

# THE CRUSADER ARTILLERY SYSTEM

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HEARING  
BEFORE THE  
COMMITTEE ON ARMED SERVICES  
UNITED STATES SENATE  
ONE HUNDRED SEVENTH CONGRESS  
SECOND SESSION

—————  
MAY 16, 2002  
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Printed for the use of the Committee on Armed Services



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## THE CRUSADER ARTILLERY SYSTEM

THURSDAY, MAY 16, 2002

U.S. SENATE,  
COMMITTEE ON ARMED SERVICES,  
*Washington, DC.*

The committee met, pursuant to notice, at 2:39 p.m. in room SD-106, Dirksen Senate Office Building, Senator Carl Levin (chairman) presiding.

Committee members present: Senators Levin, Byrd, Lieberman, Cleland, Landrieu, Reed, Akaka, E. Benjamin Nelson, Dayton, Bingaman, Warner, McCain, Smith, Inhofe, Santorum, Roberts, Hutchinson, Sessions, Collins, and Bunning.

Committee staff member present: David S. Lyles, staff director.

Majority staff members present: Daniel J. Cox, Jr., professional staff member; Kenneth M. Crosswait, professional staff member; Evelyn N. Farkas, professional staff member; Maren Leed, professional staff member; Gerald J. Leeling, counsel; Peter K. Levine, general counsel; Michael McCord, professional staff member; Arun A. Seraphin, professional staff member; and Christina D. Still, professional staff member.

Minority staff members present: Judith A. Ansley, Republican staff director; Edward H. Edens IV, professional staff member; Gary M. Hall, professional staff member; Carolyn M. Hanna, professional staff member; Ambrose R. Hock, professional staff member; George W. Lauffer, professional staff member; Patricia L. Lewis, professional staff member; Thomas L. MacKenzie, professional staff member; Ann M. Mittermeyer, minority counsel; and Scott W. Stucky, minority counsel.

Staff assistants present: Dara R. Alpert, Daniel K. Goldsmith, Andrew Kent, and Nicholas W. West.

Committee members' assistants present: Brady King and Christina L. Martin, assistants to Senator Kennedy; B.G. Wright and Erik Raven, assistants to Senator Byrd; Frederick M. Downey, assistant to Senator Lieberman; Andrew Vanlandingham, assistant to Senator Cleland; Jeffrey S. Wiener, assistant to Senator Landrieu; Elizabeth King and Neil D. Campbell, assistants to Senator Reed; Davelyn Noelani Kalipi, assistant to Senator Akaka; William K. Sutey, assistant to Senator Bill Nelson; Eric Pierce, assistant to Senator Ben Nelson; William Todd Houchins, assistant to Senator Dayton; Benjamin L. Cassidy, assistant to Senator Warner; Christopher J. Paul, assistant to Senator McCain; Margaret Hemenway and Russell J. Thomasson, assistants to Senator Smith; John A. Bonsell, assistant to Senator Inhofe; George M. Bernier III, assistant to Senator Santorum; Robert Alan McCurry, assistant to Sen-

ator Roberts; Douglas Flanders, assistant to Senator Allard; James P. Dohoney, Jr. and Michele A. Traficante, assistants to Senator Hutchinson; Arch Galloway II, assistant to Senator Sessions; Kristine Fauser, assistant to Senator Collins; David Young and Derek Maurer, assistants to Senator Bunning.

**OPENING STATEMENT OF SENATOR CARL LEVIN, CHAIRMAN**

Chairman LEVIN. The Senate Armed Services Committee meets this afternoon to receive testimony on the Army's Crusader program from the Secretary of Defense and his staff and from the Chief of Staff of the Army.

The Crusader advanced field artillery system has been under development since 1994 to be the Army's next generation self-propelled howitzer and artillery resupply vehicle. Although there has been criticism of the Crusader program by some people outside of the Department of Defense, until recently, the civilian and military leadership of the Defense Department consistently and strongly supported the Crusader program in testimony before Congress.

The fiscal year 2003 budget for the Department of Defense that President Bush submitted to Congress on February 4 of this year included \$475 million in continued research and development funding for the Crusader program. On February 28, General Shinseki testified before Congress that "Crusader's agility to keep up with our ground maneuver forces, its longer range, its high rate of fire, its precision, and the addition of Excalibur would bring the potential of a precision weapon with the platform and the munition being brought together and would be a significant increase to the potential shortage of fires that we have today."

Then he continued, "Excalibur itself will not solve the problem, and Crusader is very much a part of our requirement." The bottom line, quoting General Shinseki's testimony to this committee on March 7, "we need it," referring to the Crusader.

Deputy Secretary of Defense Wolfowitz recently testified in response to a question of whether we need Crusader, "I think we need some of it, a lot fewer than the Army had planned on. We have cut that program by almost two-thirds, and they have done a lot to cut the size and weight of the system, but I am not one of those people who think that I can bet the farm on not needing artillery 10 years from now, and I think Crusader is the best artillery system available."

Now, obviously something changed dramatically in the attitude of the senior civilian leadership of the Defense Department toward the Crusader program in the last few weeks. Change of course number one came in late April. The media reported and I was told that OSD would be reviewing the Crusader and other weapons systems during the program review process leading up to the fiscal year 2004 budget, and that a decision on the program would be made around September 1. That was documented in the recent Army IG report, which noted that prior to April 30, the defense guidance indicated the Crusader alternative study would be completed no later than September 2002.

Then came change of course number two. On May 2, Secretary Rumsfeld told the press that Deputy Secretary Wolfowitz and Under Secretary Aldridge had "advised the Secretary of the Army

that they wanted a study within 30 days that would look at a specific alternative that would assume Crusader was canceled." Secretary Rumsfeld went on to say that it was his impression that, "when the study comes back a final decision would be made."

In other words, there would be no final decision until the 30-day study announced on May 2, was completed. That same day, May 2, Under Secretary Aldridge also told the press, "We'll brief the Deputy Secretary in 30 days, and then we'll make a decision, is this the right plan, or it may not be the right plan. We're allowing," he said, "the Army to tell us if that is in fact the case, being as objective as possible, so we will have a basis for an analytical judgment based on rational and objective criteria."

Then less than a week later came change of course number three. On May 8, before the 30-day study was completed, Secretary Rumsfeld announced, "After a good deal of consideration, I have decided to cancel the Crusader program." The Department of Defense has not provided us with any study based on rational and objective criteria to support this decision as of this time.

The purpose of this afternoon's hearing is for the committee to examine the reasons behind the Secretary's decision to terminate the Crusader program, and the implications of this decision for the future modernization and combat capability of the Army. It is Congress' responsibility to determine whether we should proceed to develop, produce, and deploy Crusader. If the Crusader should not be built because the negatives outweigh the positives, then the fact that the Department of Defense followed what appears to have been a zig-zag ad hoc decision-making process should not be allowed to distract us from the merits of their decision. I, for one, have not yet made up my mind on the merits. I will weigh both sides very carefully before I do.

There seems to be no dispute that we have a requirement to address and identify a shortfall in the Army's organic indirect fire support. The Paladin cannot keep up with the Abrams tanks and the Bradley fighting vehicles, and the other combat systems the Paladin is supposed to support as part of the Army's heavy counterattack corps. There is no doubt that the Crusader's speed, accuracy, range, lethality, and embedded digital capabilities are superior to those of the Paladin it was designed to replace.

Our focus this afternoon will be on two questions. First, what changed in the Department's view of the Crusader program, particularly in the last several weeks? Second, are the advantages and capabilities of Crusader sufficient to justify the costs? Can the proposed alternatives to the Crusader meet the Army's indirect fire support requirements and do so in a reasonable amount of time at an acceptable risk and at an affordable cost?

This hearing will be unusual in that we expect the Secretary of Defense and the Chief of Staff of the Army to disagree on this important matter before us. There are several points I want to emphasize as we approach this disagreement. First, every witness this afternoon and every member of this committee has the same overall objective: ensuring that America's Armed Forces remain the best-equipped and most capable fighting force in the world. There is disagreement on the role of the Crusader artillery system in achieving that objective, but that should not obscure the fact that

we are all working toward the same goal—everybody, every witness, and every member of this committee.

Second, while Secretary Rumsfeld has the authority to change the administration's position and recommend that Congress terminate the Crusader program, Congress has an independent role under the Constitution to provide for the common defense. This committee, therefore, has a solemn responsibility to the Senate to review and analyze major defense programs and to render our best independent judgment on the importance of these programs to the capability of our Armed Forces to deter and, once engaged, to prevail in any future conflict.

To carry out this responsibility, this committee must receive the best possible professional military advice. That is why we ask senior military officers who come before this committee for confirmation if they will commit to give the committee their personal views on issues, even if those views differ from the administration in office. Every senior military officer confirmed by this committee, in my memory, has promised to give the committee his or her best professional military judgment.

In the case of the Crusader program, there appears to be an honest difference of opinion between the Secretary of Defense and the Army leadership. Where a difference of opinion exists, it is not only healthy, it is essential that it be aired. That will not undermine the civilian control of our Armed Forces that is so fundamental to our system of Government. After giving the Secretary and Congress his best professional military advice, I have no doubt that General Shinseki and his staff will carry out whatever decision is made. When military officers carry out a lawful order that they disagree with, their actions do not undermine the strength of the principles of civilian control over our Armed Forces. Those actions reinforce that principle.

Finally, we will continue to transform the military services whether Crusader proceeds or not. As Chief of Staff of the Army, General Shinseki has been one of the most forceful and effective advocates of transformation within the Defense Department. In the process, he has earned the respect and the gratitude of the soldiers he leads, as well as those outside of the Army, who support his efforts to ensure that America's Army remains the premier ground combat force in the world.

The committee will hear from two panels today. First, Secretary Rumsfeld will outline the reasons for his decision to recommend to Congress that we terminate the Crusader program. He is accompanied by Deputy Secretary of Defense Paul Wolfowitz, and Under Secretary of Defense for Acquisition, Technology, and Logistics, Pete Aldridge.

After Secretary Rumsfeld has completed his testimony and responded to questions from members of the committee, we will hear from General Shinseki.

Secretary Rumsfeld, I and the committee appreciate your being here on short notice with the kind of very crowded schedule that you have. We very much appreciate you coming, but before we call upon you, let me call upon our ranking member, Senator Warner.

**STATEMENT OF SENATOR JOHN WARNER**

Senator WARNER. Thank you, Mr. Chairman. I join you in welcoming this panel and the next panel of witnesses.

Mr. Chairman, you stated that you are of an open mind and I, too, have remained of an open mind. We have an obligation to this committee and to the Senate as a whole to compile a complete record. In our discussions, as we have done these many years that we have served together on this committee, we decided, I believe, that we would make an assessment at the end of this day with regard to the testimony to make certain that this record is complete in our judgment and the judgments of our colleagues. Although at this point in time I would not endeavor to predict, we may have to have an additional hearing. If I felt it necessary, I would so recommend to my distinguished chairman.

Mr. Chairman, I will not take the full allocation of my time. I would like to share it with our colleague from Oklahoma, who has from the earliest of times distinguished himself on this program and, indeed, other programs of the Army. I will say a few more remarks and then share my time with him, Senator Inhofe.

Mr. Secretary, how well you and I know, having worked together many years, that Congress is your partner as Secretary of Defense, your full partner, and, hopefully, your supporting partner. But those of us, who have been part of this process, the Chairman and I for almost a quarter of a century on this committee, we are concerned about the procedures followed in this instance.

