Joint Light Tactical Vehicle has been designated as a Future Combat Systems complementary system.

The Army's **Science and Technology (S&T) programs for rotorcraft** emphasize investments in technologies that enhance aircraft survivability; reduce Operating and Support costs for both Current and Future Force airframes; and pursue greater manned-unmanned system teaming capabilities. The S&T program also supports the National Rotorcraft Technology Center, a partnership of government, industry, and academia where jointly funded cooperative research and development initiatives address U.S. rotorcraft competitive and military readiness issues.

Despite near-term demands for resources to support the war on terror, we have been able to sustain our technology investments for rotorcraft. Since FY06, the Army has maintained an average of 20 percent real growth in aviation S&T funding. The last major reduction in aviation S&T occurred with the cancellation of the Comanche helicopter program and its companion S&T program, the Unmanned Combat Armed Rotorcraft.

In FY05 through FY07, a Joint Heavy Lift (JHL) Concept Refinement effort was conducted that resulted in a significant update to the Minimum Performance Specification for this proposed capability – one that provides not only mounted vertical maneuver for medium weight armored forces, but also provides aerial sustainment to the point of need, the ability to operate over tactical and

operational distances to/from land or sea bases, and the ability to be self-deployable. The overall assessment by the Army S&T community is that a heavy lift Vertical Take Off and Landing (VTOL) solution is technically feasible.

The JHL Concept Refinement effort formed the basis for the JHL Initial Capabilities Document (ICD) which has completed initial Joint Staff and Service review. As a result of this staffing, the Chief of Staffs for both the Army and Air Force have agreed to "merge" the JHL ICD with the Air Force's notional requirements for its Advanced Joint Air Combat System into a single ICD that is to be presented to the Joint Requirements Oversight Council by the fourth quarter of FY08. They have also agreed that the "merged" ICD (now called Joint Future Theater Lift) will include VTOL and Short Take Off and Landing (ability to land and take off within 1,500 feet over a 50 foot obstacle) as the desired and required capabilities, respectively.

An Analysis of Alternatives/Evaluation of Alternatives is in the process of being established at the Joint level to assess the viable materiel options for addressing the Joint Future Theater Lift requirements. Decisions on the way ahead will be significantly influenced by the outcomes of that process.

The Army's strategy for **research and development focuses on investments that provide a wide spectrum of lightweight individual Soldier equipment**, in particular lightweight ammunition, body armor, night vision, and other weight-reduction research.

Lightweight Ammunition - For the past four years the Joint Service Small Arms Program has managed the Lightweight Small Arms Technology effort -- a joint Army, Navy, and Marine Corps investment to demonstrate ammunition and weapon concepts that weigh ~40 percent less than current systems. The ammunition alternatives being investigated provide weight reductions of 35 percent to 50 percent. However, both ammunition concepts (case-telescoped and caseless) require design of a new weapon and a change to the ammunition industrial base. A decision to adopt these technologies has not yet been made.

Body Armor - The need for increased protection (to mitigate combinations of ballistic, blast, fragmentation threats, and/or provide increased area of coverage) must be balanced against human performance degradation (heat stress and mobility) due to increased weight and bulk. This dynamic is a constant challenge when increasing the performance levels of personnel armor. Performance enhancements are being researched for advances in materials such as high performance fibers, transparent polymers, ceramics, composites, better weave patterns, and improved design tools and performance modeling that assess trade-offs in the fundamental materials and armor formulations. Improved integrated system designs that reduce overlap and inherent design inefficiencies are also being studied. One such result was the fielding of the Improved Outer Tactical Vest, which increased the area of protection and reduced weight by eliminating overlap of materials and improving system design.

Night Vision - Efforts are ongoing to reduce the weight and power consumption while increasing performance and range of existing systems such as Thermal Weapons Sights and Lightweight Laser Designator Rangefinder through Advanced Integrated Circuit Designs and technology insertions to eliminate obsolete components. Combining image intensification and infrared sensors into single devices, while reducing weight and power requirements, is being achieved through advances in technology.

Other Weight Reduction Research:

Soldier Power - A variety of small, lightweight, low cost power sources are being developed to reduce the weight of Soldier power by up to 50 percent or extend the mission time for Soldier and sensor applications with the goal of reducing the re-supply quantity, weight, and costs. Technologies being investigated include: conformal (mates with body armor), rechargeable Soldier system batteries; half-size/2X energy primary batteries; hybrid fuel cells; and JP8-powered Soldier battery chargers.

Ballistic Goggles - Efforts are ongoing to achieve a 70 percent improvement in the ballistic performance of transparent tactical eyewear protection with a 52 percent reduction in weight for one-quarter inch thick face shields.

Handheld Displays - The ongoing technology development for flexible displays will result in rugged, low power sunlight-readable displays at a 60 percent reduction in weight and reduced volume compared to current glass displays.

Efficient System Designs – Our investment strategy regards the individual Soldier and his/her equipment as a system. The Army has established the Soldier as a System to find ways to increase the capabilities of our Soldiers while reducing weight. Recent examples of successful transitions from our investment strategy include: new body armor that increases area of coverage while reducing the weight by three pounds in medium sizes; reduced weight of our thermal weapons sights to include reducing by one-half the number of batteries required to power the sights; and reduced weight in the M240 machine gun by five pounds. Similarly, Soldier feedback and engineering changes reduced the weight of Land Warrior systems deployed to Operation Iraqi Freedom. The Next Generation Land Warrior systems that will be fielded to the 5/2 Stryker Brigade Combat Team at Fort Lewis, Washington, and the Army Evaluation Task Force at Fort Bliss, Texas, will reduce the system weight even more. This, in conjunction with the weight reductions in sensors, body armor, and weapons, makes the lighter-weight, more capable Soldier as a System a reality.

The **Future Combat Systems** (FCS) program is structured to bring advanced capabilities to today's force as rapidly as possible in a fielding concept known as "Spin Out." Several "FCS like" capabilities are already in use in combat operations in Iraq and Afghanistan and are protecting our Soldiers today. These technologies include (1) the Frag Kit 5 armor protection used on Up-Armored HMMWVs; (2) the Micro Air Vehicle, an early precursor of the FCS Class 1 Unmanned Air Vehicle, which has been highly effective by Navy and Army units in explosive ordnance disposal operations in Iraq; (3) the Packbot

currently used by Soldiers and Marines in Iraq and Afghanistan is the precursor to the FCS Small Unmanned Ground Vehicle; and (4) the Excalibur artillery round, used successfully during Counter Insurgency Operations in Iraq, is being adapted for use with the FCS Non-Line of Sight Cannon.

The first FCS capabilities will be provided to current force brigade combat teams beginning in 2011 as part of Spin Out 1. These capabilities represent significant strides in hardware, software, and network development. The FCS network represents the greatest advancement in Tactical Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance that the Army has ever pursued. The Spin Out strategy consists of prototypes fielded to the Army Evaluation Task Force (AETF) for evaluation. In fact, Spin Out 1 technology is currently in the hands of combat-experienced Soldiers of the AETF, preparing for evaluation at Fort Bliss, Texas, and White Sands, New Mexico.

Current FCS Spin Out 1 equipment includes: Non-Line of Sight Launch System (NLOS-LS), Urban Unattended Ground Sensors, Tactical Unattended Ground Sensors, and FCS Network Integration Kits for Abrams, Bradley, and HMMWV platforms. The FCS program currently has 75 tests ongoing throughout the United States. Each test is a precursor to the fielding of capabilities to Soldiers.

Success of the Army's Battle Command Strategy is indispensable to our future operations. Central to our strategy is the **Joint Tactical Radio System** (JTRS), a family of ground, airborne, and maritime domains of common software-defined radios that provide seamless network connectivity throughout the battlefield. We will begin to see the initial capabilities of this revolutionary modernization effort when Spin Out 1 delivers a Sensor-to-Soldier link through the network.

The Ground Mobile Radio (GMR) program reported a significant Nunn McCurdy breach to Congress in January 2008. The breach was caused by an increase in GMR costs. This resulted from a reduction in the quantities the Services plan on procuring and design and development challenges that caused

an increase in cost to the Line Replaceable Unit for the radios. These costs were included in the revised Acquisition Program Baseline which was approved in January 2008. There has been no cost growth since the revised program baseline.

The Army has five distinct **rapid acquisition processes** to provide robust capabilities to our warfighters:

(1) Joint Urgent Operational Needs Statement (JUONS);

(2) Operational Needs Statement (ONS);

(3) Joint Improvised Explosive Device Defeat Organization (JIEDDO);

(4) Joint Capabilities Integration and Development System (JCIDS) that we refer to as the "PM Informal" process; and

(5) Rapid Equipping Force (REF).

The JUONS process provides rapid acquisition for requirements that support more than one military service, and it begins when commanders submit a documented shortfall of capability request to the Joint Staff. Once the request is validated and staffed, if the request can be potentially mitigated via a materiel solution, the request for a materiel solution is vetted through the Services to determine if any Service has a potential materiel solution to address the need or if a materiel solution will have to be developed to address a capability gap. The timeline from capability gap shortfall identification to providing a potential materiel solution is dependent on two variables: how long it takes to validate and staff the request; and how long it takes to develop, test and produce the materiel solution.

The validation and staffing process normally takes 30 to 45 days, but for certain urgent requirements, the process can take as little as 48 hours. The development of a materiel solution has more variability due to several factors, including: the materiel solution's technical complexity; whether or not a potential materiel solution exists or is available; whether an appropriate solution must be developed; what complexities are associated with production of a materiel solution; and what quantities are needed to fulfill the requirement.

The ONS process is similar to the JUONS process with the exception that the requirement validation remains within the Army, and once validated, is resourced via the Army Requirements and Resources Board. Like JUONS, ONS has two variables: the timelines associated with ONS validation and staffing; and the timelines associated with developing, testing and producing the materiel solution. ONS requirements can be filled in as little as 30 days if the unit is already deployed or is preparing to deploy and a materiel solution exists. Otherwise, the ONS process can take up to 120 days.

The JIEDDO process must provide materiel solutions that mitigate IED threats worldwide. Requirements typically arrive from the JUONS process and, consequently, share that process' staffing and validation timelines. JIEDDO, like REF, has dedicated funding, so once a materiel solution is identified, acquisition and fielding can begin without identifying a funding source and redirecting the necessary resources. Timelines from receipt of a validated requirement to initial fielding may range from 180 to 360 days. The JIEDDO maintains "corporate" knowledge of IED defeat technologies and can identify existing solutions, or develop new solutions quickly by exploiting their extensive knowledge database.

The JCIDS/"PM Informal" process provides rapid materiel acquisition and fielding by recognizing that current Soldier needs may be similar to an existing materiel acquisition program. The process may be initiated by a call from a field commander to a PM describing the requirement and requesting assistance. If the requirement can be met through a minor modification to an existing program, or by a parallel effort to an existing program, the effort may be started by the PM while a formal ONS or other requirement document is initiated. This provides multiple benefits of concurrent requirement development, solution engineering, and acquisition. The PM may use his authorized funding or request additional funding from the Army Requirements and Resources Board.

The REF process starts when forward teams identify and evaluate needs and desired capabilities for the deployed forces they are supporting. The REF develops and rapidly acquires solutions while documenting a streamlined methodology for acquisition with the Army Acquisition Executive's cooperation

and oversight. The REF works within Army acquisition policies and acquisition law. To date, the REF has introduced more than 325 different types of equipment to units deployed in Operations Enduring and Iraqi Freedom.

Conclusion

Equipping the Army is not just an Army-unique challenge; it is one with National security interest and implications. It must be viewed and considered in that overarching context. The Army is simultaneously conducting wartime operations and preparing for future commitments. Our challenge is to balance these two requirements to ensure that we can defend the Nation today while preparing to do so tomorrow.

I look forward to working with this Committee and Congress to ensure that our Soldiers have the finest weapon systems and equipment our Nation can provide. Our young men and women in uniform and those who lead them are depending on us.

Thank you for the opportunity to appear before the Committee.

United States Government Accountability Office

GAO

Testimony
Before the Subcommittee on Tactical Air and Land Forces, Committee on Armed Services, House of Representatives

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FORCE STRUCTURE

Restructuring and Rebuilding the Army Will Cost Billions of Dollars for Equipment but the Total Cost Is Uncertain

Statement of Janet A. St. Laurent
Managing Director, Defense Capabilities and Management

GAO-08-669T

April 10, 2008

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Highlights

Highlights of GAO-08-669T, a testimony before the Subcommittee on Air and Land Forces, Committee on Armed Services, House of Representatives

FORCE STRUCTURE

Restructuring and Rebuilding the Army Will Cost Billions of Dollars for Equipment but the Total Cost Is Uncertain

Why GAO Did This Study

The high pace of overseas operations is taking a heavy toll on Army equipment. Harsh combat and environmental conditions over sustained periods of time have exacerbated equipment repair, replacement, and recapitalization problems. The Army has also taken steps to restructure its forces before implementing its longer term transformation to the Future Combat System. To support ongoing operations and prepare for the future, the Army has embarked on four key initiatives: (1) restructuring from a division-based force to a modular brigade-based force, (2) expanding the Army by adding about 74,000 people and creating new units, (3) repairing, replacing, and recapitalizing new equipment through its reset program, and (4) replacing equipment borrowed from its pre-positioned equipment sets around the world. Since 2004, Congress has provided billions of dollars to support the Army's equipping needs.

GAO has issued many reports on the Army's efforts to equip modular units, expand the Army, reset equipment, and manage and replace prepositioned equipment. This statement, which draws largely on these reports, will address (1) the equipment-related cost of these initiatives, and (2) the management challenges facing the Army and the actions needed to improve its implementation of these initiatives. GAO is issuing a separate statement today on the Future Combat System (GAO 08-638T).

To view the full product, including the scope and methodology, click on GAO-08-669T. For more information, contact Janet A. St. Laurent at (202) 512-4402 or stlaurentj@gao.gov.