As required, we take the President's budget, accept that on its face, follow it with hearings, followed by our committee markup and then the Senate floor debate. For this decision to have intervened right in the middle of that process makes it somewhat difficult for us, but we will have to handle it as best we can, because we are where we are today.

I went back and researched the attempt to cancel the V-22, the Marine tilt-rotor program, wherein my recollection is that it is the most recent example of a comparable magnitude of importance, but I point out there the President adjusted his budget to reflect the termination of that program. The testimony of the then-Secretary of Defense supported that readjustment, and, therefore, Congress had its opportunity to inject its own views, but the budget process was quite orderly.

I am going to work very diligently to resolve such problems that may continue, following these hearings. We will at some point in time have a markup for the purpose of a committee amendment, and the Senator from Oklahoma and perhaps others will have suggestions with regard to an amendment or amendments to reflect the outcome of these hearings.

Speaking for myself, I will work diligently to avoid the problems that we incurred in the tilt-rotor V-22 program, namely where Congress became embroiled with the administration under the Impoundment Act. That, I think, would be a disservice, and I will work hard and hopefully with others to avoid that.

In our markup, we put in the \$476 million for the Crusader system, which was the presidential request. I think the committee acted quite properly in doing so, because that mark and entry was consistent with the testimony which the Chairman has recited, and



the facts that were then before the Airland Subcommittee and the full committee. I think the mark stands for itself, but it should not at this point in time be construed as any final action. As I have said, this committee will have a budget amendment and then we will have floor action.

Chairman LEVIN. May have a budget amendment.

Senator WARNER. May have a budget amendment.

Mr. Chairman, I also ask unanimous consent that the articles that appeared in the *Washington Post* today by the distinguished Secretary of Defense and the former Chief of Staff be made a part of today's record following my statement.

Chairman LEVIN. They will be made a part of the record.

[The information referred to follows:]

**The Washington Post**  
washingtonpost.com

The Washington Post

May 16, 2002, Thursday, Final Edition

**SECTION:** EDITORIAL; Pg. A25

**LENGTH:** 977 words

**HEADLINE:** Why We Need Crusader

**BYLINE:** Gordon Sullivan

**BODY:**

The furor over the Army's Crusader mobile artillery system is reminiscent of an environment that existed more than 50 years ago -- a time when the Army, as today, found itself competing for limited modernization dollars. Among the seductive conclusions drawn in the aftermath of World War II was the notion that air power alone could win future wars. The administration, in the late 1940s, put its architects of national military strategy to work allocating the reduced defense budget to a "silver bullet" solution focused on strategic air and atomic weapons.

The resulting spending and planning priorities came at the expense of the Army and the surface Navy. The result was that our Army, which had won major battles in World War II, from Normandy and Bastogne to Guadalcanal and Okinawa, atrophied, and in 1950 found itself unprepared for an unexpected threat. Many articles and books have been written about the harsh lessons the Army learned about unpreparedness during those inter-war years. The inattention to modernization of the Army cost America dearly at the beginning of the Korean War. The most blatant example was the Army's reliance on World War II-era armaments against unanticipated superior Soviet tanks.

Those years before the Korean War showed how quickly our proud and much-vaunted Army could decline. Without sustained funding for training, modernization, recapitalization and development of new technologies, an Army quickly loses its edge. The price of such negligence is the blood of our sons and daughters.

Now, some 50 years later, we seem destined to write another chapter in unpreparedness. A new solution is taking form and gaining enthusiastic support. The notion is that our future wars can be won without putting our military men and women in harm's way. The ultimate "silver bullet" solution is now unmanned aerial vehicles with laser-guided missiles. The Army, meanwhile, is beginning to show the frayed edges of atrophy as critical funding for training, modernization, recapitalization and development is cut or abruptly shifted to new priorities and alluring possibilities.

The best-known current example of this trend is the move to cancel one of the Army's most promising and needed technologies, the Crusader Advanced Artillery System. The system is to be scrapped in favor of more "transformational" solutions, many of which are in fact not nearly as well developed or certain as Crusader. The Army, which has a critical need for artillery, could find itself in the next conflict without adequate ground fire support.

Far from being a Cold War system, Crusader was born in a time when we visualized a digitized Army that could respond to today's enlightened enemy, an enemy who will attempt to overwhelm U.S. capabilities by conducting rapid, multiple, nearly simultaneous operations across the battlefield.

Crusader is the most technologically advanced ground combat system ever developed. It was designed from the ground up to fight in the digital, network-centered battlefield, to exploit information dominance. Its advanced robotic operations and automated ammunition-handling systems allow the crew, enclosed in a protected cockpit, to exploit information instead of straining muscles. The advanced composite hull, liquid-cooled gun and mobility of the system elevate the effectiveness of our forces by 50 percent, with a corresponding reduction in resources. Crusader covers an area 77 percent greater than current systems and has a 3 to 1 advantage in rate of fire.

One of the most important but less widely acknowledged lessons from World War II was the value of balanced and complementary capabilities. Each of the services -- Army, Marine Corps, Navy and Air Force -- has an important role to play in achieving victory. But our victories come about only when joint commanders integrate the competencies of each service into their operational plans. Such was the case during Desert Storm. We now find ourselves, however, at the beginning of a new century facing the risk of having to relearn two painful lessons.

First, the armed forces emerged from Desert Storm victorious, having proven again that land forces were needed as part of the military team. All the services came out of that war with experimental programs to help design the weapons and organizations appropriate for the new strategic and tactical environment of the 21st century. Those experiments have validated some technologies and concepts that are now in line to go into production. Meanwhile, there are enthusiasts who believe in the promise of unproven concepts and technologies.

It would be inappropriate to abandon proven approaches that provide a bridge to the future while betting everything on ideas that may take years to transform into capabilities that can deliver victory in some of the challenging tactical environments our forces could face. That was precisely the approach our nation took in the late 1940s.

Second, unless the Army is funded adequately to recapitalize existing systems and develop new weapons systems such as Crusader, with its proven technologies, it is not certain we will be ready to win the nation's next war. If that war takes us into an environment in which we do not have air supremacy, or air support is not available because of competing priorities or weather, and no surrogate army can carry the ground war to the enemy, then we cannot, or might not, win.

The lessons of the past should not burden us in inappropriate ways, but we all must accept the truth that in war, things aren't simple. This country needs balanced and complementary capabilities to succeed.

The writer, a retired Army general, is president of the Association of the U.S. Army. United Defense Industries Inc., developer of the Crusader, is a sustaining member of the association.

**The Washington Post**  
 washingtonpost.com

The Washington Post

May 16, 2002, Thursday, Final Edition

**SECTION:** EDITORIAL; Pg. A25

**LENGTH:** 732 words

**HEADLINE:** A Choice to Transform the Military

**BYLINE:** Donald Rumsfeld

**BODY:**

The decision to recommend termination of the Army's Crusader artillery program has little to do with the weapon itself. If it could be produced and fielded as designed, it would be a fine piece of artillery -- the natural evolution from the current system, Paladin, which entered production after the Gulf War in 1992.

But we do not seek evolutionary progress in our ability to defend ourselves. So little is certain when it comes to the future of warfare, but on one point we must be clear: We risk deceiving ourselves and emboldening future adversaries by assuming it will look like the past. Sept. 11 proved one thing above all others: Our enemies are transforming. Will we?

In the context of the Crusader decision, it is worth reviewing a statement by President Bush on the need to change the way we think about the future battlefield: "I expect the military's budget priorities to match our strategic vision -- not the particular visions of the services -- but a joint vision for change. . . . I will direct the secretary of defense to allocate these funds to . . . new programs that do so. I intend to force new thinking and hard choices."

Perhaps most remarkable about that statement is that it was not made in the current Crusader context. Then-Gov. Bush said it in a speech to the cadets at the Citadel in September 1999.

"We are witnessing a revolution in the technology of war," he warned that day. "Power is increasingly defined not by size but by mobility and swiftness. Influence is measured in information; safety is gained in stealth; and forces are projected on the long arc of precision-guided weapons."

Once elected, the president charged me with the responsibility to put structure behind that vision, to identify the tough choices we faced in order to best prepare ourselves for a future about which the only thing certain was uncertainty.

The decision to recommend termination of the Crusader program was reached after many months of careful review, wide-ranging discussion and in-depth planning and analysis. This was a review not just of the Crusader program but also of future capabilities, of the strategy to guide us and of a framework for assessing and balancing risks.

The senior uniformed and civilian leaders of the Defense Department spent countless hours

discussing these matters in a process that started well before Sept. 11. Tragically, Sept. 11 confirmed many of our conclusions.

Addressing these issues forces one to scrutinize systems envisioned a decade ago or more, such as Crusader. The decision to recommend its termination is based on our assessment that we must forgo a system originally designed for a different strategic context to make room for more promising technologies that can accelerate the transformation of future warfare on terms the United States must dictate.

The world has stood by in some amazement at the effectiveness of precision munitions in Afghanistan. There is no reason we cannot apply that technology to the Army's land warfare capabilities. Resources are always finite, and we believe we must give preference to capabilities such as increased accuracy, more rapid deployability and "networked" combat. These capabilities will make the Army much more effective -- and relevant -- on the battlefields of the 21st century.

Taken together, the systems we want to accelerate in lieu of Crusader can offer greater improvements in precision, range and deployability -- central objectives to the Army's broader transformation vision. We have the opportunity to produce revolutionary capabilities faster and ensure their earlier integration into the Army.

The question we must answer is: Are the interim capabilities Crusader would provide -- and not for several years -- worth the delay in acquiring truly transformational technology that can sustain our combat advantage well into the future?

In his September 1999 remarks, President Bush told those cadets, "I will not command the new military we create. That will be left to a president who comes after me. . . . The outcome of great battles," he said, "is often determined by decisions on funding and technology made decades before, in the quiet days of peace."

The decisions about which he spoke are tough decisions. But if we do not make them now, when shall we?

The writer is the secretary of defense.

[The prepared statement of Senator Warner follows:]

PREPARED STATEMENT BY SENATOR JOHN WARNER

Thank you, Mr. Chairman. Secretary Rumsfeld, Deputy Secretary Wolfowitz, and Under Secretary Aldridge, thank you for appearing before us today.

The committee meets today under very unusual circumstances. On the February 4, the President released the details of his fiscal year 2003 Department of Defense budget proposal "to fight the war against terrorism, provide for homeland defense and accelerate changes to transform the U.S. military." Included in the President's defense budget was a \$476 million request for the Crusader—the Army's next generation field artillery system. Now, just 3 months after the Defense budget request was submitted to Congress, Secretary Rumsfeld has announced the cancellation of the Crusader program.

The most recent example we have of the Department attempting to cancel a major weapon system was in the late 1980s with the V-22. However, that decision to terminate was made prior to, and documented in, the administration's fiscal year 1990 budget request. As much as Congress disagreed with the decision to terminate the V-22, the decision was consistent with testimony provided by senior administration officials of the time. In the case of Crusader, at this point, we have simply not received sufficient information. We look to you to provide us with that information.

Secretary Rumsfeld, I have great respect for you and great confidence in your performance as Secretary of Defense. I do not question your authority to make the decision to terminate Crusader, or any other program. In fact, it is your responsibility to ensure that the Department invests wisely in programs that ensure that America's armed services remain the best equipped and most capable fighting force in the world. Congress, and especially this committee, has the same goal.

However, I have real concerns with the process that was used in reaching the decision to terminate the Crusader program. There are real concerns in Congress that the Army was not more of a partner in the process leading up to this decision and that there has not been a thorough analysis of alternatives for Crusader. We give you this opportunity today to address these concerns and set the record straight.

On May 9, the Senate Armed Services Committee completed its markup of the fiscal year 2003 defense authorization bill. Included in our markup was our recommendation to support the President's request of \$476 million for the Crusader system. This committee did not take that action lightly. We acted consistent with the information that was before Congress of the United States, testimony—supportive of Crusader—that was provided in hearings before the four defense committees, and the budget sent up by the President of the United States. It is this committee's understanding that the Crusader program is on schedule, within budget, compliant with many of the key performance parameters, and on an executable path to the next phase of development. We look to you for clarification.

We may disagree with the way we arrived at this point, but we are where we are. What we need now is to hear the facts—facts upon which to make a decision regarding the Crusader program.

Thank you.

Senator WARNER. I yield the balance of my time to my colleague from Oklahoma.

Senator INHOFE. First of all, let me thank Senator Warner for doing that. You only used 4 minutes, and that does leave me more time than I really need. The main reason for that, Mr. Chairman, is that I marked off the things that I was going to say that you said, and that dramatically shortened my presentation.

I think also, as far as the process is concerned, there will be enough Members up here who found it to be offensive, and I am sure some on the panel believe it to be offensive too, so I will not cover that.

It was just 3 short months ago that this committee began hearing testimony from Pentagon officials, both the uniformed and others, on the 2003 budget request that came from the President. At that time, the Crusader artillery system that began development in 1994 was fully funded in the President's budget, it was strongly supported by the U.S. Army, it was within cost, on schedule, and it met or exceeded the performance requirements.

Now, we all know what the AOA is, the analysis of alternatives. That is to say, we are not really analyzing the Crusader, we are analyzing what will be there if we do not have the Crusader. That was scheduled to take place in February. The results were supposed to be there, and at that time we would have information as to what we would be looking at. We know that it would be a long, involved process, and we know why it takes so long to complete. Again, we do not need the analysis to reexamine the Crusader. We need the analysis of alternatives that have been presented by DOD.

Starting in February, this committee received countless testimonies about the relevance of the Crusader system, the benefits that it would bring, and the fact that it was an integral part of the transformation. This is very important, because people talk about it being a relic of the Cold War, something out of the past. This is a part of the transformation of the Army. We have heard the testimonies from the Secretary of the Army, the Under Secretary of the Army, the Chief of Staff, the Vice Chief of Staff, the Deputy Secretary of Defense, the Secretary of Defense, several of the CINCs, and we have a lot of quotations. Some of the quotations that I was going to use were already used by the Chairman. I appreciate that very much.

But insofar as its applicability in the current war today, Secretary White said on March 6, "we had had it in Afghanistan today, we would not have to worry about the mortars that have

been causing casualties in the 101st on that battlefield; so I am foursquare behind it.”

General Shinseki, who will be on our second panel, in the same hearing, after commending the systems, the programmers after two downsizings of both the crew and the weight, said something important. He said that technology is what we need to continue to develop so that in years ahead, as we go to Objective Force capability, we can transition this into robotic systems that we are looking at. In other words, this is an integral part of the transition to the Objective Force.

Under Secretary Brownlee said he was adding this to General Keane’s statement: “I want to add one point. I think Jack has covered it very well, except one point, and that is that there were cases due to weather when the aircraft were limited in what they could do. Artillery is not limited by weather.”

Now, General Keane followed up and said it was 50 percent of the time in the last battle they had challenges in the weather so that we could not use the close air support, and again you do not have that problem when you are talking about an artillery piece.

I have taken the liberty—and maybe some of the other members have, too—but I have called some top uniformed military officers to see what part they played in this decision. I called: the Chairman of the Joint Chiefs of Staff, General Myers; the Vice Chairman of the Joint Chiefs, General Pace; Chief of Staff of the United States Army, General Shinseki; Vice Chief of Staff of the Army, General Keane; several CINCs, including the immediate past and current Commander in Chief in Korea, General Schwartz and General LaPorte.

I asked each one of them one question: were you consulted about the decision to cancel Crusader, and did you know of the decision prior to May 8? Each answered, no. Mr. Chairman, none of these men, not one, was consulted about this decision. Not one was aware of the decision before it was made. They were in the same situation as we, the Members of Congress were. Mr. Chairman, I thought the Goldwater-Nichols Act was supposed to take care of this type of thing.

The last thing that I doubt very seriously many members of this committee are familiar with, and it is perhaps the most important thing, and that is: what is the true cost that we are looking at today? We have two alternatives. Either we go to the AOA—that is going to be 10 months from now—that is when we will be in a position to take the time necessary to be deliberate and analyze the alternatives, or not to do that and to go ahead and cancel.

By not consulting and analyzing this decision thoroughly, the DOD has failed to produce the analysis needed to look at the ultimate cost of this decision. The Department has not been able to show the cost estimates to accelerate the programs that have been mentioned as alternatives. No cost estimates have been presented to terminate the existing program. No cost estimates have been presented to upgrade the Paladin. No analysis has been presented as to the cancellation of the Crusader, and what it would have on other systems. For example, they use the same engine in the Abrams. They have a common engine. Obviously, that would have to go up.

I will quote what was said on May 13 in an article in *Inside the Army*, by Assistant Secretary of the Army for Acquisition and Technology, Claude Bolton. He stated, "Most programs I have looked at over the last 25 years, big programs that have been canceled, if you are lucky, you break even."

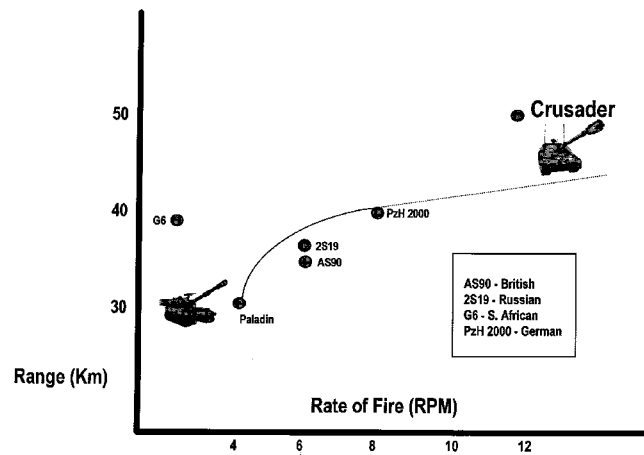
What we are saying is, we have taken the time to try to determine just the cost of termination, none of the other things. The best that we can come up with, and this is talking to the program managers, in UDLP, was the estimated cost to terminate this program would be somewhere between \$350 million and \$520 million.

Now, here is the key. I think it is very important for us to understand this. If we go to the AOA, there will be no cost. It will be zero, zero termination costs. I believe we may end up not saving a dime by canceling the Crusader before Milestone B, but I know we will be depriving the decisionmakers of the analysis they should have to make the decision. What we are saying is, we probably now have a free ride for the next 10 months. There is no \$475 million to reprogram.

Lastly please put that chart up if you would.  
[The information referred to follows:]

### **Why a New Self-Propelled Howitzer**

*The U.S. has been overmatched in artillery range and rate of fire since World War II*



### **Crusader Changes the Artillery Paradigm**

Senator INHOFE. Let us all make sure we understand what this chart is. It is very significant. If you look at the far left side, you are talking about the Paladin. That is what we have today. That is what we have had for many, many years.



If you look at the top, that is the Crusader. Then if you go on both sides you are talking about range, and you are talking about rapid fire. If you look between the Crusader and the Paladin there are four systems manufactured in four different countries. The best of those systems is one manufactured in Germany called PH 2000. I have been to Germany. I have seen it working. It cannot hold a candle to our Crusader.

Now, this is what it means. If we try to make ourselves believe that we can replace that with an Excalibur, the Excalibur has to be shot out of a gun. It is either going to be the Paladin or it is going to be the Crusader. If it is the Crusader, it will have a greater range, but, by and large, you are still going to be using artillery shells.

The cost of firing one Excalibur is estimated to be about \$200,000. The cost of one shell is going to be approximately \$200. In other words, you fire a thousand of those for every one Excalibur. The same argument can be used with the other systems, so I hope we will look at that.

What we are saying is that if we do not continue at least considering, up to the point of our analysis, the Crusader, we are saying that we are willing to send our kids, our young troops into the battlefield on the ground with inferior equipment. Mr. Chairman, I appreciate this very much, the opportunity to have these opening statements.

Let me just remind you that this is about my amendment. All my amendment does is not continue the program, but merely takes it to the analysis of alternatives, at which time we will know and it will not cost a dime to get there.

Thank you, Mr. Chairman.

Chairman LEVIN. Thank you, Senator Inhofe.

At this point, I will insert into the record the statements of Senators Landrieu, Thurmond, Santorum, and Bunning.

[The prepared statements of Senators Landrieu, Thurmond, Santorum, and Bunning follow:]

PREPARED STATEMENT BY SENATOR MARY L. LANDRIEU

I will keep my comments brief. I would like to thank the chairman and the ranking member for calling this hearing. I would also like to welcome and thank Secretary Rumsfeld and all of our witnesses for appearing before the committee.

My view of the Crusader program is consistent for most military programs and follows three basic paths. First, the program must epitomize the transformation process of the service. Asking this question has become critical to how we fight a war and how we train to fight a war—is the crusader howitzer a contributor to a lighter, leaner, more versatile Army? Secretary Rumsfeld has indicated that it does not meet his litmus test for transformation, and with \$2 billion invested and an expected \$9 billion left to spend, we would go down a very expensive road to a dead end, if we do not determine a thoughtful answer to that question.

The second path is one of grave concern for the process which leads us to this point of abruptly cutting a program in the middle of the mark up. This program is not due to reach Milestone B until April 2003. Maybe, then would be a more logical time to evaluate whether this is the right program for the Army? I have always been an avid supporter of technology from the test and evaluation phase through the implementation or deployment phase. My concern lies with whether we have the right vessel to ensure an orderly, timely, transition between the early phases of Science and Technology and Research and Development, and the later phases of prototyping, fielding, and production.

The third path that influences my every thought of military programs is whether we are determining first what matters to the war fighter. We have so much data from the war on terrorism which can now be incorporated to improve the ways we

do business in all the services. Let's make sure we're not making a decision hastily or without the important input of those in the field.

All of these cautions I address because I don't want to find us another 6 years down the road asking the same questions on a different program, or worse, the same program with little progress and a big bite of taxpayer dollars swallowed and digested.

I'd like to close my statement with a quote from General Douglas MacArthur, which I hope applies to the Department's gear shifting: "We are not retreating—we are advancing in another direction."

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PREPARED STATEMENT BY SENATOR STROM THURMOND

Mr. Chairman, I join you and Senator Warner in welcoming Secretary of Defense Rumsfeld, Deputy Secretary of Defense Wolfowitz, Secretary Aldridge, and General Shinseki. I have no doubt that this group will provide us valuable information on the Crusader artillery system, at the same time I am concerned that we do not have third party representation to discuss the merits of the Crusader. Although at this point, I intend to support the President and hope that before the committee votes on any amendment regarding this weapon system, we will have the opportunity to get additional views. Our task is to ensure we provide for National Security and, therefore, we must not make a hasty decision. We should allow the time to hear all the issues before we make the critical decision on whether or not to cancel the Crusader artillery system.