What GAO Found

Restructuring and rebuilding the Army will require billions of dollars for equipment and take years to complete; however, the total cost is uncertain. Based on GAO's analysis of Army cost estimates and cost data, it appears that the Army's plans to equip modular units, expand the force, reset equipment, and replace prepositioned equipment are likely to cost at least $190 billion dollars through fiscal year 2013. However, these estimates have some limitations and could change. Further, the Army has stated it plans to request additional funds to address equipment shortfalls in modular units through fiscal year 2017. Several factors are contributing to the uncertainties about future costs. First, the Army's $43.6 funding plan for equipping modular units was based on preliminary modular unit designs and did not fully consider the needs of National Guard units. Second, the Army expects to need $18.5 billion for equipment to expand the force but has not clearly documented this estimate. Third, costs to reset equipment may total at least $118 billion from fiscal years 2004-2013 but may change because they are dependent on how much equipment is lost, damaged, or worn beyond repair during continuing operations in Iraq and Afghanistan and how long these operations continue. Fourth, the Army believes it will need at least $10.6 billion to replace pre-positioned equipment that was taken out of storage to support ongoing operations, but this amount is an estimate and DOD's overall strategy for prepositioned equipment has not yet been issued Given the magnitude of these initiatives and potential for costs to change, DOD will need to carefully monitor the projected costs of these initiatives so that it can consider tradeoffs and allocate funding to balance the Army's equipping needs for the next decade and longer term transformation goals.

A common theme in GAO's work has been the need for DOD and the Army to take a more strategic approach to decision making that promotes transparency and ensures that programs and investments are based on sound plans with measurable, realistic goals and time frames, prioritized resource needs, and performance measures to gauge progress. GAO's work on modular restructuring has shown a lack of linkage between the Army's funding requests and equipment requirements. This lack of linkage impedes oversight by DOD and Congress because it does not provide a means to measure the Army's progress in meeting modular force equipment requirements or inform budget decisions. Oversight of Army initiatives has also been complicated by multiple funding requests that makes it difficult for decision makers to understand the Army's full funding needs. GAO has recommended a number of actions to improve management controls and enhance transparency of the Army's plans for equipping modular units, expanding the force, resetting equipment, and replacing prepositioned equipment. However, many of these recommendations have not been fully implemented or adopted. For example, until the Army provides a comprehensive plan for its modular restructuring and expansion initiatives, which identifying progress and total costs, decision makers may not have sufficient information to assess progress and allocate defense resources among competing priorities.

Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss issues related to Army equipment in light of the high pace and long duration of operations in Iraq and Afghanistan as well as the Army's plans to modernize and transform its capabilities. The Army has undertaken a number of initiatives to restructure and rebuild its force in the midst of ongoing overseas operations. Key initiatives include plans to restructure the Army from divisions to standardized modular brigades as well as expand the force by more than 74,000 soldiers. Both of these initiatives will create requirements for significant quantities of new equipment. Amid ongoing operations, the Army must also reset (repair or replace) existing equipment that has been used in harsh environments overseas. Further, the Army has taken much of its pre-positioned stock out of storage to support combat operations and these critical reserve stocks will need to be replenished.[1] Concerned about declining military readiness, Congress has provided substantial funding in response to Department of Defense (DOD) funding requests. However, significant challenges continue to face the Army as it attempts to simultaneously support ongoing operations, improve the readiness of nondeployed units, and transform its force for the future.

As you requested, my testimony will focus on the equipping implications of restructuring and expanding the Army; efforts to repair, replace, and recapitalize equipment through the Army's reset program; and reconstitution of prepositioned equipment. Specifically, I will address (1) the cost of the Army's plans to implement these initiatives, and (2) the management challenges facing the Army and the actions needed to improve its implementation of these initiatives.

My statement is based on numerous reports and testimonies published from fiscal years 2005 through 2008. Since 2004, we have examined the Army's plans and funding for the four initiatives, and determined the extent to which the Army's plans were comprehensive and transparent. We conducted our work in accordance with generally accepted government auditing standards. Related reports are listed at the end of this testimony and include reviews of the Army's equipping and reset strategies, prepositioned equipment, modular restructuring, and efforts to

[1]GAO, *Military Readiness: Impact of Current Operations and Actions Needed to Rebuild Readiness of U.S. Ground Forces*, GAO-08-497T (Washington, D.C.: Feb. 14, 2008).

expand the Army. We are also issuing a separate statement today on the Army's Future Combat System, a longer term transformation effort that comprises 14 integrated weapon systems and an advanced information network and which is estimated to cost about $160 billion.[2]

Summary

Restructuring and rebuilding the Army will require billions of dollars for equipment and take at least several more years to complete. However, the total cost of equipping the modular force, replacing or repairing damaged or worn equipment, and replacing prepositioned equipment is uncertain. Based on our analysis of Army cost estimates and cost data, it appears that the cost of equipping modular units, expanding the force, resetting equipment, and replacing prepositioned equipment sets will be at least $190 billion dollars from fiscal years 2004-2013. However, these estimates could change and additional equipment is likely to be needed at least through 2017 to equip the Army's modular units. Several factors are contributing to the uncertainties about future costs. First, the Army's $43.6 billon cost estimate for procuring equipment to convert to a modular force from fiscal years 2005-2011 was based on preliminary information about modular unit designs and did not fully consider the needs of National Guard units that are being relied on heavily to support ongoing operations. Second, the Army estimates it will need about $18.5 billion for equipment to expand the force but has not clearly documented this estimate. Third, costs to reset equipment damaged or lost during military operations have also grown significantly and are likely to total at least $118 billion from fiscal years 2004-2013. However, precise future reset costs are unclear, according to the Army, because they are dependent on how much equipment is lost, damaged, or worn beyond repair by continuing operations and how long military operations will continue. Finally, the Army estimates that it will need at least $10.6 billion to replace pre-positioned equipment that was taken out of storage on ships to support ongoing operations. In light of the potential magnitude of these initiatives, unless DOD carefully monitors projected costs, it will be difficult to consider tradeoffs and allocate funding to balance the Army's near-term equipment needs and long-term transformation initiatives.

[2]GAO, *Defense Acquisitions: 2009 Review of Future Combat System Is Critical to Program Direction*, GAO-08-638T (Washington, D.C.: April 10, 2008).

A common theme in our past work on these Army initiatives has been the need for DOD and the Army to take a more strategic approach to decision making that promotes transparency and ensures that equipment programs and investments are based on sound plans with measurable, realistic goals and time frames, prioritized resource needs, and performance measures to gauge progress. For example, our work on modular restructuring has shown a lack of clear linkage between the Army's equipment requirements, progress to date, and funding requests. This lack of linkage impedes oversight by DOD and congressional decision makers because it does not provide a means to measure the Army's progress in meeting its modular equipment requirements or to inform budget decisions. Also, we have reported that the Army is not effectively targeting its reset funds to meet the needs of units preparing for deployment to Iraq and Afghanistan. Further, the Army does not know if its existing prepositioned equipment requirements reflect actual needs because DOD has not developed a department-wide prepositioning strategy to guide the Army's prepositioning strategy. Oversight of these initiatives has been complicated by multiple funding requests. As a result, decision makers may have difficulty seeing the full picture of the Army's funding needs. GAO has suggested a number of actions to improve management controls, enhance transparency, and reduce the risks associated with modularity, force expansion, and reset. For example, we recommended that the Army develop a comprehensive strategy and funding plan that details the Army's modular equipping strategy and that DOD produce a prepositioning plan to guide the Army's strategy. However, many of these recommendations have not been implemented. For example, until the Army provides a comprehensive plan outlining its requirements, progress, and total costs for its modular restructuring and expansion initiatives, DOD and Congress will not have the full picture of the Army's total equipment funding needs and may lack information needed to decide how to best allocate defense resources among competing priorities.

Background

The Army faces enormous equipping challenges while conducting operations in Iraq and Afghanistan, and restructuring to a modular force. The Army has four key initiatives underway that impact efforts to equip the force: the establishment of modular units, expansion of the force, equipment reset, and reconstitution of prepositioned equipment.

The Army's modular restructuring initiative, which began in 2004, is considered the most extensive reorganization of its force since World War II. This transformation was initiated, in part, to support current operations in Iraq and Afghanistan by increasing the number of combat brigades

available for deployment overseas. The foundation of modular restructuring is the creation of new, standardized, modular units that change the Army's legacy division-based force structure to smaller more numerous brigade formations embedded with significant support elements. A key goal of the modularity initiative is for modular brigades to have at least the same combat capability as a brigade under the division-based force. The new modular brigades are expected to be as capable as the Army's existing brigades partly because they will have different equipment including key enablers such as advanced communications and surveillance equipment. Moreover, in contrast to the Army's previous division-based force, modular National Guard and Army Reserve units will have the same design, organizational structure, and equipment as their active component counterparts. In addition, the Secretary of Defense announced in January 2007 an initiative to expand the Army by adding more than 74,200 soldiers and thereby creating six active brigade combat teams and additional modular support units. This planned expansion is intended to allow the Army to revitalize and balance the force, reduce deployment periods, increase time soldiers spend at home station in between deployments, increase capability, and strengthen the systems that support the forces.

The Army relies on equipment reset and prepositioned equipment to improve equipment availability. Reset is the repair, replacement, and modernization of equipment that has been damaged or lost as a result of combat operations. The Army prepositioned equipment program is an important part of DOD's overall strategic mobility framework. The Army prepositions equipment at diverse strategic locations around the world in order to field combat-ready forces in days rather than the weeks it would take if equipment had to be moved from the United States to the location of the conflict.

Total Costs to Fully Equip the Army Are Uncertain

The total cost to restructure and rebuild the Army is uncertain but this effort will likely require many billions of dollars and take at least several more years to complete. Our analysis of Army cost estimates and cost data indicate that it is likely to cost at least $190 billion dollars to equip modular units, expand the force, reset equipment, and replace prepositioned equipment from fiscal years 2004 through 2013. However, these estimates have limitations and could change. For example, the Army is likely to continue to have shortfalls of some key equipment beyond then and believes it will require additional funding to equip modular units through fiscal year 2017.

Information on Army Equipping-Related Costs for Key Initiatives Is Available but Some Estimates Are Incomplete or May Change

Although the Army has not identified a total aggregate cost for its key equipping initiatives, it has previously reported some cost estimates and cost data for equipping modular units, expanding the Army, resetting equipment, and restoring pre-positioned stocks. However, these estimates have some limitations because they are based on incomplete information, have not been updated, or may change as a result of the evolving nature and unknown duration of ongoing operations in Iraq and Afghanistan. As a result, the full costs of these equipping efforts are unclear but will be substantial. Based on our analysis of various sources of Army cost data, it appears that the cost of these initiatives will exceed $190 billion dollars between fiscal years 2004-2013 (see table 1). These figures do not include data on Army longer term transformation efforts such as the Army's Future Combat System.

Table 1: GAO Analysis of Estimates of Equipping-Related Costs[a] to Restructure, Grow and Rebuild the Army (fiscal year 2004 through fiscal year 2013)

Dollars in billions

Program	Estimates Based on Army Data	Description and limitations
Equip restructured modular units	$43.6	• Estimate developed before unit designs were finalized. • Army has not revised its 2005 estimate. • Army plans to request additional funds to address equipment shortages in modular units through fiscal year 2017.
Increase the number of and equip new Army units	$18.5	• Could not assess how the Army calculated this amount because Army budget documents do not identify key assumptions or the steps used to develop the estimate. • Army plans to accelerate the completion of this plan from fiscal year 2013 to 2010.
Reset the force	$118.5[b]	• Army stated it will require reset funding for a minimum of 2 to 3 years after hostilities end. • Future reset costs are unclear, according to the Army, because they depend on how much equipment is lost, damaged, or worn beyond repair during current operations and how long the operations will continue.
Reconstitute prepositioned stocks	$10.6	• Army estimates that total costs will be between $10.6 billion and $12.8 billion. • Unclear whether the Army has included these funds into future budget planning.
Total	**$191.2[c]**	

Source: GAO analysis of Army information.

[a]These estimates include costs for both procurement and operation and maintenance.

[b]The estimate includes $54 billion in funds for reset from fiscal year 2004 through fiscal year 2008, as reported by the Army in its February 2008 report to Congress. To calculate fiscal years 2009-2013 estimates, we assumed $12.9 billion per year through fiscal year 2013, which is the average of the 2006-2007 amounts.

[c]There are on-going assessments of some of these estimates as part of the fiscal years 2010-2015 programming process that could lead to revised estimates, according to Office of the Secretary of Defense and Army officials.

The John Warner National Defense Authorization Act for Fiscal Year 2007[3] required the Army to report annually on its progress toward fulfilling requirements for equipment reset, equipping of units transforming to modularity, and reconstitution of equipment in prepositioned stocks. In its February 2008 report,[4] the Army stated that there is no longer a distinguishable difference between equipment purchased for modular restructuring and other modernized fielding. The report does not address future costs in detail, nor does it provide significant detail about progress achieved to date with funds that have already been appropriated. As a result, it is becoming increasingly difficult to track overall progress and costs. The following sections further describe the cost and status of the Army's key initiatives including modular restructuring, expanding the force, resetting equipment, and restoring pre-positioned stocks. These initiatives will drive much of the costs of equipping the Army for the next several years.

Army Has Made Progress in Establishing Modular Units but Meeting Active and Reserve Component Modular Equipment Requirements May Cost Billions More than Originally Estimated

The Army has made progress establishing modular units but this initiative will likely cost billions more than the Army originally estimated because the Army's estimate was based on some assumptions that no longer appear valid and was developed before some modular unit designs had been finalized. As a result, the Army now believes it will require additional funding through fiscal year 2017 to equip its modular units. However, it has not revised its 2005 cost estimate to reflect this. Moreover, because it will take time to procure equipment once funds are appropriated, units may not receive all scheduled equipment until 2019.

In early 2005, the Army estimated that converting the Army to a modular design would cost approximately $52.5 billion from fiscal years 2005-2011, which was incorporated in a funding plan approved by the Office of the Secretary of Defense. The funding plan included costs for equipment, sustainment and training, and construction/facilities. As shown in table 2, most of these funds—$43.6 billion—were designated for equipment purchases.

[3]Pub. L. No. 109-364 §323 (2006).

[4]United States Army, *The Annual Report on Army Progress* (Feb. 27, 2008).

Table 2: Funding Plan for Army Modular Restructuring, Fiscal Years 2005-2011 as Reported to the Office of Management and Budget in January 2007

Dollars in millions

Appropriation category	Fiscal Year 2005	Fiscal Year 2006	Fiscal Year 2007	Fiscal Year 2008	Fiscal Year 2009	Fiscal Year 2010	Fiscal Year 2011	Total 2005-2011
Equipment	$4,354	$5,436	$5,907	$6,855	$7,165	$7,226	$6,666	**$43,609**
Sustainment and Training	$0	$1,022	$196	$285	$679	$744	$588	**$3,514**
Construction/ Facilities	$250	$13	$497	$461	$1,440	$1,358	$1,359	**$5,378**
Total	**$4,604**	**$6,471**	**$6,600**	**$7,601**	**$9,284**	**$9,328**	**$8,613**	**$52,501**

Source: GAO analysis of Army data.

The Army made the decision to create modular units knowing that it would take several years after units were established to equip and staff them at authorized levels. At the end of fiscal year 2007, the Army had converted about two-thirds of its force to modular units. By the end of fiscal year 2008, the Army projects it will have converted 277 of 327 modular units (about 85 percent). The Army currently projects that the unit restructuring will be completed by fiscal year 2013. However, our ongoing work shows that the Army will continue to have significant shortfalls of key equipment that are critical to achieving the planned benefits of the modular force after the Army receives planned funding for fiscal years 2005-2011. For example, the Army projects that it will still need hundreds of thousands of modern equipment items including intelligence equipment, advanced radios, and trucks. In place of more modern equipment, many Army units will continue to have some older equipment that does not necessarily provide the same capability as the more modern counterparts.

The Army has stated that it plans to request funds through 2017 to help fill modular unit equipment shortfalls. However, it has not revised its initial $43.6 billion estimate, even though it was based upon several assumptions that no longer appear valid.[5] Specifically, we have reported that the Army believes it will need additional funding to equip modular units because its 2005-2011 funding plan:

[5]GAO, *Force Structure: Better Management Controls Are Needed to Oversee the Army's Modular Force and Expansion Initiatives and Improve Accountability for Results*, GAO-08-145 (Washington, D.C.: Dec. 14, 2007).

- was developed before some modular unit designs had been finalized,
- assumed that Army National Guard and reserve units would retain some older models of equipment, and
- assumed that significant quantities of equipment would be returned from Iraq in good enough condition to help equip modular units.

Additional explanation of each of these factors follows.

At the time the Army's cost estimate was developed, the Army's modular designs were incomplete, so budget analysts were uncertain about the exact number of personnel and how many and what type of equipment items would be needed for modular units. For example, on the basis of lessons learned, the Army has reconfigured some of the modular unit designs and has added additional capabilities for force protection and route clearance to counter specific threats faced by deployed units. Further, because the number and composition of National Guard units had not been developed, budget analysts made certain assumptions about how much funding would be required by National Guard units to convert to the new modular designs. When the Army began to implement its modular restructuring initiative, it planned for the National Guard to establish 34 Brigade Combat Teams plus an additional number of support brigades. The 2006 Quadrennial Defense Review, however, recommended that the Army establish only 28 Brigade Combat Teams and convert the remaining units to support brigades.

In addition, the Army's original plan for equipping modular units also did not fully consider the equipping implications associated with the Army National Guard's changing role in supporting military operations. Since 2001, the Army National Guard's role has changed from a strategic reserve force to an operational force that is used to support a wide range of military operations at home and abroad. Prior to 2001, Army National Guard units were generally equipped with older equipment and at lower levels than comparable active duty units because it was assumed that they would have considerable warning and training time before deploying overseas.[6] However, senior Army officials have determined that the National Guard's modular units should be structured like those in the active component and receive similar equipment since the Guard has become an operational force that deploys along with active units. As a

[6]GAO, *Reserve Forces: Plans Needed to Improve Army National Guard Equipment Readiness and Better Integrate Guard into Army Force Transformation Initiatives*, GAO-06-111 (Washington, D.C.: Oct. 4, 2005).

result, senior Army officials have stated the Army plans to request additional funds for Army National Guard equipment. In addition, the Army National Guard also has significant domestic missions, and equipment needs for those missions are uncertain. In January 2007[7] we issued a report on actions needed to address National Guard domestic equipment requirements and readiness. We found that DOD has not worked with the Department of Homeland Security to define National Guard requirements for responding to the 15 catastrophic scenarios developed by the Homeland Security Council. As a result, the equipment requirements and the funding needed to provide equipment for such missions are unknown.

Last, when developing its cost estimate for equipping modular units, the Army assumed that significant quantities of equipment would come back from Iraq and be available after some reset and repair work to be distributed to new modular units. Given the heavy use of equipment in Iraq and Afghanistan, this assumption may no longer be valid. The increased demands for equipment used in Iraq operations have had a dramatic effect on equipment availability. This demand reduces expected service life, creates significant repair expenses, and creates uncertainty as to whether it is economically feasible to repair and reset these vehicles. Further, more vehicles currently being operated in theater may be replaced altogether by newer vehicles offering better protection.

Equipment Costs to Expand the Force Are Significant

DOD's plan to expand the size of the Army by over 74,000 personnel will also add to the Army's equipment needs. This planned expansion includes building six additional active modular infantry brigade combat teams and some additional modular support units. In January 2007, the Army estimated that this expansion would cost approximately $70.2 billion including personnel, equipment, facilities, and other costs. The equipment portion of this estimate was $17.9 billion. However, in January 2008, we reported that the Army's overall estimate was not transparent or comprehensive.[8] We also found that certain aspects of the estimate, such as health care costs, may be understated and that some factors that could potentially affect the Army's funding plan are still evolving. With regard to

[7]GAO, *Reserve Forces: Actions Needed to Identify National Guard Domestic Equipment Requirements and Readiness*, GAO-07-60 (Washington, D.C.: Jan. 26, 2007).

[8]GAO, *Force Structure: Need for Greater Transparency for the Army's Grow the Force Initiative Funding Plan*, GAO-08-354R (Washington, D.C.: Jan. 18, 2008).

equipment costs, we could not determine how the Army calculated its procurement estimate because Army budget documents do not identify key assumptions or the steps used to develop the estimate. According to best practices, high-quality cost estimates use repeatable methods that will result in estimates that are comprehensive and can also be easily and clearly traced, replicated, and updated. Given the magnitude of the Army's funding plan and potential changes to the plan, we recommended that the Secretary of Defense direct the Secretary of the Army to provide Congress with a revised funding plan for expanding the force and adhere to a high quality cost estimating methodology. In February 2008, the Army revised its overall cost estimate for expanding the force to $72.5 billion. According to Army documents, the Army now assumes that $18.5 billion will be needed to procure equipment for combat brigades and support units being created under the Army's expansion efforts.

Finally, in October 2007, the Army also announced a plan to accelerate the expansion implementation timelines for the active Army and Army National Guard from fiscal year 2013 to fiscal year 2010 which will likely further exacerbate equipment shortfalls. The Army has not yet developed a revised funding plan for implementing this acceleration but plans to do so as part of its effort to prepare its fiscal years 2010-2015 budget plan later this year. As a result, it is not clear how the decision to accelerate the expansion effort will affect equipment costs.

Equipment Reset Costs Are Growing

To improve near-term readiness of nondeployed units, the Army has received substantial funds in recent years to rebuild the force by resetting damaged, and worn equipment and reconstituting its prepositioned equipment sets. However, the Army has not identified the overall requirements for these efforts, and the total cost of these initiatives is uncertain. In addition to procuring new equipment, the Army is working to rebuild the force by resetting its existing equipment to support the ongoing conflicts as well as to equip nondeployed units. Originally, the Army estimated that equipment reset would cost $12 billion to $13 billion per year. Reset costs have grown significantly[9] from about $3.3 billion in fiscal year 2004 to more than $17 billion in fiscal year 2007. Our analysis of Army

[9]GAO, *Defense Logistics: Army and Marine Corps Cannot Be Assured That Equipment Reset Strategies Will Sustain Equipment Availability While Meeting Ongoing Operational Requirements*, GAO-07-814 (Washington, D.C.: Sept. 19, 2007).

data shows that the Army is likely to require at least $118.5 billion dollars from fiscal years 2004-2013 (see table 1). The Army has reported [10] that future reset costs will depend on the amount of forces committed, the activity level of those forces, and the amount of destroyed, damaged or excessively worn equipment. As a result, these costs are uncertain. The Army has stated that it will require reset funding for the duration of operations and estimates that it will request reset funding for an additional 2-3 years after operations cease. As operations continue in Iraq and Afghanistan and the Army's equipment reset requirements increase, the potential for reset costs to significantly increase in future DOD supplemental budget requests also increases.

We have also reported that Congress may not have the visibility it needs to exercise effective oversight and to determine if the amount of funding appropriated for equipment reset has been most appropriately used for the purposes intended because the Army was not required to report the obligation and expenditure of funds appropriated for reset in the procurement accounts at a level of detail similar to the level of detail reported in the operation and maintenance accounts.[11] Given the substantial amount of equipment deployed overseas, the uncertain length of operations in Iraq and Afghanistan, and the lack of transparency and accountability, it is unclear how much funding the Army will need to reset its equipment. While Army officials recently told us that they have begun to report procurement obligations and expenditures at a level of detail similar to the level of detail reported for operation and maintenance accounts, officials in the Office of the Secretary of Defense believe that all of the Army's equipping initiatives, including reset, are part of a larger Army equipping effort and they do not believe that the department needs to track these initiatives separately. We continue to believe that tracking the cost of reset is key to identifying the total cost of the Army equipment plan.

Timing and Cost of Reconstituting Prepositioned Stocks Is Unclear

In December 2006, the Army decided to remove equipment from its prepositioned sets stored on ships in order to accelerate the creation of two additional brigade combat teams to provide support for ongoing operations. This equipment supplemented equipment prepositioned in Southwest Asia, equipment which has been depleted and reconstituted

[10] United States Army, *The Annual Report on Army Progress* (Feb. 27, 2008).

[11] GAO 07-814.

several times over the course of these operations. It is still unclear when these critical reserve stocks will be reconstituted or how much this will cost; however, the Army has estimated it will require at least $10.6 billion to complete this reconstitution effort through 2013 (see table 1).[12] Army officials stated that prepositioned equipment sets worldwide would be reconstituted in synchronization with the Army's overall equipping priorities, when properly funded, and in accordance with the Army's prepositioning strategy, known as the Army Prepositioned Strategy 2015. We recommended in our September 2005 and February 2007[13] reports that DOD develop a coordinated, department-wide plan and joint doctrine for the department's prepositioning programs. Synchronizing a DOD-wide strategy with the Army's prepositioning strategy would ensure that future investments made for the Army's prepositioning program would properly align with the anticipated DOD-wide strategy. Without a DOD-wide strategy, DOD risks inconsistencies between the Army's and the other services' prepositioning strategies, which may result in duplication of efforts and resources.

In addition, we could not determine the extent to which the reconstitution of the Army's prepositioned stocks is reflected in DOD funding requests nor identify the cost estimates for restoring these prepositioned equipment sets. For example, Army officials could not provide a breakdown of the $3.3 billion cost estimate in the fiscal year 2007 supplemental budget request to reconstitute the prepositioned stocks removed from ships. Army officials stated that the estimated cost to fully implement the prepositioning strategy would total somewhere between $10.6 billion and $12.8 billion between fiscal years 2008 and 2013. However, DOD's funding requests for reconstitution are difficult to evaluate because they may also include funding for other equipment-related funding requests, such as Army modularity, equipment modernization, equipment reset, or requests to fill equipment shortages. Army officials stated that separating prepositioning requirements from other requirements in their funding

[12]GAO, *Defense Logistics: Army Has Not Fully Planned or Budgeted for the Reconstitution of Its Afloat Prepositioned Stocks* GAO-08-257R (Washington, D.C.: Feb. 8, 2008).

[13]GAO, *Defense Logistics: Better Management and Oversight of Prepositioning Programs Needed to Reduce Risk and Improve Future Programs*, GAO-05-427 (Washington, D.C.: Sept. 6, 2005) and *Defense Logistics: Improved Oversight and Increased Coordination Needed to Ensure Viability of the Army's Prepositioning Strategy*, GAO-07-144 (Washington, D.C.: Feb. 15, 2007).

requests is complicated, and they do not plan to separately track funds set aside for the reconstitution of their prepositioned equipment sets.

The Army Lacks a Strategic Approach That Promotes Transparency and Ensures That Equipment Investments Are Based on Sound Plans

A common theme in our work has been the need for DOD and the Army to take a more strategic approach to decision making that promotes transparency and ensures that programs and investments are based on sound plans with measurable, realistic goals and time frames, prioritized resource needs, and performance measures to gauge progress. Our prior work has found that a lack of clear linkages between overall Army equipment requirements and funding needs is an impediment to effective oversight of the Army's equipping plans. Further, transparency of the funds requested for Army equipment is hindered because Army funding needs are scattered across multiple funding requests. Finally, we have suggested a number of actions to enhance transparency and reduce the risks associated with Army equipping initiatives. However, many of these recommendations have not been adopted and, as a result, the Army faces uncertainties going forward.

Lack of Clear Linkage between Equipment Requirements and Funding Impedes Program Oversight

The Army has not clearly linked its overall equipment requirements with funding requests. Our work has shown that major transformation initiatives have a greater chance of success when their funding plans are transparent, analytically based, executable, and link to the initiative's implementation plans. A lack of linkage between overall Army equipment requirements and funding plans impedes oversight by DOD and congressional decision-makers because it does not provide a means to measure the Army's progress toward meeting long-term Army equipment goals or to inform decisions that must be made today.

Our work on modular restructuring has shown that the Army has substantially revised its timeline for fully equipping units from an original date of 2011 to 2019 but has not provided evidence of its overall equipment requirements or specific plans, milestones, or resources required to fully equip the modular force. Meanwhile, the Army is working to expand its force beyond its original modular restructuring goals, which will lead to billions of additional dollars in requirements to equip new modular units.