Mr. Chairman, my concern on this matter is not the merit of the Crusader, but the process used to decide to terminate the program. The President in his budget request included \$435 million for the Crusader. He included this level of funding despite earlier concerns about the system. In fact, several panels that conducted the strategic review directed by Secretary Rumsfeld recommended that the Crusader program be canceled. We must assume that the office of the Secretary of Defense considered all the pros and cons of the system before it recommended the funding level in the budget. What has changed since the budget was submitted? There certainly wasn't sufficient time to do a thorough analysis. By all accounts, Crusader is within the funding profile established for the program and the Army is working to reduce its weight to make it more deployable. Yet, with a late evening phone call the Department announces that the program will be terminated. I don't agree with such a process. The system may not be necessary, but there is a proper process to reach such a conclusion.

Thank you, Mr. Chairman.

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PREPARED STATEMENT BY SENATOR RICK SANTORUM

Chairman Levin and Senator Warner, thank you for convening this hearing and for inviting witnesses who can best address the decision to terminate the Department of the Army's next generation self-propelled howitzer, the Crusader. I look forward to hearing the testimony of Secretary Rumsfeld and General Shinseki on the process that led to the decision to terminate Crusader.

The Senate Committee on Armed Services has historically given strong support to the Army's development of the Crusader self-propelled howitzer. Let me be clear, this issue that the committee is examining is not about the inadequacies or deficiencies of the Crusader; rather it is about the lack of resources available to the Army and the hard choices that must follow.

The Crusader advanced field artillery system was conceived to be the Army's next generation self-propelled howitzer and artillery resupply vehicle. The Crusader was to offer increased capability in the areas of lethality, mobility, survivability, resupply, command and control and sustainability over the current Paladin field artillery system. However, even after an aggressive redesign and weight reduction initiative, the Crusader, now projected to weigh 40 tons, is too heavy for C-130 transport, a criterion established by the Chief for the Interim Brigade Combat Teams and the Future Combat Systems. The Army's most recent plan called for purchasing 480 Crusaders at a cost of \$11 billion.

I do want to state for the record that the decision made by the Office of the Secretary of Defense to terminate Crusader could not have come at a more difficult time for this committee. Members of the committee first learned of activity concerning the future of the Crusader just days before we began marking up the Fiscal Year 2003 National Defense Authorization Act. Then, as the members were drawing to a close their deliberations on the committee's bill, we received notification from the Office of Management and Budget that the President's fiscal year 2003 request

was being amended. We learned that the \$475 million requested for Crusader would now be applied to other “transformational” Army programs and that the committee would be notified later in May on where those monies would be applied. I would hope that the Department of Defense would take a different approach in the future and provide greater advance notice of such decisions.

With respect to the issue at hand, I have concerns with actions taken by the Office of the Secretary of Defense and the Department of the Army. Members of this committee commend General Shinseki for his efforts to transform the Army. The need to transform the Army was something that Senator Lieberman and I raised with the Chief prior to his confirmation hearing by this committee. To his credit, the Chief answered this call and unveiled an ambitious transformation strategy in October 1999. The Chief’s vision includes modernizing our Legacy Force, fielding a new Interim Force, and investing in an Objective Force. While General Shinseki noted the need to transform the service to better address 21st century threats, he did so by electing to procure costly “off-the-shelf” equipment.

Knowing the costs associated with these three goals, Senator Lieberman and I crafted bill language that would have required the Army to conduct a side-by-side test with new equipment (purchased for the Interim Force) against equipment already in the Army’s inventory. Our goal was to make sure the Army invested its resources in modernizing the Legacy Force and made critical investments in the technologies to support the Objective Force. In our view, purchasing new equipment for the Interim Force had the potential to divert critical resources away from the Legacy Force and the Objective Force.

The Army has committed to buying new equipment—at \$1.5 billion per brigade—to support six Interim Brigade Combat Teams at a total cost of \$10 billion. These are funds that could have been applied to procuring the Crusader self-propelled howitzer. Regrettably, the hard choices facing the Army don’t end here as the Future Combat Systems—the main platforms of the Objective Force—come on line in 2008, with the Comanche helicopter following closely in 2009.

Based on historical numbers, there is little reason to expect the Department of Defense will support a massive increase in the budget authority for the Army. This perception was made evident to members of the committee when General Shinseki first brought forward his desire to transform the Army into a strategically relevant fighting force. By all accounts, General Shinseki was told by then-Secretary of Defense William Cohen that he would receive no additional funds to support this initiative, but was expected to self-finance his revolutionary effort. Since there was no direct increase in the Army’s budget to support transformation, program terminations and restructurings were required.

By way of example, 2 years ago the Army was forced to cancel several programs—such as the Grizzly Engineer Vehicle, Command and Control Vehicle, Stinger Block II Missile, Army Tactical Missile System Block IIA, and Wolverine Heavy Assault Bridge—so that the Army could self-finance the Chief’s vision. For fiscal year 2003 the Army was forced to terminate another 18 programs to pay for transformation activities. Furthermore, this year, despite a nearly \$50 billion increase in Department of Defense budget authority, the Department of the Army has submitted a list of unfunded programs totaling \$9.5 billion in funding.

The Office of the Secretary of Defense and the leadership in the Army must begin to work together to address these critical funding issues and help achieve an understanding on how the service will prioritize its needs to maintain the Legacy Force and transition to the Objective Force. Unless they do so, this committee and Congress will continue to deal with funding crises such as we are experiencing with Crusader.

Again, thank you Senator Levin and Senator Warner, and I look forward to the testimony of our witnesses.

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PREPARED STATEMENT BY SENATOR JIM BUNNING

Mr Rumsfeld, I can’t tell you how proud I am of the magnificent work that our military is doing in fighting the current war on terror. The American people are also very grateful for the sacrifices made by our men and women in uniform.

I am deeply troubled with the perception that we have here in Congress in how the decision to cancel the Crusader was carried out. I support the President and the policies of his administration, but I cannot allow this administration or any other to abrogate the process set forth in our Constitution.

Mr. Secretary, many people from your department, the Army Secretary, the Army Chief of Staff, and the Combatant Commanders have personally appeared before this committee and stated that there was a significant need for the Crusader weap-

on system. The President's budget funded Crusader. With respect to Crusader, there appears to be almost no relationship between the submitted budget, testimony before this and other committees, and this decision. Now, I applaud the President for his vision to transform the military; however, this is not the way to go about it. How do you expect Congress to sponsor transformation without consulting with Congress?

If this is how the administration plans to go about transformation, then it is probably time for Congress to consider legislation that is necessary to facilitate and promote transformation. I can assure you that DOD transformation will only occur with the support of Congress. It is absolutely arrogant to think it will occur any other way.

Chairman LEVIN. Secretary Rumsfeld, please proceed.

**STATEMENT OF HON. DONALD H. RUMSFELD, SECRETARY OF DEFENSE; ACCOMPANIED BY HON. PAUL D. WOLFOWITZ, DEPUTY SECRETARY OF DEFENSE; HON. EDWARD C. ALDRIDGE, UNDER SECRETARY OF DEFENSE FOR ACQUISITION, TECHNOLOGY, AND LOGISTICS; AND HON. MICHAEL W. WYNNE, PRINCIPAL DEPUTY, THE OFFICE OF THE UNDER SECRETARY FOR ACQUISITION, TECHNOLOGY, AND LOGISTICS**

Secretary RUMSFELD. Thank you, Mr. Chairman and Senator Warner for your comments. Senator Inhofe, I certainly recognize the interest you have shown in the Army and artillery and commend you for it, and I certainly thank all of you for the opportunity to discuss the Department's recommendation to terminate the Crusader program, to continue some of the Crusader technologies, and to move funds to technologies and programs that we believe will better serve the country.

President Bush has said, "I expect the military's priorities to match our strategic vision, not the particular visions of the services, but a joint vision for change. I will direct the Secretary of Defense to allocate these funds to new programs that do so. I intend to force new thinking and hard choices."

That statement was not made in the context of the Crusader decision. It was made as Governor of Texas at the Citadel back in September of 1999, and he told the American people what he planned, and we are purposefully pursuing that goal.

On that day in 1999, the President warned, "We are witnessing a revolution in the technology of war. Power is increasingly defined not by size," he said, "but by mobility and swiftness. Influence is measured in information; safety is gained in stealth, and forces are projected on the long arc of precision-guided weapons."

What took so long to put structure behind the President's vision, a vision he laid out plainly for all to see, and a vision I discussed with this committee during my confirmation hearings in January of 2001? I remember the clamor throughout 2001 and into this year to get on with the tough decisions, as though transformation of our Armed Forces could be measured in terms of which programs were killed and how fast it was done.

In testimony before this committee, I said we would engage our brains before engaging the taxpayer's pocketbooks. We said we would be deliberate, not rushed, and that we preferred to get it right. The decision to recommend termination of the Crusader was not reached precipitously, as some recent commentary has suggested, but after months of review, wide-ranging discussion and in-

depth planning and analysis, a review not just of the Crusader program, but of future capabilities, of the strategy to guide us, and of the framework for assessing and balancing risks.

The senior leaders of this Department, military and civilian, service chiefs, service secretaries, the Chairman, the Vice Chairman, the Under Secretary, and I spent countless hours—I have not bothered to add them up, but it was day after day after day, several hours a day—discussing strategies, capabilities, threats, and risks, and that process started well before September 11. Tragically, September 11 confirmed many of our conclusions. I will recount some of that process so that the proper context for the Crusader decision can be better understood.

President Bush shaped the context, the direction of that process in those remarks at the Citadel. He talked about an era of proliferation of missile technology and weapons of mass destruction, an era of car-bombers, plutonium merchants, of cyber terrorists and dictators. He cautioned of barbarism emboldened by technology. These challenges, he said, can be overcome, but they cannot be ignored. The best way to keep the peace is to redefine war on our terms. We must shape the future with new concepts, new strategies, and new resolve.

If elected, he said, he would initiate a comprehensive review of our military, the state of its strategy, the priorities of procurement. He talked about the opportunities to skip a generation of technology. In the future, he said, we may not have months to transport massive divisions to waiting bases, or to build new infrastructure on-site.

He said, our forces in the next century must be agile, lethal, readily deployable, and require a minimum of logistical support. We must be able to project power over long distances in days or weeks, rather than months. Our military must be able to identify targets by a variety of means, from marine patrol to a satellite, and then be able to destroy those targets almost instantly with an array of weapons.

On land, our heavy forces must be lighter. Our light forces must be more lethal. All must be easier to deploy, and these forces must be organized in smaller, more agile formations.

Still later, he spoke of emerging threats, and reinforced the need to prepare for the future, keeping America safe, he said, is a challenge that is well within our reach if we will work together to shape the budgets, the programs, strategies, and force structures necessary to meet the threats we face and those that are emerging.

It was a direction and an urgency that I underscored in my testimony before this committee last June 21, warning that the new technology of war is advancing not in decades but in months and years and that we must take advantage of the time we have to prepare for the challenges we are sure to face in the years ahead.

Last year, we began to put that thinking into action. Last May, the Department's senior leadership, civilian and military, began intensive discussions about where America's military should go in the years ahead, and we agreed on the need for real changes in U.S. defense strategies. The outline of those changes is reflected in the Quadrennial Defense Review. Among the new directions set in the QDR, the following are perhaps the most important.

First, we moved away from the two-major-theater war planning construct which called for maintaining forces capable of nearly simultaneous marching on and occupying the capitals of two regional adversaries and changing regimes. Today's new approach emphasizes deterrence in four critical spheres, backed by the ability to swiftly defeat two aggressors in the same time frame while preserving the option for one major offensive to occupy an aggressor's capital and replace the regime. It calls for the ability to execute several lesser contingencies as well. By making this adjustment, we gained more flexibility in planning for a wider array of contingencies, and we gained flexibility for investing in the future.