The Army also does not know if its existing prepositioned equipment requirements reflect actual needs because DOD has not formulated a DOD-wide prepositioning strategy to guide the Army's prepositioning strategy. Army officials stated that its worldwide prepositioned equipment

sets would be reconstituted in synchronization with the Army's overall equipping priorities and in accordance with its Army Prepositioned Strategy 2015. However, the Army had not established those priorities as of December 2007. Additionally, the Army Prepositioned Strategy 2015 is not correlated with a DOD-wide prepositioning strategy, because, according to DOD officials, a DOD-wide prepositioning strategy does not exist. DOD officials explained that the services are responsible for equipping strategies and that the Joint Staff conducts assessments of the services' prepositioning programs to determine their relationship within the DOD-wide strategic context. We continue to believe, however, that a DOD-wide strategy is needed in addition to an Army strategy.

Finally, the Army's reset implementation strategy is based on resetting equipment that it expects will be returning in a given fiscal year, and not on targeting shortages of equipment for units preparing for deployment to Iraq and Afghanistan. According to the Army's Army Force Generation model implementation strategy and reset implementation guidance, the primary goal of reset is to prepare units for deployment and to improve next-to-deploy units' equipment-on-hand levels. Until the Army's reset implementation strategy targets shortages of equipment needed to equip units preparing for deployment, the Army will be unable to minimize operational risk by ensuring that the needs of deploying units can be met.

Oversight of the Army's key equipment initiatives has been complicated by multiple funding requests. DOD requested operation and maintenance funds for Army prepositioned equipment in both the fiscal year 2008 annual budget request (about $156 million) and the fiscal year 2008 request related to the Global War on Terror (about $300 million). Army officials stated that there could be some overlap between funds requested for reconstitution of prepositioned equipment in the annual budget request and the reset of prepositioned equipment in the supplemental request. Without integrating the full costs for Army equipment needs in a single budget, decision makers may have difficulty seeing the complete picture of the Army's funding needs and the potential for trade-offs among competing defense priorities.

Actions Needed to Improve Management Controls and Improve Transparency of Army Equipping Efforts

We have recommended a number of actions intended to improve management controls and enhance transparency of funding requests associated with modular restructuring, force expansion, equipment reset, and prepositioning of equipment stock. However, many of these recommendations have not been adopted because the Army has not developed concrete plans to address the recommendations and in some cases, disagreed with our recommendations. As a result, senior DOD leaders and Congress may not have sufficient information to assess progress and fully evaluate the Army's funding requests.

Our prior reports on the Army's modular restructuring initiative recommended that the Army improve the transparency of its equipment requirements and funding plans as well as its plan to assess the modular unit designs.[14] In recent years, we recommended the Army develop a comprehensive strategy and funding plan that details the Army's equipping strategy, compares equipment plans with modular unit designs, identifies total funding needs, and includes a mechanism for measuring progress in staffing and equipping its modular units. We have also recommended that the Army develop a comprehensive assessment plan that includes steps to evaluate modular units in full-spectrum combat. In January 2008, we recommended that DOD provide Congress with additional information on the Army's expansion initiative, including an updated funding plan and that the Army maintain a transparent audit trail including documentation of the steps used to develop its expansion funding plan.

We have also made recommendations intended to address short and long-term operational risks associated with Army equipment reset and prepositioning strategies. Regarding the Army's equipment reset plans, we recommended in September 2007 that the Army ensure that its priorities address equipment shortages in the near term to minimize operational risk and ensure that the needs of units preparing for deployment can be met. Finally, with regard to prepositioned equipment, we recommended the establishment of a DOD-wide prepositioning strategy to ensure that future Army prepositioning investments are aligned with DOD's prepositioning goals. We continue to believe that our recommendations have merit, though many of these recommendations have not been adopted and, as a result, the Army faces uncertainties going forward.

[14] GAO-08-145 and GAO, *Force Structure: Army Needs to Provide DOD and Congress More Visibility Regarding Modular Force Capabilities and Implementation Plans*, GAO-06-745 (Washington, D.C.: Sept. 6, 2006).

Concluding Observations

Restoring equipment readiness across the Army will require billions of dollars in maintenance and procurement funding but the full cost—and how long it will take—are still unclear. The uncertainty about the magnitude and duration of our military commitments further complicates and deepens the equipping challenges facing the Army. Moreover, growing fiscal problems facing the nation may lead to growing pressure on defense budgets.[15] Such uncertainty about the future underscores the need for sound management approaches like setting goals, establishing clear measures to track progress, and identifying full costs. Until these steps are taken, decision makers will lack key information needed to gauge interim progress and make informed choices aimed at balancing the need to restore near-term readiness while positioning the Army for the future.

Mr. Chairman and Members of the Committee, this concludes my statement. I would be pleased to respond to any question you or other Members of the Committee or Subcommittee may have.

Contacts and Acknowledgments

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[15] GAO, *The Nation's Long-Term Fiscal Outlook: January 2008 Update*, GAO-08-591R (Washington, D.C.: Mar. 21, 2008).

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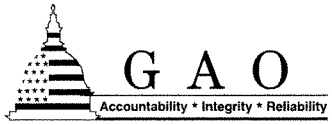
DEFENSE ACQUISITIONS

2009 Review of Future Combat System Is Critical to Program's Direction

Statement of Paul L. Francis, Director
Acquisition and Sourcing Management



GAO-08-638T

April 10, 2008

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Highlights

Highlights of GAO-08-638T, a testimony before the Subcommittee on Air and Land Forces, Committee on Armed Services, House of Representatives

DEFENSE ACQUISITIONS

2009 Review of Future Combat System Is Critical to Program's Direction

Why GAO Did This Study

The Future Combat System (FCS) program—which comprises 14 integrated weapon systems and an advanced information network—is the centerpiece of the Army's effort to transition to a lighter, more agile, and more capable combat force. The substantial technical challenges, the Army's acquisition strategy, and the cost of the program are among the reasons why the program is recognized as needing special oversight and review.

This testimony is based on GAO's two March 2008 reports on FCS and addresses (1) how the definition, development, and demonstration of FCS capabilities are proceeding, particularly in light of the go/no-go decision scheduled for 2009; (2) the Army's plans for making production commitments for FCS and any risks related to the completion of development; and (3) the estimated costs for developing and producing FCS.

What GAO Recommends

In its March 2008 reports, GAO made several recommendations to the Secretary of Defense that included: establishing criteria that the FCS program will have to meet in the 2009 milestone review in order to justify continuation; identifying viable alternatives to FCS; and taking other actions. DOD concurred with GAO's recommendations.

To view the full product, including the scope and methodology, click on GAO-08-638T. For more information, contact Paul Francis at (202) 512-4841 or francisp@gao.gov.

What GAO Found

Today, the FCS program is about halfway through its development phase, yet it is, in many respects, a program closer to the beginning of development. This portends additional cost increases and delays as FCS begins what is traditionally the most expensive and problematic phase of development. In the key areas of defining and developing FCS capabilities, requirements definition is still fluid, critical technologies are immature, software development is in its early stages, the information network is still years from being demonstrated, and complementary programs are at risk for not meeting the FCS schedule. It is not yet clear if or when the information network that is at the heart of the FCS concept can be developed, built, and demonstrated. Yet, the time frame for completing FCS development is ambitious; even if all goes as planned, the program will not test production-representative prototypes or fully demonstrate the system of systems until after low rate production begins.

Even though the development of FCS will finish late in its schedule, commitments to production will come early. Production funding for the first spinout of FCS technologies and the early version of the FCS cannon begin in fiscal years 2008 and 2009. Production money for the core FCS systems will be requested beginning in February 2010, with the DOD fiscal year 2011 budget request—just months after the go/no-go review and before the stability of the design is determined at the critical design review. In fact, by the time of the FCS production decision in 2013, a total of about $39 billion, which comprises research and development and production costs, will already have been appropriated for the program, with another $8 billion requested. Also, the Army plans to contract with its lead system integrator for the initial FCS production, a change from the Army's original rationale for using an integrator. This increases the burden of oversight faced by the Army and the Office of the Secretary of Defense.

While the Army's cost estimates for the FCS program remain about the same as last year—$160.9 billion—the content of the program has been reduced, representing a reduction in buying power for the Army. The level of knowledge for the program does not support a confident estimate, and cost estimates made by two independent organizations are significantly higher. Competing demands from within the Army and DOD limits the ability to fund higher FCS costs. Thus, the Army will likely continue to reduce FCS capabilities in order to stay within available funding limits. Accordingly, FCS's demonstrated performance, the reasonableness of its remaining work, and the resources it will need and can reasonably expect will be of paramount importance at the 2009 milestone review for the FCS program.

Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss the Department of the Army's Future Combat System (FCS), a networked family of weapons and other integrated systems. FCS is in the forefront of efforts to help the Army transform itself into a lighter, more agile, and more capable combat force by using a new concept of operations, new technologies, and a new information network linking whole brigades together in a system of systems. In 2009, FCS faces a congressionally mandated go/no-go decision review to determine the program's future. This review is crucial, as production funding and commitments will build rapidly after that point, limiting the government's ability to alter course.

My statement today is based on the work we conducted over the past year in response to the National Defense Authorization Act for Fiscal Year 2006, which requires GAO to report annually on the FCS program.[1] Accordingly, this statement discusses (1) how the definition, development, and demonstration of FCS capabilities are proceeding, particularly in light of the go/no-go decision scheduled for 2009; (2) the Army's plans for making production commitments for FCS and any risks related to completing development; and (3) the estimated costs for developing and producing FCS and risks the Army faces in both meeting the estimate and providing commensurate funding.[2]

Summary

Definition, development, and demonstration of capabilities will finish late in the FCS schedule. At this point, requirements definition is still fluid, critical technologies are immature, software development is in its early stages, the information network is still years from being demonstrated, and complementary programs are at risk for not meeting the FCS schedule. Significant commitments to production will be made before FCS capabilities are demonstrated. Production money for the core FCS systems will be requested beginning in February 2010, with the DOD fiscal year 2011 budget request—just months after the go/no-go review and before the stability of the design is determined at the critical design review. By the

[1] Pub. L. No. 109-163 §211 (2006).

[2] GAO, *Defense Acquisitions: 2009 Is a Critical Juncture for the Army's Future Combat System*, GAO-08-408 (Washington, D.C.: Mar. 7, 2008); GAO, *Defense Acquisitions: Significant Challenges Ahead in Developing and Demonstrating Future Combat System's Network and Software*, GAO-08-409 (Washington, D.C.: Mar. 7, 2008).

time of the FCS production decision in 2013, about $39 billion will already have been invested in the program. While the Army's cost estimates for the FCS program remain about the same as last year—$160.9 billion—the content of the program has been reduced. FCS costs are likely to grow as the current level of knowledge does not support a confident estimate, and cost estimates made by two independent organizations are significantly higher. Competing demands from within the Army and DOD limit the ability to fund higher FCS costs. Thus, the Army will likely continue to reduce FCS capabilities in order to stay within available funding limits.

In our March 2008 reports, we made several recommendations to ensure that the 2009 FCS milestone review is positioned to be both well-informed and transparent. Specifically, we recommended that the Secretary of Defense, among other things, (1) establish objective and quantitative criteria that the FCS program will have to meet in order to justify its continuation and gain approval for the remainder of its acquisition strategy, (2) identify viable alternatives to FCS as currently structured that can be considered in the event that FCS does not measure up to the criteria set for the review, and (3) closely examine the oversight implications of the Army's decision to contract with the lead system integrator for early production of FCS spin outs, the non-line-of-sight cannon (NLOS-C), and low rate production for the FCS core program. In the area of FCS network and software, we recommended that the FCS program stabilize the network and software requirements of each software build to enable software developers to follow disciplined software practices and establish a clear set of criteria for acceptable network performance at each of the key program events. Finally, in setting expectations for the 2009 milestone review, we recommended that the expectations include an analysis of network technical feasibility and risks, synchronization of the network with other elements of FCS, and a reconciliation of cost estimates of network and software development scope and cost.

DOD concurred with our recommendations and stated that criteria for the 2009 FCS Defense Acquisition Board review will be established and will be reviewed and finalized at the 2008 Defense Acquisition Board review. The results of the analyses and assessments planned to support the 2009 review will inform DOD's acquisition and budget decisions for FCS. These are positive steps toward informing the 2009 Defense Acquisition Board review.

Background

The FCS concept is designed to be part of the Army's Future Force, which is intended to transform the Army into a more rapidly deployable and

responsive force that differs substantially from the large division-centric structure of the past. The Army is reorganizing its current forces into modular brigade combat teams, each of which is expected to be highly survivable and the most lethal brigade-sized unit the Army has ever fielded. The Army expects FCS-equipped brigade combat teams to provide significant warfighting capabilities to DOD's overall joint military operations. The Army has also instituted plans to spin out selected FCS technologies and systems to current Army forces throughout the program's system development and demonstration phase.

The FCS program is recognized as being high risk and needing special oversight. Accordingly, in 2006, Congress mandated that the Department of Defense (DOD) hold a milestone review following its preliminary design review.[3] Congress directed that the review include an assessment of whether (1) the needs are valid and can best be met with the FCS concept, (2) the FCS program can be developed and produced within existing resources, and (3) the program should continue as currently structured, be restructured, or be terminated. Congress required the Secretary of Defense to review and report on specific aspects of the program, including the maturity of critical technologies, program risks, demonstrations of the FCS concept and software, and a cost estimate and affordability assessment.

This statement is based on work we conducted between March 2007 and March 2008 and is 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.

[3] John Warner National Defense Authorization Act for Fiscal Year 2007, Pub. L. No. 109-364, § 214 (2006).

Definition, Development, and Demonstration of Capabilities Will Finish Late in the FCS Schedule

Ideally, the Army should have entered development in 2003 with firm requirements and mature technologies. However, the FCS program will be challenged to meet these markers by the time of the preliminary design review in 2009. The Army has only recently formed an understanding of what will be expected of the FCS network. Complementary programs, necessary to the success of the FCS, are not yet fully synchronized with the FCS schedule and face funding and technical challenges. By 2009, the Army will have spent 6 years and $18 billion on these initial efforts, with the costlier components of a development program still to come. It will be years before demonstrations validate that the FCS will provide needed capabilities.

Requirements, Technologies, and Designs Are Not Yet Mature

While the Army should have firmed requirements at the outset of its development program, it now faces a daunting task in completing this work by the preliminary design review and subsequent milestone review in 2009—6 years into a 10-year development schedule. Many of FCS's thousands of requirements are almost certain to be modified as the program approaches these reviews. The Army's decision to restructure the program in early 2007, reducing the set of systems from 18 to 14, resulted in requirements modifications, deferrals, and redistributions that affected the requirements balance among the remaining systems. As this program adjustment is implemented, further requirements changes to the systems, as well as to the network, could be required. The Army also continues to make design trade-offs to accommodate restrictions such as space, weight, and power constraints; affordability; and technical risks, such as transport requirements for manned ground vehicles. FCS software development is hampered by incomplete requirements and designs for the information network. While the Army's user community expects that FCS will deliver capabilities that are as good as or better than current forces, this position is based on the results of modeling and simulation activities—it will be several years before field demonstrations validate the user community's position.

FCS's critical technologies remain at low maturity levels. According to the Army's latest technology assessment, only two of FCS's 44 critical technologies have reached a level of maturity that, based on best practice standards, should have been demonstrated at program start. Even applying the Army's less rigorous standards, only 73 percent can be considered mature enough to begin system development today. The technological immaturity, coupled with incomplete requirements, is a mismatch that has prevented the Army from reaching the first critical knowledge point for this program—a precursor for cost growth. Many of these immature

technologies may have an adverse cumulative impact on key FCS capabilities such as survivability. In addition, the Army is struggling to synchronize the schedules and capabilities of numerous essential complementary programs with the overall FCS program. The Army has identified problems that raise concerns about the likelihood that many complementary systems will deliver the required capabilities when needed. In some cases, complementary programs have been adversely affected by FCS demands, and in others, lack of coordination between FCS and complementary program officials has stalled efforts aimed at synchronizing programs and resolving cost, schedule, and technical issues.

Significant Challenges in Developing And Demonstrating FCS Network and Software

It is not yet clear if or when the information network that is at the heart of the FCS concept can be developed, built, and demonstrated by the Army and lead system integrator (LSI). Significant management and technical challenges—owing more to the program's complexity and immaturity than to the approach to software—have placed development of the network and software at risk. These risks include network performance and scalability, immature network architecture, and synchronization of FCS with Joint Tactical Radio System (JTRS) and Warfighter Information Network-Tactical programs that have significant technical challenges of their own. The amount of estimated software code required for the FCS network and platforms has recently increased to 95.1 million lines. This is nearly triple the size of the original estimate in 2003, and the largest software effort by far for any weapon system. Software code is difficult to estimate, and underestimation is not unique to FCS. Compounding this inherent difficulty on FCS were the program's poorly defined requirements, indicative of its immaturity. Lines of code have grown as requirements have become better understood. The Army believes the latest increases will not substantially increase software development costs, but updated Army and independent cost estimates will not be available until next year. Previously, the independent estimates have differed sharply from the Army's in the area of FCS software development costs.

Although several disciplined practices are being used to develop FCS's network and software, the program's immaturity and aggressive pace during development have delayed requirements development at the software developer level. For example, software developers for five major software packages that we reviewed report that high-level requirements provided to them were poorly defined, omitted, or late in the development process. These caused the software developers to do rework or defer functionality to future builds. In turn, these poor or late requirements had

a cascading effect that caused other software development efforts to be delayed.

It is unclear when or how it can be demonstrated that the FCS network will work as needed, especially at key program junctures. For example, in 2009, network requirements, including software, may not be well defined nor designs completed at the preliminary design review; and at the FCS milestone review later that year, network demonstration is expected to be very limited. The Army and LSI have identified and need to address numerous areas of high risk such as network performance and scalability. The first large scale FCS network demonstration—the limited user test in 2012—will take place at least a year after the critical design review and only a year before the start of FCS production. That test will seek to identify the impact of the contributions and limitations of the network on the ability to conduct missions. This test will be conducted after the designs have been set for the FCS ground vehicles, a situation that poses risks because the designs depend on the network's performance. A full demonstration of the network with all of its software components will not be demonstrated until at least 2013 when the fully automated battle command system is expected to be ready.

FCS Capabilities Will Be Demonstrated after Key Decision Points

When FCS reaches its planned preliminary design review in 2009, the Army will have expended over 60 percent of its development funds and schedule. However, much will still need to be done in terms of technology maturation, system integration and demonstration, and preparing for production—all three knowledge points fundamental to a successful acquisition. Large scale demonstrations of the network will not occur until after manned ground vehicles, which depend on the performance of the network, are already designed and prototyped. The Army does not plan to demonstrate that the FCS system of systems performs as required until after the production decision for the core program in 2013. That would preclude opportunities to change course if warranted by test results and increasing the likelihood of costly discoveries in late development or during production. The cost of correcting problems in those stages is high because program expenditures and schedules are less forgiving than in the early stages of a program. Conversely, the test standards we apply reflect the best practice of having production-representative prototypes tested prior to a low rate production decision. This approach demonstrates the prototypes' performance and reliability as well as manufacturing processes—in short, that the program is ready to be manufactured within cost, schedule, and quality goals.

Significant Commitments to Production Will Be Made Before FCS Capabilities Are Demonstrated

While the FCS production decision for the core FCS program is to be held in fiscal year 2013, production commitments will begin in fiscal years 2008 and 2009 with production for the first of a series of three planned spin out efforts and the early versions of the NLOS-C vehicle. When considering these activities, along with long-lead and facilitization investments associated with the production of FCS core systems, a total of $11.9 billion in production money will have been appropriated and another $6.9 billion requested by the time of the production decision for the FCS core systems in 2013. When development funds are included, $39 billion will have been appropriated and another $8 billion requested. As noted previously, key demonstrations will not yet have taken place by this time. Also, in April 2007, the Army announced its intention to contract with the LSI for the production for the first three brigade combat teams of FCS systems, the production of the FCS spin out items, and the early production of NLOS-C vehicles. This decision makes an already unusually close relationship between the Army and the LSI even closer, and heightens the oversight challenges FCS presents.

Spin Out Procurement to Begin before Testing Completed

In 2004, the Army revised its acquisition strategy to bring selected technologies and systems to current forces via spin outs while development of the core FCS program is underway. The first of these spin out systems will be tested and evaluated in the coming year, and a production decision is planned in 2009. However, the testing up to that point will feature some surrogate subsystems rather than the fully developed subsystems that would ultimately be deployed to the current forces. For example, none of the tests will include fully functional JTRS radios or associated software. The Army believes this strategy is adequate; however, testing of surrogates may not provide quality measurements to gauge system performance, and the Army may have to redesign if JTRS radios have different form, fit, and function than expected. Taken together, these spin out 1 capabilities serve as a starting point for FCS but represent only a fraction of the total capability that the Army plans for FCS to provide. The Army has general plans for a second and third set of spin out items but, according to the Army, these have not yet been funded.

NLOS-C Production to Begin Soon at Congress' Direction

Responding to congressional direction, the Army will begin procuring long lead production items for the NLOS-C vehicle in 2008.[4] The Army will deliver six units per year in fiscal years 2010 through 2012; however, these early NLOS-C vehicles will not meet threshold FCS requirements and will not be operationally deployable without significant modifications. Rather, they will be used as training assets for the Army Evaluation Task Force.

To meet the early fielding dates, the Army will begin early production of the NLOS-C vehicles with immature technologies and designs. Several key technologies will not be mature for several years, and much requirements and design work remains on the manned ground vehicles, including the NLOS-C. Significant challenges involving integrating the technologies, software, and design will follow. To the extent these aspects of the manned ground vehicles depart from the early production cannons, costly rework of the cannons may be necessary.

The Army is planning a seamless transition between NLOS-C production and core FCS production. However, beginning the production of NLOS-C vehicles 5 years before the start of FCS core production could create additional pressure to proceed with FCS core production. Moreover, to the extent that beginning NLOS-C production in 2008 starts up the manned ground vehicle industrial base, it could create a future need to sustain the base. If decision makers were to consider delaying FCS core production because it was not ready, a gap could develop when early NLOS-C production ends. Sustaining the industrial base could then become an argument against an otherwise justified delay. The Under Secretary of Defense for Acquisition, Technology, and Logistics recently took steps to keep the decisions on the NLOS-C early production separate from FCS core production. In approving procurement of long lead items for the NLOS-C vehicles in 2008, the Under Secretary designated the 18 early prototypes as a separate, special interest program for which he will retain authority for making milestone decisions. The Under Secretary will make a second decision in 2009 whether to approve NLOS-C production and has put a cost limit of $505.2 million (fiscal year 2003 dollars) on production of these vehicles. He also added that specific requirements be met at that time, such as a capability production document, technology readiness assessment, test plan, independent estimate of costs, and an approved acquisition program baseline. This is a positive step in ensuring that the

[4] Department of Defense Appropriations Act, 2003, Pub. L. No. 107-248 § 8121 (2002), and similar provisions in subsequent defense appropriations acts.

Army's efforts to meet Congressional direction do not result in unfavorable consequences.

Army Commitment to LSI for Production Heightens Oversight Challenges

The Army's April 2007 decision to contract with the LSI for FCS production makes an already close relationship closer, represents a change from the Army's original rationale for using an LSI, and may further complicate oversight. The specific role the LSI will play in production of spin outs, NLOS-C, and FCS core production are unclear at this point. According to program officials, the statements of work for the long lead items contracts for spin outs and NLOS-C have not yet been worked out. The statements of work for the production contract will also be negotiated later. The work the LSI does in actual production of FCS is likely to be small compared to the other hardware suppliers and assemblers. Thus, the production role of the LSI is likely to be largely in oversight of the first tier subcontractors.

From the outset of the program, the LSI was to focus its attention on development activities that the Army judged to be beyond what it could directly handle. Army leadership believed that by using an LSI that would not necessarily have to be retained for production, the Army could get the best effort from the contractor during the development phase while at the same time making the effort profitable for the contractor. Nonetheless, the LSI's involvement in the production phase has been growing over time. The current LSI development contract for the core FCS systems extends almost 2 years beyond the 2013 production decision. The Army does not expect the initial brigades outfitted by FCS will meet the upper range of its requirements and has made the LSI responsible for planning future FCS enhancements during the production phase. Combined with a likely role in sustainment, the LSI will remain indefinitely involved in the FCS program. By committing to the LSI for early production, the Army effectively ceded a key point of leverage it had held—source selection—and is perhaps the final departure from the Army's initial efforts to keep the LSI's focus solely on development. This decision also creates a heightened burden of oversight in that there is now additional need to guard against the natural incentive of production from creating more pressure to proceed through development checkpoints prematurely. As we have previously reported, this is a burden that will need to be increasingly borne by the Office of the Secretary of Defense.

FCS Costs Likely to Grow beyond Army Estimates

The Army's $160.9 billion cost estimate for the FCS program is largely unchanged from last year's estimate despite a program adjustment that reduced the number of systems from 18 to 14. This may mean a reduction in capabilities of the FCS program and thus represents a reduction in the Army's buying power on FCS. Further, two independent cost estimates—from DOD's Cost Analysis Improvement Group (CAIG) and the other from the Institute for Defense Analyses (IDA), a federally funded research and development center—are significantly higher than the Army's estimate. Both assessments estimate higher costs for software development, to which a recent increase in lines of code adds credence. The Army has not accepted either of the independent estimates on the grounds that they each include additional work scope, particularly in the later years of the development phase. Also, the CAIG and IDA both use historical growth factors in their estimates, based on the results of previous programs. It is reasonable to include such growth factors, based on our own analysis of weapon systems and the low level of knowledge attained on the FCS program at this time.

Given the program's relative immaturity in terms of technology and requirements definition and demonstrations of capabilities to date, there is not a firm foundation for a confident cost estimate. The Army has not calculated confidence levels on its estimates, though this is a best practice and could reduce the probability of unbudgeted cost growth. Under its current structure, the Army will make substantial investments in the FCS program before key knowledge is gained on requirements, technologies, system designs, and system performance, leaving less than half its development budget to complete significantly expensive work, such as building and testing prototypes, after its preliminary design review. The Army maintains that if it becomes necessary, FCS content will be further reduced, by trading away requirements or changing the concept of operations, to keep development costs within available funding levels. As the Army begins a steep ramp-up of FCS production, FCS costs will compete with other Army funding priorities, such as the transition to modular organizations and recapitalizing the weapons and other assets that return from current operations. Together, the program's uncertain cost estimate and competing Army priorities make additional reductions in FCS scope and increases in cost likely.

Conclusion

The deficiencies we cite in areas such as requirements and technology are not criticisms of progress in the sense that things should have gone smoother or faster. At issue, rather, is the misalignment of the program's normal progress with the events used to manage and make decisions on

such acquisitions—key decisions are made well before sufficient knowledge is available. The decision in 2009 will provide an opportunity to realign the progress of knowledge in FCS with events such as the critical design review and tests of prototypes before the production decision. The 2009 decision may also be the government's last realistic opportunity to safeguard its ability to change course on FCS, should that be warranted. The first decision, as we see it, will have to determine whether FCS capabilities have been demonstrated to be both technically feasible and militarily worthwhile. If they have not, then DOD and the Army will need to have viable alternatives to fielding the FCS capability as currently envisioned. Depending on the results of the first decision, the second decision is to determine how to structure the remainder of the FCS program so that it attains high levels of knowledge before key commitments.

Other aspects of the FCS program warrant attention that should not wait until the 2009 decision. Primary among these is the Army's decision to extend the role of the LSI into FCS production. This is a decision that will necessarily heighten the role the Office of the Secretary of Defense will have to play in overseeing the program and departs from the Army's philosophy of having the LSI focus on development without the competing demands and interests that production poses. A second aspect of the program warranting attention is the Army's approach to spin outs. It will be important for the Army to clearly demonstrate the military utility of the spin outs to current Army forces, based on testing high-fidelity, production-representative prototypes, before a commitment is made to their low rate production. This is not the current plan, as the Army plans to use some surrogate equipment in the testing that will support the production decision for spin out 1. Finally, it is important that the production investments in the spin outs and NLOS-C do not create undue momentum for production of the FCS core systems. As noted above, commitment to production of the FCS core systems must be predicated on attaining high levels of knowledge, consistent with DOD policy.