Second, the senior civilian and military leaders agreed on the new framework for assessing risk. We agreed that we could not judge a program simply by how it addressed near-term warfighting risks. A new framework was required, one that would put other types of risks up on the table as well. We identified four such categories of risk.

First, force management risks, which concern how we sustain our people, our equipment, and our infrastructure.

Second, operational risks, which concern the ability of forces to accomplish the missions called for in the near-term military plans. Third, future challenge risks which addresses the investments and changes needed to permit us to meet military challenges in the mid- to more-distant future. Last, institutional risks, which involves inefficient processes and excessive support requirements that hinder our ability to use our resources efficiently.

The approach we adopted sought to balance those various risks in all of those categories and to avoid the extreme solutions that would lower risks in some areas while raising other risks to unacceptable levels. That is not easy to do. It is very difficult to do. It is very easy to balance the Paladin, for example, against the Crusader. It is quite a different thing to balance that question, that issue, if you will, against health care or pay to maintain the force that we need to attract and retain, against transformation, the need to invest for the future.

The Department does apples-to-apples balancing of risks rather well. Historically, the Department has not done very well in balancing the different types of risks, the four types that I have just characterized. While it is understandable and expected that reasonable people may differ on specific decisions regarding a given investment or a budgetary decision, it is critically important to understand the need to balance among those difference categories of risks that we confront today, because it bears directly on the Crusader decision.

Third, to contend with a world of surprise and uncertainty, we are shifting our planning from a threat-based model, the misguided DOD thinking in the past, to a capabilities-based model for the future. We cannot know precisely who may threaten us or when, or where, but we can know what sort of capabilities we may be threatened with, and how, and we can also determine which capabilities we are most likely to provide with the important new advantages.

Fourth, to support our capabilities-based approach to force planning, we worked to focus transformation efforts by defining goals.

Historically, successful cases of transformation have occurred in the face of compelling strategic and operational challenges.

As the President foresaw, U.S. ground forces must be lighter, more lethal, and highly mobile. They must be capable of insertion far from traditional ports and air bases. They must be networked to leverage the synergy that comes from combining ground maneuver forces with long-range precision firing. Air forces, manned and unmanned, must be able to locate and track mobile targets persistently over vast areas, and strike rapidly at long range without warning.

The point is not to substitute air power for ground power, as some critics have demanded. Instead, it is the asymmetric opportunity that comes from integrating ground, air, maritime, and space capabilities in a networked web of forces. Today, forces are operating jointly in ways that were unimaginable before the information and telecommunications revolution.

The fiscal year 2003 budget request before you now draws from many of the things we learned in developing the Quadrennial Defense Review. Developing defense systems against asymmetric threats are one area that we have provided an increase in that budget. A second is accelerating the field of unmanned aerial vehicles. A third is converting Trident submarines to conduct new missions. A fourth is developing advanced communications, including laser communications to deliver fiber optics-quality broadband to U.S. forces. Next is accelerating introduction of near real time secure and joint data links, and, last, accelerating the field of a variety of new precision munitions.

These leveraging investments in surveillance, reconnaissance, integration, networking, and precision strike are signposts of the future transformation of the force.

There are a number of new transformation starts in this budget, most of which will not reach fruition within the planning horizon of 2009. As new transformation initiatives mature, we have to be prepared to make adjustments in programs to take advantage of successes, and we have to be willing to move beyond those of less interest as time passes. In doing so, we need to balance between the need to be ready for war tomorrow, which is important, and also the need to be prepared for future wars.

As part of this transformation effort, we are taking steps to shift the balance of weapons inventory to emphasize precision weapons, weapons that are precise in time, space, and in their effects. In that regard, the Department is developing a range of new conventional precision and miniature munitions for attacking mobile targets, targets in dense urban areas, and for defeating chemical and biological weapons.

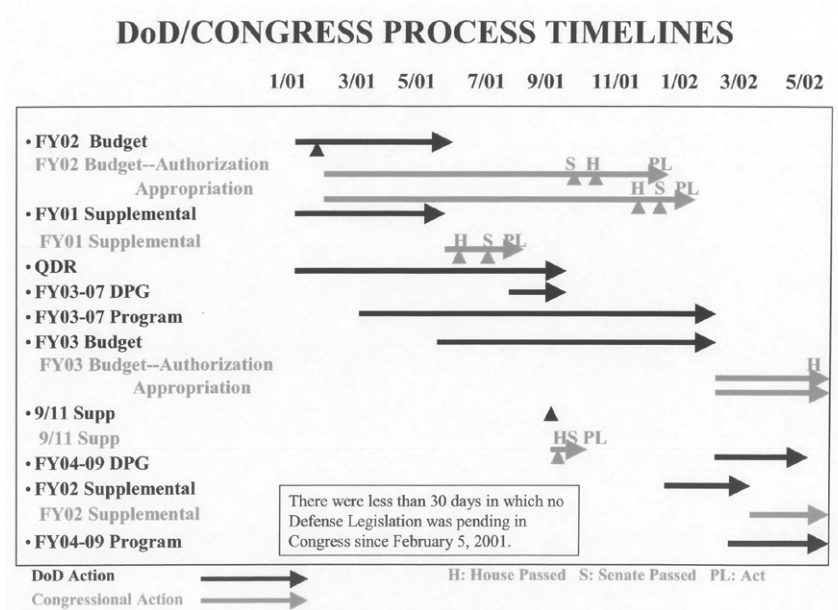
Resources are always finite. Tough choices have to be made. Such choices are generally not made between good and bad, or needed and not-needed, or even between what is wanted and not-wanted. Tough choices are made at the margin, often between programs that are both desirable, and both wanted, but nonetheless, choices have to be made, and the American people know that. They make choices every day. It is not whether some thing is good, or nice, or wanted. It is a question of what choice is best when resources are finite.

Also, this year's defense budget increase is the largest in a long time. Virtually the entire increase was spoken for, to cover inflation, must-pay bills for health care and pay raises, to correct unrealistic costing of readiness and procurement from past budgets, and funding the global war on terror. Some \$9.3 billion in resources has been shifted by terminating a number of programs. Major terminations included the DD-21 destroyer program, which has been replaced by a restructured DD(X) that will develop a new family of service combatants with revolutionary improvements in stealth propulsion and other technologies.

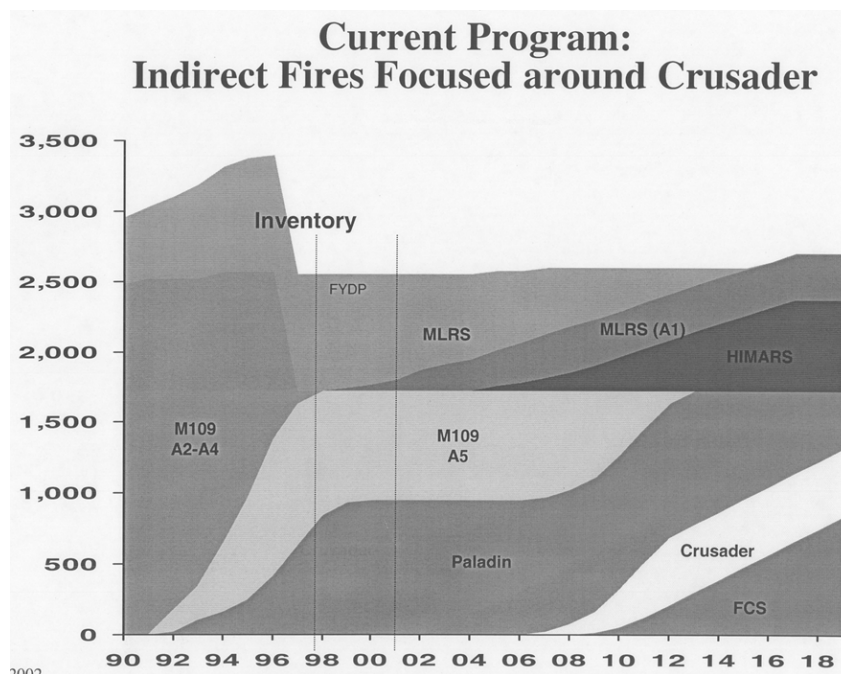
As we put together the fiscal 2003 budget that is now before you, many major programs, including Crusader, required review. As I have described, most of last year was spent developing the strategic framework within which to consider individual programs against required capabilities.

This February, we began developing the Defense Planning Guidance for fiscal year 2004 budget, and the fiscal year 2004 to 2009 programs. If you could put this board up that shows the time line, it has been suggested that this decision was made in the midst of a congressional consideration of the various pieces of our budget that is before Congress.

[The information referred to follows:]







If you look at that, the black represents what the Department of Defense is working on in our locations. The red indicates what Congress is working on at any given time, and as you can see, Congress was working on the 2002 budget authorization, then the appropriation, almost simultaneously a 2001 supplemental. The Pentagon was working on the QDR, the 2003–2007 budget, and then the 2003 budget itself. Congress was working on the 2003 budget authorization and appropriation.

The supplemental came up, then we started working on the 2004–2009 budget while Congress was still working on the 2002 supplemental, the 2003 budget authorization and the 2003 appropriation. It turns out there are about 27 days since I have been Secretary of Defense when we could make decisions that would not occur at a time when one of the branches of Congress was working on either a supplemental, or an authorization, or an appropriation.

Now, if we had 2 year budgets, that would not be the case, it would be possible, but given the situation we are in, I do not know how in the world we could make a decision down there that would not at some point conflict—well, not conflict, but occur at a time that seems awkward from the standpoint of Congress, and I recognize that. I just do not know what the answer to it is.

When we addressed the 2004 budget, the planning guidance for it, and the 2004–2009 program, as the senior civilian and military leadership met, we focused on the bow wave problem. If you look out and think of the 2003 to 2007 budget, which is up, and then add 2 years at the end, what happens is, if every program we have is continued to be funded the way it is currently programmed, in-

cluding the Crusader, the bow wave just goes up like this. The time to deal with that is not in 2 or 3 years, because then it is too late. You have all of these investments. The only way to do it is to address it now, do it, and make the tough choices which have to be made.

The issue of dealing with the bow wave that we face requires decisions that we have to make as early as possible. People have said, gee, why did you do this now, why didn't you do it later, or earlier? Well, it would have been nice if we had done it earlier. It would be nice if you could do it later, but the fact of the matter is, you do it when you can do it. You do it when you have reached the best judgment you can, and that is in the last analysis going to save the most money and have the least disruption on people involved in the activities involved with that particular program.

I would like to mention a couple of lessons from Operation Enduring Freedom that have a bearing on this issue as well, Mr. Chairman. You asked about what changed. Well, since last fall, the Department has been compiling some insights from the war in Afghanistan, and I would not want anyone to think that the war in Afghanistan had lessons that determined whether every weapons system should be handled in a certain way. It does not, and I know that, but there are some things that it seemed to me are worth looking at.

First is flexibility. The war in Afghanistan was not a war that the U.S. forces had planned to fight. There was no war plan on the shelf. There were no prepositioned stocks of equipment, or basing agreements with neighboring countries. The United States went to war on the fly, because we had to. U.S. forces will be confronted with future surprises, let there be no doubt, and that will require flexibility.

Second is speed of deployment and employment. Rapidly deployable and employable forces served as the vanguard force in Afghanistan. Air, ground, and maritime forces that could enter the theater quickly proved the most valuable in the initial phases of the war. Future wars are also likely to require a swift U.S. response to defeat aggression. As in this case, U.S. forces may not have the luxury in future contingencies of long lead times for deployment.

Restricted access. Given the limited access to basing in the region, especially adjacent and within Afghanistan, systems that could only enter the fight through large ports or airfields were of limited utility. The infrastructure in many areas of the world will not permit oversized systems to be inserted. Moreover, as more and more adversaries acquire the means to deny U.S. forces traditional access through manned-portable air defenses, ballistic missiles, mines, cruise missiles, chemical and biological weapons, U.S. forces will likely have to enter through nontraditional avenues such as over beaches, through mountains and smaller landing areas, and airfields.

Next is integration of ground and air. One of the most powerful lessons from the war has been the power that comes from the combination of forces on the ground and long-range air power. Having U.S. forces on the ground early in Afghanistan contributed directly to success. We saw soldiers armed with rifles maneuvering on

horseback using advanced communications to direct strikes by 50-year-old bombers. The integration of ground and air power can, in some circumstances, allow small teams on the ground to achieve effects far beyond their numbers.

Next, precision. A final lesson is that precision matters, and it matters a lot. In many cases, U.S. Special Forces on the ground were calling in long-range bombers to provide tactical close air support. This had never been done before. Precision allowed forces on the ground in the heat of battle to call in air strikes close to their own positions. It reduced the number of friendly fire incidents, as well as incidents of civilian collateral damage.

At the same time, precision meant that fewer weapons needed to be fired. Precision munitions accounted for roughly 65 percent of the total number of munitions used so far in the Afghanistan war, compared to 30 percent in Kosovo, and compared to 7 percent in Desert Storm. So in a decade we have gone from 7 percent to 30 percent to 65 percent, close to two-thirds. The trend is clear. Increasingly, the munitions that U.S. forces, air, sea, and ground, employ, will need to be precision-guided.

In light of these lessons, the tenets of the new defense strategy, the analysis of the future budgetary situation, the senior leadership considered the case of Crusader. It is against that backdrop, it seems to me, that it is important that we consider this decision.

The decision to recommend termination is not about killing a bad system. Crusader is potentially a good system. We know that. It is not about a system that could not be used; it could be used. It is not about a system that the Army would not like; the Army would like it. But the issue is, how do we balance the risks? In short, it is about foregoing a system that was originally designed in a different strategic context to make room for more promising technologies that can accelerate transformation.

Let there be no doubt, when fielded early in the next decade, Crusader would have represented a measurable improvement over the existing Paladin howitzer in both the rate of fire and the speed of maneuver. Now, that was what the requirement was, rate of fire and maneuver. Precision, interestingly—when Crusader was validated as a requirement, precision was not part of the picture.

Now, really, what ought to be validated as a requirement is an outcome for a combatant commander in a given theater in his area of responsibility, and clearly precision needs to be factored into it. We are convinced that it is better to invest that money where it can be used to prove the truly transformational capabilities, capabilities such as increased accuracy, more rapid deployability, and the ability to network fires that will make the Army indirect fire systems effective and relevant on the battlefields of the 21st century.

There has been a lot of talk about the weight of the Crusader, and I think it is useful to get it out. The Crusader was up in the 60-ton neighborhood the way they did it, which was about—oh, goodness, that was some period back, and that is the only one that exists today. There is not a 40-ton Crusader. There is not a prototype of that yet. It has not been sized down, although it is undoubtedly doable.

However, the problem is that when you add the armor back on and the ammunition and the fuel and the people. The ammunition you need in the vehicle that goes with it, it is not 40 tons or 60 tons, it is 97 tons. That is a lot, and it seems to me it is important to have that in mind.

I asked how many C-17s would it take to move 18 Crusader tubes into a battle, and the answer was 60 to 64 C-17s to move 18 Crusader tubes into a battle. That is a bucket. That is half of the entire C-17 fleet, plus or minus 10 percent.

The debate about the Crusader is about whether to spend roughly \$9 billion more to procure some 480 Crusader howitzers, or instead to use the funds to accelerate a variety of precision munitions, including GPS-guided rounds for all U.S. 155 millimeter canons, as well as adding GPS guidance and accuracy to upgraded multiple-launch rocket system vehicles and the more mobile wheeled version of this system, the high mobility artillery rocket system, or HIMARS.

Transforming to give our country the capabilities that revolutionary changes in technology offer, and to enable us to fight and win the Nation's wars in the 21st century as effectively as we did in the last century, I think, requires some choices and some decisions; the hardest of those is balancing risks between the challenges we face in the near-term and the mid-term to those less certain. Indeed, as Senator Inhofe pointed out, less certain and vastly more difficult to analyze, issues that we face in the longer term. That was the choice we made in recommending terminating the Crusader and shifting the funding into programs that are more appropriate, we believe, for the future.

It is not an indication that the U.S. should do without ground forces, as some have suggested. That is nonsense. To the contrary, it is a decision that reflects confidence in the U.S. Army that has set a course over the longer term that we believe is a good course and, indeed, needs to be accelerated, and probably can be accelerated to shorten the period between the current time and when the Future Combat System could come in.

Nor is it a decision that the future Army can manage without indirect fire and rely solely on air support. Rather, it is a decision that precision in artillery and rocket fires can be as revolutionary as it has already proven in air-delivered weapons, and that mobility and rapid deployability will be crucial in the future, not only in getting to the battlefield but in maneuvering over potentially vast battle areas. In short, it was a decision about balancing risks, a decision that was made after long and careful consideration.

I saw the article this morning, the one Senator Warner said he was going to have inserted in the record. By a retired General that tried to compare this period to the period after World War II. Well, I am old enough to remember most of that, and I will tell you, after World War II the Army budget was being cut by 80 percent. During this period, this administration, we have proposed increasing the Army budget by 21 percent. There is no comparison between those two periods. This is not, as was suggested in that article, a comparable basis for comparison.

The defense strategy established last year in the Quadrennial Defense Review emphasized the need for U.S. forces to dem-

onstrate authority to swiftly and surely defeat adversaries in distant theaters and by so doing, and being capable of so doing, to deter them in the first instance. In particular, the strategy confirmed the need for ground forces that are lighter, more lethal, and more readily deployable in today's force.

Throughout the conflict in Afghanistan, we have seen the remarkable synergy between ground and air forces and, if nothing else, Operation Enduring Freedom has demonstrated some of the advantages that can be achieved with joint integrated approaches to warfare. Not only is the safety and effectiveness of our troops improved, the result is the rapid and precise destruction of enemy forces. We know that ground operations will continue to be a critical dimension of warfare, and that accurate indirect fires will continue to play an important role in deterring and defeating a range of potential adversaries.

In light of the new defense strategy and the initial insights from the war, the senior leadership weighed the relative merits of Crusader against other alternatives to meet the Army's need for organic and indirect fire, both cannon and rocket. Following extensive discussion and evaluation, it became apparent that, on balance, alternatives to Crusaders would be more consistent with both the new defense strategy and with the Army's overall transformation effort. Today, revolutionary improvements in indirect fire systems appear to be within reach, and offer potentially reasonable alternatives to Crusader, an alternative that could provide greater precision, more rapid deployability, and the ability to integrate fires.

Precision means that fires are more lethal and more able to attack targets more rapidly before they can attack or move and disappear. Precision also means fewer rounds are expended to defeat a given target, and therefore, importantly, the logistical burden is reduced, and that is a critical pacing element. Logistics are vital, and this provides greater ability to deploy an effective force quickly and, of critical importance, precision can enable us to reduce collateral damage and make it considerably more difficult for enemies to hide in concentrated population centers, a problem which we faced in Afghanistan.

Accelerating the development of satellite-guided artillery shells such as Excalibur munitions and the guided multiple launch system could bring the precision revolution we have witnessed in air power to the U.S. Army, and we are also considering the possible acceleration of highly mobile and more readily deployable indirect fire systems such as the high mobility artillery rocket system (HIMARS). This system could be easily transported in the smaller C-130 aircraft, and that mobility means it could keep pace with other vehicles in the Army's planned Objective Force.

In short, the decision to recommend that we skip Crusader is one that emphasizes accelerating the shift to precision munitions of all indirect fire systems, cannon as well as rocket, Marine Corps as well as Army. Our recommendation is not to abandon the technologies already developed by the Crusader program. In fact, it would ensure that the key pieces of Crusader technology are maintained for use in both the Army's Future Combat System and possibly in the advanced gun system that the Navy is developing for its future surface combatants.

In the near- to mid-term, however, our conclusion is that accelerating precision rounds for indirect fire will increase the overall capability of our forces more than the procurement of the 480 Crusaders. Skipping Crusader to emphasize these precision munitions and rocket systems does not put U.S. forces at risk, as some have suggested. Rather, we can reduce future risk by speeding the introduction of critical new capabilities.

This decision also invests in the future Army, in integrated combined arms, in greater deployability, and lethality. The Army's Objective Force should represent not only a technological but also a conceptual and cultural change. The Crusader, by contrast, would have represented a waystation in that change process.

While a technological advancement over the Paladin howitzer, to be sure, it was conceived for a traditional mass force counterattack role. In short, we do not believe that it was critical to the Army's overall transformation effort nor to the broader defense strategy.

By implementing this recommendation, we can ensure that the Armed Forces will continue to overmatch the capabilities of any potential adversary now and in the future, not tank for tank, not aircraft for aircraft, not cannon for cannon, but asymmetrically. Rather than any single element alone, the combination of U.S. joint forces and precision can ensure that the U.S. maintains the advantage in the battlefield.

The Senator is correct in his chart that there are artillery pieces that have some ranges that exceed Paladin. However, it seems to me that we must look at all of the U.S. capabilities to bring firepower on a given target, and think of the range we have. We have the Paladin, we have the MLRS rocket, we have attack helicopters, we have cruise missiles, and we have airpower from the Army, the Navy, the Air Force.

We have a whole range of things that can be used in a joint way, and the task is not to look at a single one of them. I guess the proof of that is to ask the generals and the admirals in any one of the countries that have an artillery piece that has a slightly longer range whether they would rather trade our ability to put power on a target for theirs. The answer is, there is not anyone in the world who would want to do that.

Some have raised concerns that these technologies are not far enough along, and to be sure there is much work to be done, and I am not here to oversell any one of them. The C-130 portable rocket system, the HIMARS, for example, is further along than the Crusader. Furthermore, we have growing expertise in precision guidance systems, and we are using them to great effect.

Taken together, the systems we are examining can offer greater improvements in precision and range and deployability, and we believe that by foregoing the Crusader we have the opportunity to produce more advanced capabilities and ensure their earlier integration into the Army.

The question has to be asked, are the interim capabilities that the Crusader would have provided worth the delay in acquiring indirect fire systems that are, we believe, more transformational? There are certainly honorable Army generals who will say yes, and I respect that; but there are also honorable and knowledgeable

Army generals who would advise you that we should press ahead with the new technology.

I have been through this. Twenty-five years ago, they came into my office and said, the Army said they wanted to have another diesel tank. The M-1 tank was proposed to be a diesel, and they showed up in my office at 7:30 at night. It was unanimous. That is what they wanted, and we decided to go with a turbine tank. You ask generals today whether or not they think the turbine tank was the right decision or the wrong decision, and most of them, I think, will tell you they think it was a good decision. It was a fine tank, and it has done a good job.