Actions Recommended in Our Recent Reports

In our March 2008 reports, we made several recommendations to ensure that the 2009 FCS milestone review is positioned to be both well-informed and transparent. Specifically, we recommended that the Secretary of Defense establish objective and quantitative criteria that the FCS program will have to meet in order to justify its continuation and gain approval for the remainder of its acquisition strategy. The criteria should be set by at least July 30, 2008, in order to be prescriptive, and should be consistent with DOD acquisition policy and best practices. At a minimum, the criteria

should include, among other things, the completion of the definition of all FCS requirements including those for the information network and the synchronization of FCS with all essential complementary programs. We also recommended that the Secretary of Defense, in advance of the 2009 milestone review, identify viable alternatives to FCS as currently structured that can be considered in the event that FCS does not measure up to the criteria set for the review. As we have previously reported, an alternative need not be a rival to the FCS, but rather the next best solution that can be adopted if FCS is unable to deliver the needed capabilities. For example, an alternative need not represent a choice between FCS and the current force, but could include fielding a subset of FCS, such as a class of vehicles, if they perform as needed and provide a militarily worthwhile capability. We further recommended that the Secretary of Defense (1) closely examine the oversight implications of the Army's decision to contract with the LSI for early production of FCS spin outs, NLOS-C, and low rate production for the core FCS program; (2) take steps to mitigate the risks of the Army's decisions, including the consideration of the full range of alternatives for contracting for production; and (3) evaluate alternatives to the LSI for long-term sustainment support of the FCS system of systems.

Finally, regarding the FCS network and software development and demonstration efforts, we recommended that the Secretary of Defense (1) direct the FCS program to stabilize network and software requirements on each software build to enable software developers to follow disciplined software practices; (2) establish a clear set of criteria for acceptable network performance at each of the key program events; and (3) in setting expectations for the 2009 milestone review, include a thorough analysis of network technical feasibility and risks, synchronization of network development and demonstration with that of other FCS elements, and a reconciliation of the differences between independent and Army estimates of network and software development scope and cost.

DOD concurred with our recommendations and stated that criteria for the 2009 FCS Defense Acquisition Board review will be established and will be reviewed and finalized at the 2008 Defense Acquisition Board review. The results of the analyses and assessments planned to support the 2009 review will inform DOD's acquisition and budget decisions for FCS. These are positive steps toward informing the 2009 Defense Acquisition Board review.

Mr. Chairman, this concludes my prepared statement. I would be happy to answer any questions you or members of the subcommittee may have.

Contacts and Staff Acknowledgements

For future questions about this statement, please contact me on (202) 512-4841 or francisp@gao.gov. Individuals making key contributions to this statement include William R. Graveline, Assistant Director; Martin G. Campbell; Ronald N. Dains; Tana M. Davis; Marcus C. Ferguson; John A. Krump, John M. Ortiz; and Carrie R. Wilson.

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"DoD Procurement Policy for Body Armor"

Department of Defense Office of Inspector General

Report No. D-2008-067 **March 31, 2008**

(Project No. D2007-D000LA-0054.000)

DoD Procurement Policy for Body Armor

Executive Summary[1]

Who Should Read This Report and Why? DoD acquisition and contracting personnel should read this report because it concerns procurement decisions for body armor components used by DoD in the Global War on Terror.

Background. A member of Congress asked the DoD Office of Inspector General to review DoD procurement of body armor and armored vehicles to determine whether officials followed contracting policies. In addition, the member asked the DoD Office of Inspector General to provide information on why DoD issued contracts to Armor Holdings and Force Protection and to determine the effect the Army's ban on privately procured body armor had on the safety of our Service members. This is the second of two reports issued in response to the request. This report discusses the procurement of various body armor components by the Army and the Marine Corps, and the effect of the ban on privately procured body armor (Appendix C). The first report, Report No. D-2007-107, "Procurement Policy for Armored Vehicles," June 27, 2007, covered the procurement policy for armored vehicles and why DoD issued contracts for armored vehicles to Armor Holdings and Force Protection.

[1] This is the Executive Summary of the Audit on "DoD Procurement for Body Armor" (Report No. D-2008-067, March 31, 2008). A copy of the entire report is available at: http://www.dodig.mil/Audit/reports/index.html.

Results. The Army and Marine Corps issued contracts and Federal Supply Schedule orders valued at more than $5.2 billion for body armor components. The Federal Acquisition Regulation requires contracting organizations to maintain adequate contract documentation to provide a complete acquisition history. Specific information concerning testing and approval of first articles was not included in 13 of 28 Army contracts and orders reviewed, and contracting files were not maintained in 11 of 28 Army contracts to show why procurement decisions were made. As a result, DoD has no assurance that first articles produced under 13 of the 28 contracts and orders reviewed met the required standards, or that 11 of the 28 contracts were awarded based on informed procurement decisions. We recommended that the Program Executive Office Soldier direct testing and evaluation of first articles for contract conformance before production on all contracts, update purchase descriptions, and document contractual actions for all body armor contracts. In addition, we recommended that the U.S. Army Research, Development and Engineering Command ensure First Article Testing instructions are included in contracting documents when applicable, and document contractual actions. We also recommended that the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) ensure proper use of non-DoD contracts to ensure that the contracts are in the best interest of the Government. Recommendations in this report, if implemented, will correct deficiencies identified, and ensure the DoD receives the best value in the body armor it procures. See the Finding section for the detailed recommendations.

Scope Limitations. The audit scope was limited to Army and Marine Corps contracts and orders awarded between January 2004 and December 2006 for body armor components. We divided the acquisition process into three phases: presolicitation, solicitation and evaluation, and contract administration. The scope was limited to reviewing the presolicitation and the solicitation and evaluation

phases of the acquisition process for specific contracts. We also reviewed contracting files as necessary to determine requirements for First Article Testing. We did not evaluate the contract administration phase of the acquisition process, which includes activities performed after contract award, such as quality control and testing,[2] deliverable requirements, and monitoring and measuring performance and end-user satisfaction, to determine whether the contractor met the requirements of the contract. We also did not visit contractor facilities during the audit. See Appendix F for a summary of the contracts reviewed.

Management Comments and Audit Response. The Program Executive Office Soldier neither concurred nor nonconcurred with Recommendation 1. Specifically, the Program Executive Office Soldier stated that for Recommendations 1.a., 1.b., and 1.c. no action would be required because all of the recommended actions are already regular and consistent current business practices that his office follows in accordance with the Federal Acquisition Regulation. However, our audit results show that testing and evaluation of first articles for contract conformance before production, updating of purchase descriptions, and documenting of all contractual actions for all body armor contracts are not consistently occurring. The Program Executive Office Soldier also provided comments on the draft report and finding, and stated that although not in the scope of our audit, the Army also conducts lot acceptance testing and post issue surveillance testing, both critical parts of the body armor testing program. In an additional meeting with Army officials, the Program Executive Office Soldier stated that the Army has no evidence of deaths that can be attributed to defective body armor. We request that the Program

[2] Quality control and testing (acceptance testing) involves testing each item or manufacturing lot of items to verify that each particular item meets its specification requirements. The purpose of acceptance testing is to catch random defects on a particular item that are not systemic in the manufacturing process; because of our scope limitation, we did not examine acceptance testing.

Executive Office Soldier provide additional comments on Recommendations 1.a., 1.b., and 1.c. in response to the final report by April 30, 2008.

The Commander, U.S. Army Research, Development and Engineering Command concurred with Recommendation 2. The Commander also provided comments on the draft report and finding. The comments of the Commander, U.S. Army Research, Development and Engineering Command on the recommendation were responsive, and no additional comments are required.

The Deputy Assistant Secretary of the Army (Policy and Procurement), responding for the Assistant Secretary of the Army (Acquisition, Logistics, and Technology), concurred with Recommendation 3. Although he concurred, the Deputy Assistant Secretary's comments are only partially responsive because he did not identify what actions will be taken to ensure that policies and procedures are enforced. We request that the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) provide additional comments that address the proposed actions for Recommendations 3.a.1., 3.a.2., 3.a.3., and 3.a.4. in response to the final report by April 30, 2008. A discussion of the management comments is in the Finding section of the report; the complete text of the comments is in the Management Comments section; and management comments on the draft report and finding, along with audit response, are in Appendix G.

DOCUMENTS SUBMITTED FOR THE RECORD

April 10, 2008

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-4704

JUN 2 4 2008

MEMORANDUM FOR THE RECORD

SUBJECT: OIG Audit Report No. D-2008-067, "DoD Procurement for Body Armor," March 31, 2008 (Project No. D2007-D00LA-0054.00)

The purpose of this Memorandum is to document the terms of agreement between the Department of Defense Office of Inspector General (DoD IG) and Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology) regarding the recommendations of the subject report. The Army is issuing policy to resolve the contracting issues raised in the report (see attached May 27, 2008 Department of the Army response to the final report). The scope of our audit did not include safety issues or other testing requirements.

The Army concurred with the DoD IG recommendations that address several areas requiring attention, such as First Article Testing and maintaining complete contracting files. In their May 27, 2008 response, the Army commented that First Article Testing is not required by the Federal Acquisition Regulation and that preaward testing techniques existing under the Federal Acquisition Regulation can provide sufficient assurance that the contractor can furnish a product conforming to all contract requirements. The Army stated that contracting officers must ensure that solicitation and contract documents precisely and consistently describe the testing approach being used, and avoid terminology and procedures that are inapplicable to the selected approach. The Army also agrees that contracting officers must fully document decisions related to contracting methods and price determinations. The Army's implementing policy is currently under development and is expected to be issued on or about June 30, 2008.

Regarding adequate documentation to support all contractual actions, the Army stated that it will assist contracting officers in their efforts to document all contractual actions and obtain all required documentation that may be generated and kept on file by concerned organizations (e.g., U.S. Army Test and Evaluation Center).

As for requiring contracting officers to ensure proper use of Federal Supply Schedules, the Army stated that it issued Policy Alert 08-26, "Use of Non-DoD Contracts," April 28, 2008, which reemphasized the requirements associated with non-DoD contracts including Federal Supply Schedules. The Army further stated that those requirements will be added to the Army's Contracting Operations Review Program by June 30, 2008, and the

Army's July 12, 2005, policy on the Use of Non-DoD Contracts will be revised and redistributed as a Secretary of the Army Directive.

The DoD IG agrees that First Article Testing procedures are outlined by the Federal Acquisition Regulation and that preaward testing, if it is used in lieu of First Article Testing, may be sufficient as long as preaward testing requirements meet the full intent of a First Article Test and are properly documented in the contract files. The DoD IG also agrees that these procedural changes in contracting will enhance the Army's ability to provide the best products to our soldiers and DoD civilians. The DoD IG will followup on the corrective actions being taken by the Army in accordance with the requirements of DoD Directive 7650.3 to ensure that these procedural changes have been implemented in policy.

Mary L. Ugone
Deputy Inspector General for Auditing

CONCUR:

N. Ross Thompson III
Lieutenant General, GS
Military Deputy to the
Assistant Secretary of the Army (Acquisition, Logistics and Technology)

Attachment: As stated

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY
ACQUISITION LOGISTICS AND TECHNOLOGY
103 ARMY PENTAGON
WASHINGTON DC 20310

MAY 27 2008

SAAL-ZB

MEMORANDUM FOR DEPARTMENT OF DEFENSE, INSPECTOR GENERAL

SUBJECT: Response to the Department of Defense (DoD) Inspector General (IG) Final Report No. D-2008-067, DoD Procurement Policy for Body Armor, dated March 31, 2008

The Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology) appreciates the opportunity to submit comments on the subject report, which reviewed certain U.S. Army procurements of body armor to determine whether applicable contracting policies were followed. Our comments also extend to, and cover, DoD IG recommendations directed at the Program Executive Office (PEO) Soldier and the Office of the Deputy Assistant Secretary of the Army (Policy and Procurement). While we acknowledge and address the report's concern with various first article testing (FAT) practices observed in the U.S. Army contracts reviewed by the DoD IG, we are pleased that the DoD IG did not call into question the effectiveness or safety of the various body armor components in use throughout the DoD.

Recommendation 1a: Direct testing and evaluation of the first article for conformance with contract requirements before the initial stage of production on all contracts for body armor components.

Comment: Concur in part. FAT is not required by the Federal Acquisition Regulation (FAR), and pre-award testing techniques exist under the FAR that can be used in lieu of FAT. Such pre-award testing can provide sufficient assurances that the contractor can furnish a product that conforms to all contract requirements for acceptance. Techniques for pre-award testing include: (1) the use of qualification requirements under FAR Subpart 9.2; and (2) the inclusion of testing requirements as a solicitation evaluation factor or subfactor in negotiated procurements under FAR Part 15. Contracting officers must ensure that solicitation and contract documents precisely and consistently describe the testing approach being used and avoid terminology and procedures that are inapplicable to the selected approach. Implementing policy is currently under development.

Recommendation 1b: Update the purchase description to identify the appropriate first article and the number of units to be furnished.

Comment: Concur in part. As stated in our comment to Recommendation 1a, FAT is not required by the FAR, and there are pre-award testing techniques that exist under the FAR that can be used in lieu of FAT. However, we agree that whenever a contract requires FAT, or uses pre-award testing in-lieu of FAT, the solicitation and contract documents must precisely and consistently describe the product requirements and testing approach being used, and avoid terminology and procedures that are inapplicable to the selected approach.

Recommendation 1c: Provide adequate documentation to support all contractual actions, including waivers for FAT.

Comment: Concur. PEO Soldier will assist contracting officers in their efforts to document all contractual actions and obtain all required documentation that may be generated and kept on file by other organizations (e.g., U.S. Army Test and Evaluation Center).

Recommendation 3.a: Require contracting officers who conduct direct acquisition for amounts greater than the simplified acquisition threshold to:

(1) Determine whether the use of non-DoD contracts is in the best interest of the Government, and verify that the required goods cannot be obtained as conveniently or economically by using a DoD contract. The contracting officer or another official designated by the agency head should document those conclusions in writing.

(2) Request discounts when placing orders from the Federal Supply Schedule contracts.

(3) Document their requests for discounts. If discounts were received, document how the discounts were determined to be fair; if discounts were not received, explain why the vendor was chosen.

(4) Fully document decisions not to consider all potential sources when awarding orders using the Federal Supply Schedules.