So the task in the Army is to do what they do, and that is to make proposals up, as the Navy and the Air Force do. The combatant commander is not going to fight with the Army proposals, or the Navy proposals, or the Air Force proposals, or the Marine proposals. They are going to fight joint, and they want to look at the totality of all of that and ask: what can they do to prevail on the battlefield? It is the task of the entire Department, not one service but the entire Department, to address those issues in an orderly and hopefully a thoughtful way.

Mr. Chairman, for most of the last 50 years the U.S. military has faced a fairly predictable set of threats. During the Cold War, we had one primary adversary, the Soviet Union. We came to know a great deal about that adversary, its strategies, and its capabilities. We fashioned our strategies and capabilities accordingly. The resulting mix of U.S. weapons and forces allowed us to keep the peace and to defend freedom these many years.

Preparing for the future, however, requires a different strategy, different forces, different capabilities, and a different way of thinking. Rather than static adversaries and threats, we face a new security environment in which surprise and uncertainty are the defining characteristics. We have to be prepared to adapt to an ever-evolving set of challenges and circumstances. We have entered a new age, and we have to transform to meet it. To do so, we have to prepare our forces to deter and defeat threats and adversaries that may not yet even have emerged.

I recognize that the decision to recommend cancellation comes at a time when Congress is considering the fiscal year 2003 budget request. Had it been possible, it would have been preferable to make it last year, or next year. However, as I said, at that time our focus was on developing the proper framework for the important program decisions we were making. We have reached our conclusion, and it is clear that continuing to fund a program we now know will not best meet the mission would be irresponsible and a misuse of taxpayer's dollars, so we went ahead with the decision. If there is one thing that September 11 has taught us, it is that we can no longer ignore the warnings of the past or delay preparation for the future.

In his 1999 speech at the Citadel President Bush told the cadets, "I will not command the new military we create. That will be left to a President who comes after me. The outcome of great battles," he said, "is often determined by decisions on funding and technology made decades before, in periods of peace."

President Bush also said to Congress, "Join me in creating a new strategic vision for our military. Moments of national opportunity,"

he said, “are either seized or lost, and the consequences reach across the decades. Now comes the time of testing. Our measure is taken not only by what we have and use, but by what we build and leave behind, and nothing this generation could ever build will matter more than the means to defend our Nation and extend our freedom and peace.”

I agree, and I look forward to working with Congress and with this committee to ensure that the taxpayer’s funds we invest and the systems we select will give our country the joint capabilities we need. We need to work together to provide not simply what any one service may want, but rather the joint warfighting capability that will be necessary for our combatant commanders and our Armed Forces to deter and defend and contribute to the peace and stability that is so essential to our country’s security in the next decade and beyond.

Thank you, Mr. Chairman.

[The prepared statement of Secretary Rumsfeld follows:]

PREPARED STATEMENT BY HON. DONALD H. RUMSFELD

INTRODUCTION

Mr. Chairman and members of the committee:

Thank you for this opportunity to discuss the Department’s recommendation to terminate the Crusader program, continue some of the Crusader technology, and move the funds to technology and programs to better serve our country.

President Bush has said:

“I expect the military’s . . . priorities to match our strategic vision—not the particular visions of the services—but a joint vision for change . . . I will direct the Secretary of Defense to allocate these funds to . . . new programs that do so. I intend to force new thinking and hard choices.”

That statement was not made in the context of the decision on Crusader. It was made by then-Governor Bush, in remarks to cadets at the Citadel back in September 1999. He told the American people what he planned, and we are purposefully pursuing that goal.

On that day in 1999, the President warned, “We are witnessing a revolution in the technology of war. Power is increasingly defined not by size,” he said, “but by mobility and swiftness. Influence is measured in information; safety is gained in stealth; and forces are projected on the long arc of precision-guided weapons.”

So, one might ask, why now? What took so long to put structure behind the President’s vision—a vision he laid out plainly for all to see? A vision I discussed with this committee at my confirmation hearing in January 2001.

I remember, as I’m sure you do, the clamor throughout 2001, and into early this year, to get on with the tough decisions—as though the transformation of our armed forces could be measured in terms of which programs were killed, and how fast it was done.

That is not how we saw it. In testimony before this committee, I said we would engage our brains before engaging the taxpayer’s pocketbooks. We said we would be deliberate, not rushed; that we preferred to get it right.

The decision to recommend termination of the Crusader program was not reached precipitously—as some recent commentary has suggested—but after months of careful review, wide-ranging discussion, and in-depth planning and analysis—a review of not just the Crusader program, but of future capabilities, of the strategy to guide us, and of a framework for assessing and balancing risks.

The senior leaders of the Department—military and civilian—Service Chiefs, Service Secretaries, the Chairman, the Vice Chairman, the Under Secretaries, and I, spent countless hours discussing strategies, capabilities, threats and risks.

That process of review, discussion, planning and analysis started well before September 11. Tragically, September 11 confirmed many of our conclusions. I will recount that process, so that the proper context for the Crusader decision can be understood.



## PRESIDENT BUSH'S TRANSFORMATION VISION

President Bush shaped the context, the direction, of that process in his Citadel remarks.

He talked about an era of proliferation of “missile technology and weapons of mass destruction” . . . an era of car bombers and plutonium merchants . . . of cyber terrorists . . . and dictators. He cautioned of “barbarism emboldened by technology.”

“These challenges,” he said in 1999, “can be overcome, but they can’t be ignored.”

“The best way to keep the peace,” he said, “is to redefine war on our terms. We must shape the future with new concepts, new strategies, and new resolve.”

If elected, he said he would initiate a “comprehensive review of our military, the state of its strategy, the priorities of procurement.” He talked about the opportunities “to skip a generation of technology.” In the future, he said, “We may not have months to transport massive divisions to waiting bases, or to build new infrastructure on site.”

He said, “Our forces in the next century must be agile, lethal, readily deployable, and require a minimum of logistical support. We must be able to project . . . power over long distances, in days or weeks rather than months. Our military must be able to identify targets by a variety of means, from a Marine patrol to a satellite—Then be able to destroy those targets almost instantly, with an array of weapons . . .”

“On land, our heavy forces must be lighter. Our light forces must be more lethal. All must be easier to deploy. These forces must be organized in smaller, more agile formations . . .”

Still later, the President spoke of emerging threats and reinforced the need to prepare for the future. “Keeping America safe,” he said, “is a challenge that’s well within our reach—if we work together to shape the budgets, programs, strategies, and force structure necessary to meet the threats we face and those that are emerging.”

It was a direction and an urgency that I underscored in testimony before this committee on June 21 of last year, warning that the new technology of war is advancing—not in decades—but in months and years, and that we must take advantage of the time we have to prepare for the challenges we are sure to face in the years ahead.

Last year, Mr. Chairman, we began to put that thinking into action.

## TRANSFORMATION AND THE 2001 QDR

In May 2001, the Department’s senior leaders—civilian and military—began intensive discussions about where America’s military should go in the years ahead. We agreed on the need for real changes in U.S. defense strategy. The outline of those changes is reflected in the Quadrennial Defense Review (QDR).

Among the new directions set in the QDR, the following four are perhaps the most important:

- First, we decided to move away from the two Major Theater War (MTW) force planning construct, which called for maintaining forces capable of, nearly simultaneously, marching on and occupying the capitals of two regional adversaries and changing their regimes.

Today’s new approach emphasizes deterrence in four critical theaters, backed by the ability to swiftly defeat two aggressors in the same timeframe, while preserving the option for one major offensive to occupy an aggressor’s capital and replace the regime. It calls for the ability to execute several lesser contingencies as well.

By making this adjustment, we gain more flexibility in planning for a wider array of contingencies, and we gain more flexibility in investing for the future.

- Second, during the QDR, the senior civilian and military leaders agreed on a new framework for assessing risk. We agreed that we couldn’t judge a program simply on how it addressed near-term warfighting risks. A new framework was required, one that would put other types of risk up on the table as well.

We identified four specific categories of risk:

- Force management risks—which concern how we sustain our people, equipment, and infrastructure;
- Operational risks—which concern the ability of our forces to accomplish the missions called for in near-term military plans;
- Future challenges risks—which address the investments and changes needed today to permit us to meet the military challenges of the mid- to more-distant future; and last, the

- Institutional risk—which involves inefficient processes and excessive support requirements that hinder our ability to use resources efficiently.

The approach we adopted sought to balance the various risks in all of these categories, and avoid extreme solutions that would lower risks in some areas while raising other risks to unacceptable levels.

While it is understandable and expected that reasonable people may differ on specific decisions regarding a given investment or budgetary decision, it is important to understand the need to balance among the different categories of risks that we confront today on this issue of the Crusader.

- Third, to contend with a world of surprise and uncertainty, we are shifting our planning from the “threat-based” model that has guided DOD thinking in the past to a “capabilities-based” model for the future. What does this mean? In short, it means that we can’t know precisely who may threaten us or when or where. But, we can know what sort of capabilities we may be threatened with, and how. We can also determine which capabilities are most likely to provide us with important new advantages.
- Fourth, to support this capabilities-based approach to force planning, we worked to focus transformation efforts by defining goals. Historically, successful cases of transformation have occurred in the face of compelling strategic and operational challenges. What then are the challenges of the 21st century, and how can we best meet them?

#### SIX TRANSFORMATIONAL GOALS—TAKING CARE OF TODAY WHILE INVESTING IN TOMORROW

Setting specific transformation goals has helped focus transformation efforts. The six goals identified in the QDR are:

- First, to defend the U.S. homeland and other bases of operations, and deter and defeat nuclear, biological and chemical weapons and their means of delivery;
- Second, to deny enemies sanctuary
- Third, to project and sustain forces in distant theaters in the face of access denial threats;
- Fourth, to conduct effective operations in space;
- Fifth, to conduct effective information operations; and,
- Sixth, to leverage information technology to give our joint forces a common operational picture.

Taken together, these goals will guide and inform the military’s transformation efforts and improvements in U.S. joint forces.

As the President foresaw, U.S. ground forces must be lighter, more lethal, and highly mobile; they must be capable of insertion far from traditional ports and air bases. They must be networked to leverage the synergy that comes from combining ground maneuver forces with long-range precision fires.

Naval and amphibious forces must be able to assure U.S. access even in area-denial environments, operate close to enemy shores, and project power deep inland. Air forces—manned and unmanned—must be able to locate and track mobile targets persistently over vast areas and strike rapidly at long-ranges without warning.

The point is not to substitute air power for ground power—as some critics have demanded. Instead, it is the asymmetric opportunity that comes from integrating ground, air, maritime and space capabilities in a networked web of forces.

Today, forces are now operating jointly in ways that were unimaginable before the information and telecommunications revolutions.

#### PROVIDING CAPABILITIES TO MEET THE TRANSFORMATIONAL GOALS

The fiscal year 2003 budget request before you now draws from many of the things we learned in developing the QDR. The budget request set the signposts for the transformation of U.S. defense capabilities. It included important increases for:

- Developing defense systems against asymmetric threats including chemical and biological weapons, cruise and ballistic missiles, as well as for strengthening intelligence, surveillance and reconnaissance capabilities;
- Accelerating the fielding of unmanned aerial vehicles, like Predator and Global Hawk, and Unmanned Combat Aerial Vehicles;
- Converting Trident submarines to conduct new missions, including high-volume, conventional land-attack and special operations;
- Developing advanced communications, including laser communications to deliver fiber-optics quality broadband to U.S. forces anywhere in the world;

- Accelerating the introduction of near real-time, secure, and joint data links; and for
- Accelerating the fielding of a variety of new precision munitions.