Comment: Concur. Regarding the DoD IG concern that the U.S. Army's response to the draft report did not identify the steps that will be initiated to ensure that existing policies and procedures on the use of non-DoD contracts are enforced, the Office of the Deputy Assistant Secretary of the Army (Policy and Procurement) issued policy alert 08-26 on April 28, 2008, which re-emphasizes the requirements associated with the use of non-DoD contracts and federal supply schedules. To provide oversight and periodic assessment of appropriate procedural application, these requirements will be added as inspection elements in conjunction with the U.S. Army's Contracting Operations Review Program by June 30, 2008. Based on the October 11, 2007, Army Audit Agency report, Proper Use of Non-DoD Contracts, the Office of the Deputy Assistant Secretary

of the Army (Policy and Procurement) is revising the U.S. Army's policy, dated July 12, 2005, regarding the use of non-DoD contracts. The revised policy will be distributed on/or about June 30, 2008, as a Secretary of the Army Directive to re-emphasize the requirements related to the use of non-DoD contracts.

N. ROSS THOMPSON III
Lieutenant General, GS
Military Deputy to the
Assistant Secretary of the
Army (Acquisition, Logistics
and Technology)

QUESTIONS AND ANSWERS SUBMITTED FOR THE RECORD

APRIL 10, 2008

QUESTIONS SUBMITTED BY MR. ABERCROMBIE

Mr. ABERCROMBIE. Lieutenant General Thompson and Lieutenant General Speakes, in the fiscal year 2005 Joint Cargo Aircraft Analysis of Alternatives, the Army estimated the 25 year life-cycle cost for 56 C–130J aircraft would be $6,803.6 million, or $121.5 million per aircraft. The Army estimates in fiscal year 2007 that the 25 year life-cycle of 54 C–27 aircraft will be $7,085.7 million, or $131.2 million per aircraft. Given the life-cycle cost disparity between the two platforms and the greater capability of the C–130J, why did the Army choose the higher priced C–27 over the C–130J, and what specific scenarios would the C–130J aircraft not be able to meet Army airlift requirements?

General SPEAKES and General THOMPSON. The Joint Cargo Aircraft (JCA) enables the Army to meet its inherent core logistics functions as described by Joint Publication 3–17. The Army needs a replacement aircraft for the aging C–23 Sherpa's that conduct the Army's time-sensitive and mission critical resupply mission. For this mission, the C–27J is an appropriate size while the C–130J has significant excess cargo-carrying capability to address this Service-unique mission. Due in part to its smaller size, the C–27J can land at airfields and landing strips for which the C–130J is not built. This ability to land near Army Brigade Combat Teams in the field is an essential characteristic for the JCA.

The disparity between the life cycle cost figures as described in the fiscal year 2005 (FY05) JCA Analysis of Alternatives (AOA) for the C–130J and the 2007 cost estimates for the C–27J were based on assumptions that do not provide a true comparison. To compare the cost estimates, one needs to insure that the same base assumptions are used in the calculations. At the time of the JCA AoA, FY05, the cost estimate for 56 C–27J was $4,703.30, or $84.0 million per aircraft. Using the same assumptions, the C–130J came in at the $6,803.60 figure above, or $121.5 million per aircraft. Both estimates were calculated in budget year dollars 2005 ($BY05). These figures included Research Development Testing and Evaluation (RDT&E), Procurement (PROC), Military Personnel (MILPER), Military Construction (MILCON), and Operations Maintenance Appropriations (OMA).

Using the United States Air Force 2008 Rand study for a point of comparison, the Life Cycle Cost Estimate for C–130J, and C–130J–30 are $188 million and $195 million per aircraft, $BY08, based on 15,000 operational hours. This analysis only considers PROC and OMA. The 2007 C–27J cost position of $131.2 million per aircraft, $BY07 and based on 15,000 operational hours includes RDTE, PROC, MILPER, MILCON, and OMA.

Along with bringing greater size and cargo-carrying capability than is required for this mission, the C–130J brings with it a significantly higher per unit cost. The C–27J costs approximately $33 million per aircraft, while an equivalently equipped C–130J cost is in excess of $60 million per aircraft. In addition, it is not surprising that a four-engine C–130 has a higher per flight hour maintenance requirement than a two-engine C–27J.

Mr. ABERCROMBIE. Lieutenant General Thompson and Lieutenant General Speakes, what is the Army's long term acquisition strategy for body armor? And, will the current request for proposals address the theater's primary concern of providing a lighter-weight system without sacrificing survivability performance?

General SPEAKES and General THOMPSON. The long term acquisition strategy for body armor is to continue the research and development of materials that will achieve better ballistic protection while reducing the overall weight of the system. As improved material technologies become available, the U.S. Army will rapidly transition the technology into body armor production. The current request for proposal for the next generation body armor solicitation closed on February 7, 2008, and source selection is ongoing. At this time, current materials technology is challenged to achieve significant weight savings for the same or better level of performance. The current Enhanced Small Arms Protective Insert worn with the Improved Outer Tactical Vest protects against the current threat and provides an increased area of coverage over the current Outer Tactical Vest with a weight reduction of greater than three pounds.

Mr. ABERCROMBIE. Lieutenant General Thompson and Lieutenant General Speakes, what is the Army's procurement strategy for the Improved Outer Tactical Vest (IOTV)? I understand two vendors were producing the vest but now are idle. Do you plan to award a bridge contract?

General SPEAKES and General THOMPSON. The U.S. Army's procurement strategy is to procure the Army Acquisition Objective (AAO) to replace the 966,000 Outer Tactical Vests (OTVs) currently in the field. Procurement of the IOTV began in June 2007 for an initial Theater requirement of 230,000 vests. The IOTV production contracts were awarded to Point Blank Body Armor (PBBA), Oakland Park, Florida, and Specialty Defense Systems, Jefferson City, Tennessee (which was later acquired by BAE Systems). These companies are the only two sources that have passed U.S. Army first article tests and have sufficient production capacity to meet the Army's monthly production requirements. A contract will be awarded in 3rd quarter Fiscal Year 2008 to procure 150,000 IOTV's as a bridge to a Full and Open competitive solicitation for the remaining U.S. Army requirement. The competitive solicitation will procure the remaining 586,000 IOTVs to complete the AAO, and contract awards for this IOTV solicitation are anticipated by August 30, 2008.

Mr. ABERCROMBIE. Lieutenant General Thompson and Lieutenant General Speakes, please outline the Army's procurement strategy for small arms? Please comment on the results from the recent extreme dust chamber tests conducted at Aberdeen Proving Ground on the M4 Carbine? Are you planning to replace the M4 Carbine?

General SPEAKES and General THOMPSON. The Army is a requirements-based force and as such, the Army's small arms procurement strategy is designed to meet the materiel requirements generated by our proponent Schools and Centers within the U.S. Army Training and Doctrine Command. In the small arms arena, the U.S. Army Infantry Center at Ft. Benning, Georgia, serves as the proponent for all small arms for the Army. They recently completed their latest Small Arms Capability Based Assessment (CBA) to evaluate: current capability gaps; the methods to reduce or eliminate those gaps; and lastly, whether a new requirements document is necessary to close any capability gaps. While ongoing procurement programs are addressing many of the gaps identified, the changing face of warfare and the advancement in technologies has created opportunities to provide capabilities such as counter-defilade target engagement (the ability to engage and destroy targets behind cover such as walls, berms, vehicles, etc.) never possible in the past.

The small arms procurement strategy remains based on proponent-generated material requirements and during wartime, the Operational Need Statements (ONS) that come from the field, validated by the chain of command, and ultimately approved by the Army leadership for specific limited requirements. These ONS are also submitted to the formal requirements process with the proponent evaluating the ONS for applicability across the force. The ONS generated in Operations in Southwest Asia were also reviewed as part of the CBA that the U.S. Army Infantry Center recently completed.

The current small arms procurement strategy focuses on: meeting the expanding requirements for machine guns for convoy protection and individual and crew-served weapons to meet the expansion of the Army; and increasing the fielding of the latest version of weapons to the whole Army. For instance, the Army and industry are developing a lighter weight .50 caliber machine gun (XM312) with increased safety features such as the Quick Change Barrel that eliminates the need to set head space and timing with each barrel change; and a lightweight 7.62mm Machine Gun (M240E6) which reduces the weight of the weapon by five pounds through the incorporation of a titanium receiver and a metal polymer pistol grip and trigger assembly. We have been developing a counter-defilade capability, which will meet the highest priority materiel gap identified by the CBA. A new sniper weapon began fielding this year and a new 40mm Grenade Launcher will begin fielding later in the year. Next year, a new shotgun integrated with the carbine will begin fielding. The procurement strategy is a living document that constantly adjusts to meet the needs of the Army.

The extreme dust test conducted last year highlighted the quality of the weapons tested with all of the weapons performing 98.4 percent of the time or better in a laboratory environment designed to push the weapons beyond their limits at a significantly accelerated pace. The test also confirmed that the maintenance regimen directed by the Army makes a significant impact on the reduction of malfunctions. The Army has taken the results of this test to analyze the data for possible engineering changes to further improve the Army's basic carbine, as we have continuously done since before the current carbine, the M4, was introduced into the force. In addition, on the basis of engineering data that the Army already had, an ongoing

magazine program will begin fielding the new improved ammunition magazines in the 1st quarter Fiscal Year 2009.

The Army currently does not have plans to replace the M4 carbine. The U.S. Army Infantry Center's CBA found no capability gaps that require a new materiel solution for the Soldier's basic carbine and rifle. Further, the reports from the field commanders and senior non-commissioned officers constantly praise the M4 with their only request being that they want more of them.

Mr. ABERCROMBIE. Lieutenant General Thompson and Lieutenant General Speakes, the Air Force appears to be attempting to procure a new handgun. Does the Army plan to replace the M9mm? Does the Army support the Air Force initiative to procure a new modular handgun system?

General SPEAKES and General THOMPSON. The Army has determined there is no immediate need to replace the current 9mm handgun. The current 9mm pistol meets the Army requirements. Although improvements can be made, a new handgun is a lower priority than other small arms needs such as our desire to defeat defilade targets. Replacing a pistol for another pistol without significant improvements in operational capabilities and other attributes (sustainment) is of little value.

Finally, the Army supports the Air Force initiative to procure a new handgun. As the Executive Agent for small arms, the Army has participated in the development of the Air Force handgun capability requirement documentation.

Mr. ABERCROMBIE. Lieutenant General Thompson and Lieutenant General Speakes, what is the Army's strategy for long term MRAP vehicle procurement and do you expect a change in current requirements? When does the Army plan to transition MRAP to an official program of record?

General SPEAKES and General THOMPSON. It is too soon to assess the MRAP in the current fight. As Commanders in the field provide operational assessments of MRAPs, we will adjust the MRAP and Tactical Wheeled Vehicle strategy accordingly to further define MRAPs role in the future Army.

Most recently, a Joint Requirements Oversight Council validated an interim requirement for 12,000 MRAP vehicles. The theater has requested a two-thirds fleet mix of MRAPs and a one-third fleet mix of High Mobility Multipurpose Wheeled Vehicles (HMMWVs) based on initial feedback from commanders that MRAP may not be suited to all missions because of its large size: HMMWVs are smaller and more maneuverable in densely populated areas. Theater commanders will complete their evaluation of the MRAP's performance and will provide feedback at a later date.

Mr. ABERCROMBIE. Lieutenant General Thompson, do all models and types of fielded body armor components meet first article test requirements?

General THOMPSON. Unless waived by the contracting officer in cases where supplies identical or similar to those called for in the schedule have been previously furnished by the contractor and have been accepted by the Government, the Army conducts First Article Tests (FAT) for all models and types of fielded body armor components to ensure performance requirements are met before being accepted by the U.S. Army. The U.S. Army also conducts Lot Acceptance Tests and surveillance tests throughout the production and fielding cycle to confirm continued compliance.

Mr. ABERCROMBIE. Lieutenant General Thompson, do you agree with all the recommendations in the IG's report? For those recommendations you do agree with, what is the plan for their implementation?

General THOMPSON. The Federal Acquisition Regulation (FAR) affords contracting officers with discretion when deciding whether to require first article testing (FAT) for a given acquisition. FAR 9.302 provides that before requiring FAT, the contracting officer shall consider the impact on cost or time of delivery, risk to the Government of foregoing such testing, and the availability of other, less costly, methods of ensuring the desired results. Pre-award testing techniques exist under the FAR that can be used in appropriate circumstances in lieu of FAT. Such pre-award testing can provide sufficient assurances that the contractor can furnish a product that conforms to all contract requirements for acceptance. Techniques for pre-award testing include: (i) the use of qualification requirements under FAR Subpart 9.2; and (ii) the inclusion of testing requirements as a solicitation evaluation factor or subfactor in negotiated procurements under FAR Part 15. Based on the concerns in the Department of Defense Inspector General (DODIG) report, the Army is revising its internal procedures so that contracting officers ensure solicitation and contract documents precisely and consistently describe the testing approach being utilized and avoid terminology and procedures that are inapplicable to the selected approach. Implementing policy is currently under development.

We concur with the DODIG recommendation to provide adequate documentation to support all contractual actions. The program office will assist contracting officers in their efforts to document all contractual actions and obtain all required docu-

mentation that may be generated and kept on file by other organizations (e.g., Army Test and Evaluation Center).

We also concur with the DODIG recommendation to identify the steps that will be initiated to ensure that policies and procedures applicable to the use of non-DOD contracts are enforced. The Office of the Deputy Assistant Secretary of the Army (Policy and Procurement) issued policy alert 08–26 on April 28, 2008, which re-emphasizes the requirements associated with the use of non-DOD contracts and federal supply schedules, to include seeking discounts for orders and documenting contract files on market research efforts conducted. To provide oversight and periodic assessment of appropriate procedural application, these requirements will be added as inspection elements in conjunction with the Army's Contracting Operations Review Program by June 30, 2008. Based on the October 11, 2007, Army Audit Agency report, Proper Use of Non-DOD Contracts, the Office of the Deputy Assistant Secretary of the Army (Policy and Procurement) is revising the Army's July 12, 2005, policy on the use of non-DOD contracts. The revised policy will be distributed on or after June 2008 as a Secretary of the Army Directive to re-emphasize the requirements related to the use of non-DOD contracts.

Mr. ABERCROMBIE. Lieutenant General Thompson, under objective 1, the IG report also suggested other Federal Acquisition Regulations (FAR) deficiencies, according to the IG report: some contracts did not request a quantity discount or document why one was not requested; some contracts lacked market research; and some contracts contained internal control weaknesses, among others. Do you agree with the IG on these issues? In cases where you agree, how do these deficiencies affect the performance of the body armor?

General THOMPSON. While we have acknowledged and are addressing the report's concern with various practices observed in the Army contracts reviewed by the DODIG, we are pleased that the DODIG did not call into question the effectiveness or safety of the various body armor components in use throughout the DOD. We concur with the DODIG recommendation to provide adequate documentation to support all contractual actions. We also concur with the DODIG's recommendation to identify the steps that will be initiated to ensure that policies and procedures applicable to the use of non-DOD contracts are enforced. The Office of the Deputy Assistant Secretary of the Army (Policy and Procurement) issued policy alert 08–26 on April 28, 2008, which re-emphasizes the requirements associated with the use of non-DOD contracts and federal supply schedules, to include seeking discounts for orders and documenting contract files on market research efforts conducted. To provide oversight and periodic assessment of appropriate procedural application, these requirements will be added as inspection elements in conjunction with the Army's Contracting Operations Review Program by June 30, 2008. Based on the October 11, 2007, Army Audit Agency report, Proper Use of Non-DOD Contracts, the Office of the Deputy Assistant Secretary of the Army (Policy and Procurement) is revising the Army's July 12, 2005 policy on the use of non-DOD contracts. The revised policy will be distributed on or after June 2008 as a Secretary of the Army Directive to re-emphasize the requirements related to the use of non-DOD contracts.

Mr. ABERCROMBIE. Lieutenant General Thompson, on page 16, DODIG recommends that PEO Soldier direct testing and evaluation of first articles for contract conformance before production on all (emphasis added) contracts. Do you believe this would be a good change? Why or why not? What changes would need to be made to the FAR, if any, to make FAT testing mandatory for all contracts after contract award as suggested by the DODIG?

General THOMPSON. The Federal Acquisition Regulation (FAR) affords contracting officers with discretion when deciding whether to require first article testing (FAT) for a given acquisition. The FAR 9.302 provides that before requiring FAT, the contracting officer shall consider the impact on cost or time of delivery, risk to the Government of foregoing such testing, and the availability of other, less costly, methods of ensuring the desired results. Preaward testing techniques exist under the FAR that can be used in appropriate circumstances in lieu of FAT. Such preaward testing can provide sufficient assurances that the contractor can furnish a product that conforms to all contract requirements for acceptance. Techniques for preaward testing include (i) the use of qualification requirements under FAR Subpart 9.2 and (ii) the inclusion of testing requirements as a solicitation evaluation factor or subfactor in negotiated procurements under FAR Part 15. Based on the concerns in the DODIG report, the Army is revising its internal procedures so that contracting officers ensure solicitation and contract documents precisely and consistently describe the testing approach being utilized and avoid terminology and procedures that are inapplicable to the selected approach. Implementing policy is currently under development. The FAR currently provides adequate authority to require preaward and post-award testing, thus we do not believe a change is necessary.

Mr. ABERCROMBIE. Lieutenant General Thompson, on some contracts, the DODIG stated that the Army used test results on the preliminary design models (PDMs) submitted under the solicitation to authorize production. What is your understanding of the FAR as it relates to PDMs and whether testing PDMs can satisfy FAT requirements? What assurances do you have that the initial production samples provided after contract measure up to or surpass the performance of PDMs provided before the contract? Has a manufacturer's PDMs ever passed a pre-contract test but failed a post-contract FAT? Do you have examples of such a situation? If such a situation occurs, how would the Army proceed and what modifications would the Army be responsible for? Please explain the impact, if any, of the FAT being conducted pre-award or post-award?

General THOMPSON. The Federal Acquisition Regulation (FAR) affords contracting officers with discretion when deciding whether to require first article testing (FAT) for a given acquisition. The FAR 9.302 provides that before requiring FAT, the contracting officer shall consider the impact on cost or time of delivery, risk to the Government of foregoing such testing, and the availability of other, less costly, methods of ensuring the desired results. Preaward testing techniques exist under the FAR that can be used in appropriate circumstances in lieu of FAT. Such preaward testing can provide sufficient assurances that the contractor can furnish a product that conforms to all contract requirements for acceptance. Techniques for preaward testing include (i) the use of qualification requirements under FAR Subpart 9.2 and (ii) the inclusion of testing requirements as a solicitation evaluation factor or subfactor in negotiated procurements under FAR Part 15.

The test protocols are the same for preaward testing and post-award FAT, so there is no impact on testing and there have been no instances where PDMs have passed preaward testing and subsequently failed post-award FAT. Only new producers or new designs are required to undergo FAT regardless of any preaward testing conducted.

The Army conducts robust post-award surveillance testing, continuous lot sampling and Lot Acceptance Testing (LAT) to verify consistency of production items in meeting the performance specifications. FAR 52.209–3 and 52.209–4 discuss the Government's rights when a product fails FAT and is disapproved. The cost of any repeat FAT is borne by the contractor, and the Government retains equitable adjustment and default rights under the contract.

Mr. ABERCROMBIE. 1. The Army assessed it needed $52.5 billion ($43.6 billion of which is allocated to equipment) to complete its restructuring to a modular force by 2011. In 2007 Army officials extended the timeline for fully equipping the modular force from 2011 to 2019, but have not re-estimated the costs to accommodate this change.

- What is the Army's current cost estimate for fully equipping modular units to authorized levels of equipment?
- To what extent is the Army's estimate reflected in the Department of Defense's Future Years Defense Program?
- Why was the timeline for equipping modular units revised from 2011 to 2019? To what extent will modular units be equipped by then?

2. GAO could not determine the extent to which the Army Prepositioned Stocks (APS) reconstitution strategy is reflected in current defense budget requests and cost estimates for restoring the prepositioned equipment sets to a posture that fully supports the Department of Defense's strategy.

- What is the Army's cost estimate for implementing APS Strategy 2015 approved in November 2007?
- How can the Army be assured that the funding requested for APS is used for APS requirements if APS funds are not tracked separately from other equipment-related funds?

3. The Secretary of Defense announced an initiative to expand the Army, 74,200 military personnel, in order to meet increasing strategic demands and to help reduce stress on the force. The Army is now considering accelerating the implementation timeline from fiscal year 2013 to fiscal year 2010. Army officials stated that they expect to include acceleration costs in another emergency supplemental request for funds to prosecute Global War on Terror.

- What are the estimated costs for accelerating the implementation timeline for expanding the force and what is driving the costs?
- What are the equipment costs for expanding the force and to what extent are they likely to change?

General SPEAKES and General THOMPSON. [The information referred to was not available at the time of printing.]

Mr. ABERCROMBIE. Ms. Ugone, the report states that your first objective was to review "the procurement history of body armor." Please explain what the specific audit objectives were with regard to this procurement history? In other words, what specific questions did you set out to address?

Ms. UGONE. To answer the first audit objective, "review the procurement history of body armor," we set out to address the following:

- Did contracting officials award Army and Marine Corps contracts and orders for body armor components between January 2004 and December 2006 in accordance with the Federal Acquisition Regulation, the Defense Federal Acquisition Regulation Supplement, Public Laws, and the United States Code?
- Specifically, did the contracting documentation for these body armor components from the presolicitation and solicitation and evaluation phases support compliance with the Federal Acquisition Regulation, the Defense Federal Acquisition Regulation Supplement, Public Laws, and the United States Code?

Mr. ABERCROMBIE. Ms. Ugone, given the findings from the report, would you recommend recalling body armor components procured and fielded under the 13 contracts found to be deficient?

Ms. UGONE. As stated in the scope limitation section of the report, the scope was limited to reviewing the presolicitation and solicitation and evaluation phases of the acquisition process for specific contracts. We also reviewed contracting files as necessary to determine whether First Article Testing was completed in accordance with the Federal Acquisition Regulation and Defense Federal Acquisition Regulation Supplement. Since we did not evaluate other testing requirements or safety issues such as ballistics testing, we do not have a basis for recommending the recall of this body armor. I should note that the Army has assured us many times that the armor procured under these contracts has passed all testing and no evidence of deaths could be attributed to defective body armor.

Mr. ABERCROMBIE. Ms. Ugone, please elaborate on your findings presented in Appendix C regarding the Army's safety of use message. How did you reach your conclusions? And, in your opinion, is the safety of use message putting military personnel at risk?

Ms. UGONE. Our second audit objective was to determine the effect the Army's ban on personally procured body armor had on the safety of our Service members. To respond to this request, we reviewed the circumstances leading to the Army's ban, and determined whether the Army had enough body armor in inventory to protect its soldiers.

The safety of use message informed soldiers that commercially available body armor was not tested to the same military specifications for ballistic protection. As a result, the message directed the replacement of all commercially available body armor immediately with Army approved and issued body armor. We did not validate whether commercially bought body armor met military specifications for ballistic protection; however, we reviewed whether the Army had available stocks of body armor on hand to sustain the replacement. According to Army officials, sufficient stocks of Army issued body armor were available for Service members at the time of the ban. We reviewed the Army's recorded inventory against the U.S. Central Command theater requirements for body armor to determine that reported quantities were sufficient to issue one suit of body armor to each Service member and DOD civilian in the U.S. Central Command theater.

Mr. ABERCROMBIE. Ms. Ugone, in your report, you concluded that "specific information concerning testing and approval of first article was not included in 13 out of 28 Army contracts and orders reviewed." What is required by the federal acquisition regulations regarding testing and approval of first articles and the timing of the first article tests (FAT)? Which phase of the acquisition process do you consider FAT to fall under?

Ms. UGONE. The Federal Acquisition Regulation allows contracting officials to use their judgment as to when to require First Article Testing, which is defined by the Federal Acquisition Regulation as "testing and evaluating the first article for conformance with specified contract requirements before or in the initial stage of production." Federal Acquisition Regulation Subpart 9.3, "First Article Testing and Approval," also states that testing and approval may be appropriate when the product is described by a performance specification (i.e. body armor components).

Additionally, the Purchase Description for each body armor component, which is part of the contract, states, "when a first article is required, it shall be inspected under the appropriate provisions of Federal Acquisition Regulation 52.209." Because the body armor testing was conducted at an Independent National Institute of Jus-

tice certified ballistics laboratory and not by each contractor, the contracting officer was required by the Federal Acquisition Regulation to insert clause 52.209–4, "First Article Approval—Government Testing," in the contract. The clause states:

> "The Contractor shall deliver ____ unit(s) of Lot/Item ____ within ____ calendar days from the date of this contract to the Government . . . for first article tests."

Based on the above text from the Federal Acquisition Regulation, we concluded that First Article Testing should be conducted after contract award (i.e. during the contract administration phase of the acquisition).

Mr. ABERCROMBIE. Ms. Ugone, would you consider first article tests of preliminary design models to be in compliance with FAR requirements for first article tests of initial production for body armor? Why or why not?

Ms. UGONE. As stated in our report, Federal Acquisition Regulation Subpart 14.202–4 states that preliminary design models will be used to determine only the responsiveness of the bid and will not be used to determine a bidder's ability to produce the required item. For specific contracts that we reviewed and found deficient, evidence showed that when preliminary design models were evaluated during the solicitation and evaluation phase of the acquisition as part of the First Article Test, only ballistic requirements were tested. No evidence was presented to validate that a full First Article Test was performed on the identified contracts. Therefore, First Article Tests performed on preliminary design models were not in compliance with Federal Acquisition Regulation requirements, specifically for body armor components we reviewed and found deficient.

Mr. ABERCROMBIE. Ms. Ugone, did you examine documentation or other evidence outside of the Army contract files, or was their review limited to the information presented in the contract files?

Ms. UGONE. The congressional request was for my office to determine whether proper policies were followed with regard to the procurement history for body armor. The Federal Acquisition Regulation Subpart 4.801(b) states, "the documentation in Government Contract files shall be sufficient to constitute a complete history of the transaction for the purpose of furnishing essential facts in the event of congressional inquiries." We reviewed contract files, conducted extensive interviews with program and contracting officials, and obtained information from the Program Executive Office Soldier that was not originally in the contract files.

QUESTIONS SUBMITTED BY MR. ORTIZ

Mr. ORTIZ. Lieutenant General Thompson and Lieutenant General Speakes, the Department of the Army has approved a requirement for nine additional MEDEVAC companies in the Army. What is the procurement plan to resource the additional companies, specifically the Army Reserve and National Guard, with UH60Ms?

General SPEAKES and General THOMPSON. The Army is committed to providing the best Medical Evacuation (MEDEVAC) aircraft to evacuate our wounded Soldiers, Marines, Sailors and Airmen from the battlefields. This commitment to procure HH–60M aircraft is part of our overall plan to field and modernize the Army National Guard (ARNG) and United States Army Reserve (USAR) concurrently with the Active Army. Indeed, the first unit equipped with the new HH–60M will be an ARNG unit from Vermont and Massachusetts, C Company, 1–126th (C/1–126th), which will receive its aircraft this fall.

The next ARNG MEDEVAC companies from Arkansas, Florida, Montana and South Dakota are scheduled to receive the HH–60M MEDEVAC. C/1–111th (Florida and Arkansas ARNG) will start receiving HH–60M aircraft in late Spring 2009 and C/1–189th (South Dakota and Montana ARNG) will receive them in the Summer 2011.

The USAR has a plan to build three new MEDEVAC units and plans to field detachments at four locations including Johnstown, Pennsylvania; Fort Knox, Kentucky; Kingsville, Texas; and Fort Carson, Colorado. The third USAR MEDEVAC unit is a HH–60L unit at Clearwater, Florida, and these are the Army's most capable integrated MEDEVAC aircraft, up until HH–60Ms are fielded. The Fiscal Year 2008 (FY08) Global War on Terror request would resource 21 of the required 24 HH–60M aircraft for the USAR. The USAR units will begin receiving the HH–60M aircraft in Spring 2010 and continuing through Winter 2010.

Units beyond these fieldings receive UH–60A cascaded aircraft from the Active component. As you know, we have instituted a recapitalization initiative at Corpus Christi Army Depot to convert UH–60A aircraft to the more capable UH–60L configuration. The Army is in the final stages of validating this "A to L Recapitalization" initiative and once we confirm the process and expected long term savings, we will ensure the ARNG and USAR units receive these recapitalized aircraft.

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