These leveraging investments in intelligence, surveillance, reconnaissance, integration, networking, and precision strike are signposts of the future transformed force.

There are many new transformation starts in this budget—most of which will not reach fruition within our programming horizon. As new transformation initiatives mature, we must be prepared to make adjustments in programs to take advantage of success and move beyond those that fail. In doing so, we need to balance between the need to be ready for war tomorrow and the need to be prepared for future wars.

As part of this transformation effort, we are taking steps to shift the balance of the weapons inventory to emphasize precision weapons, weapons that are precise in time, space, and in their effects. In that regard, the Department is developing a range of new conventional precision and miniature munitions for attacking deep underground facilities, mobile targets, targets in dense urban areas, and for defeating chemical and biological weapons.

Resources are always finite. Tough choices have to be made—Such choices are generally not made between the good and bad, the needed or not needed, or between what is wanted and not wanted. Tough choices are made at the margin, most often between programs that are both desirable, both needed, and both wanted, but, nonetheless, choices have to be made.

Although this year's defense budget increase is the largest in a long time, virtually the entire increase was "spoken for:"

- to cover inflation (\$6.7 billion);
- "must-pay" bills for health care and pay raises (\$14.1 billion);
- unrealistic costing of readiness and procurement in the past (\$7.4 billion);
- and
- funding the global war on terror (\$19.4 billion).

Approximately \$9.3 billion in resources has been shifted by terminating a number of programs. Major terminations include the DD-21 Destroyer program, which has been replaced by a restructured DD(X) program that will develop a new family of surface combatants with revolutionary improvements in stealth, propulsion, and other technologies. Some 18 Army legacy systems have been terminated.

As we put together the fiscal year 2003 budget that is now before you, many major programs—including Crusader—required further review. As I've described, most of last year was spent developing the strategic framework within which to consider individual programs against required capabilities. There was a considerable amount of pressure from some quarters to get on with the tough decisions. We decided it would be best to defer them until we had completed the new defense strategy and had the time to study our future circumstance. The decisions we have made and will make are against that backdrop.

In February of this year, we began developing the Defense Planning Guidance for the fiscal year 2004 budget and the fiscal years 2004–2009 program. The senior civilian and military leadership team had to focus on the looming problem of a sizable procurement "bow wave" beyond fiscal year 2007, shorthand for describing the procurement of systems that would be ready for fielding late in this decade that, if funded, would crowd out other areas of investment and thereby cause a repetition of many of the same headaches we suffer today as a result of the procurement holiday in the 1990s. The time to address that "bow wave" is now earlier, not later.

To deal with the bow wave we face requires decisions now about major defense acquisition programs—which brings us to Crusader.

But before I get to that, Mr. Chairman, I would like to mention some of the lessons learned from Operation Enduring Freedom that I believe have a bearing on this issue as well.

#### LESSONS LEARNED FROM OPERATION ENDURING FREEDOM

Since fall of last year, the Department has been compiling insights from the war in Afghanistan. Five lessons in particular stand out, especially in the context of evaluating Crusader.

- *Flexibility.* The war in Afghanistan was not a war that U.S. forces had planned to fight. There was no war plan on the shelf. There were no pre-positioned stockpiles of equipment or basing agreements with neighboring countries. The United States went to war on the fly. It speaks to the skill of the U.S. Armed Services that in less than a month from the terrorist attacks of September 11, a plan had been developed and the war was joined.

The flexibility of the men and women of the armed forces to shift from the familiar to confront the unknown is a key advantage. U.S. forces will be confronted with future surprises, for which they will also require flexibility. U.S. forces must not only have a flexible mindset, they will also need capabilities that are more flexible and capable of adapting to a wide variety of circumstances.

- *Speed of Deployment and Employment.* Rapidly deployable and employable forces served as the vanguard force in Afghanistan. Air, ground, and maritime forces that could enter the theater quickly proved most valuable in the initial phase of the war. Future wars are also likely to require a swift U.S. response to defeat aggression. As in this case, U.S. forces may not have the luxury in future contingencies of long lead times for deployments. They may well also have less time to acclimatize and stage once they enter an overseas theater. They will have to be able to hit the ground fighting.

- *Restricted Access.* Given the limited access to basing in the region, especially adjacent to and within Afghanistan, systems that can only enter the fight through large ports and airfields were of limited utility. The infrastructure in many areas of the world will not permit oversized systems to be inserted. Moreover, as more and more adversaries acquire the means to deny U.S. forces traditional access—through man-portable air defenses, ballistic missiles, mines, and chemical and biological weapons—U.S. forces will likely have to enter theaters through non-traditional avenues, such as over beaches, through mountains, and smaller landing areas and airfields.

- *Integration of Ground and Air Power.* One of the most powerful lessons from the war has been the power that comes from the combination of forces on the ground and long-range air power. Having U.S. forces on the ground early in Afghanistan contributed directly to success. We saw soldiers armed with rifles, maneuvering on horseback, using advanced communications to direct strikes by 50-year-old bombers. The integration of ground and air power can, in some circumstances, allow small teams on the ground to achieve effects far beyond their numbers. At the same time, ground forces providing “eyes” for pilots in the air dramatically increased the effectiveness of air power.

- *Precision.* A final lesson is that precision matters. In many cases, U.S. Special Forces on the ground were calling in long-range bombers to provide tactical close air support. This had never been done before. Precision allowed forces on the ground, in the heat of battle, to call in air strikes close to their own positions. It reduced the number of friendly fire incidents, as well as incidents of civilian collateral damage. At the same time, precision meant that fewer weapons needed to be fired. Precision munitions accounted for roughly two-thirds of the total number of munitions used in the war, compared with only 30 percent in Kosovo and 7 percent in Desert Storm. The trend is clear. Increasingly, the munitions all U.S. forces—air, sea, and ground forces—employ will need to be precision-guided.

In light of these lessons learned, the tenets of the new defense strategy, and analysis of the future budgetary situation, the senior leadership considered the case of Crusader.

#### THE CRUSADER DECISION

The decision to recommend termination of the Crusader program is not about killing a bad system. It is potentially a good system. It is not about a system that could not be used. It could. It is a system that is wanted by many. But that is not the issue. The issue is how do we balance the risks. In short, it is about foregoing a system originally designed for a different strategic context, to make room for more promising technologies that can accelerate transformation.

Let there be no doubt, when fielded, early in the next decade, Crusader would have represented a measurable improvement over the existing Paladin howitzer in both rate of fire and speed of maneuver. (Both Paladin and Crusader are indirect fire systems. Indirect fire systems include howitzers as well as rocket systems.) But we are concerned that it is better to invest that money where it can be used to prove the truly transformational capabilities—capabilities such as increased accuracy, more-rapid deployability, and the ability to network fires—that will make Army indirect fire systems effective and relevant on the battlefields of the 21st century.

Fundamentally, the debate over Crusader is about whether to spend roughly \$9 billion more to procure some 480 Crusader howitzers or, instead, use funds to accelerate a variety of precision munitions, including GPS-guided rounds for all U.S. 155mm cannons, as well as adding GPS guidance and accuracy to upgraded Mul-

multiple Launch Rocket System vehicles and the more mobile, wheeled versions of this system, the High Mobility Artillery Rocket System (HIMARS).

Transforming to give our country the capabilities that revolutionary changes in technology offer and to enable us to fight and win the Nation's wars in the 21st century as effectively as we did in the last century requires hard choices and tough decisions. The hardest choices are those about balancing risks between the challenges we face in the near and mid term and those less certain, but possibly more formidable, challenges that we will face in the longer term. That was the choice we have made in recommending terminating Crusader and shifting the funding into programs that are more appropriate to the future.

It is not, of course, an indication that the U.S. can do without ground forces. That is nonsense. To the contrary, it is a decision that reflects confidence that the Army has set a course over the longer term that is a good course and, indeed, needs to be accelerated. Nor is it a decision that the future Army can manage without indirect fires and rely solely on air support. Rather, it is a decision that precision in artillery and rocket fires can be as revolutionary as it has already proven in air-delivered weapons, and that mobility and rapid deployability will be crucial in the future, not only in getting to the battlefield, but in maneuvering over potentially vast battle areas.

In short, Mr. Chairman, it was a decision about balancing risks, a decision that was made after long and careful consideration of what those risks are and what capabilities this nation will require in the coming decades.

The defense strategy established last year in the Report of the Quadrennial Defense Review emphasized the need for U.S. forces to demonstrate an ability to swiftly and surely defeat adversaries in distant theaters, and by doing so, deter them. In particular, the strategy confirmed the need for ground forces that are lighter, more lethal, and more readily deployable than today's force.

Throughout the conflict in Afghanistan, we have seen the remarkable synergy between ground, air and naval forces. If nothing else, Operation Enduring Freedom has demonstrated some of the advantages that can be achieved with joint, integrated approaches to warfare. Not only is the safety and effectiveness of our troops improved, the result is the rapid and precise destruction of enemy forces. We know that ground operations will continue to be a critical dimension of warfare and that accurate indirect fires will continue to play an important role in deterring and defeating a range of potential adversaries.

In light of the new defense strategy and initial insights from the war, DOD senior leadership weighed the relative merits of Crusader against other alternatives to meet the Army's need for organic indirect fires—both cannon and rocket. Following extensive discussion and evaluation, it became apparent that, on balance, alternatives to Crusader would be more consistent with both the new defense strategy and with the Army's overall transformation effort.

Today, revolutionary improvements in indirect fire systems appear to be within reach and offer reasonable alternatives to Crusader—alternatives that should provide greater precision, more rapid deployability, greater range, and the ability to integrate fires. We are working to determine precisely where Crusader funding should be reallocated.

Specifically, precision fire is proving to be one of the most transformational improvements in modern warfare, as we have seen already with the Tomahawk cruise missile and GPS-guided bombs.

Precision can have a transformational effect on indirect fire systems. Precision means that fires are more lethal and able to attack targets more rapidly before they can attack or disappear. Precision also means fewer rounds expended to defeat a given target, and, therefore, less logistical burden. Because logistics are vital, this provides greater ability to deploy an effective force quickly. Of critical importance, precision can enable us to reduce collateral damage and make it considerably more difficult for enemies to hide in concentrated population centers.

Accelerating the development of satellite-guided artillery shells, such as the Excalibur munition, and the Guided Multiple Launch System would bring the precision revolution we have witnessed in airpower to the Army.

We are also considering the possible acceleration of highly mobile and more readily deployable indirect fire systems, such as the High Mobility Artillery Rocket System. This system could easily be transported in smaller C-130 aircraft and that mobility means it could keep pace with other vehicles in the Army's Planned Objective Force—an important consideration.

In short, the decision to recommend that we skip Crusader is one that emphasizes accelerating the shift to precision munitions of all indirect fire systems—cannon as well as rocket, Marine Corps as well as Army. Our recommendation is not to abandon the technologies already developed by the Crusader program. In fact, it would

ensure that the key pieces of Crusader technology are maintained for use in both the Army's Future Combat System, and possibly in the advanced gun system the Navy is developing for its future surface combatants.

In the near to mid term, however, our conclusion is that accelerating precision rounds for indirect fire systems will increase the overall capability of our forces more than procuring 480 Crusader platforms.

This recommendation also reflects the contribution that rocket systems already make for indirect fires. Following the 1991 Gulf War, an Iraqi artillery battalion commander said, "after a month of bombing, I had 17 of 18 tubes left. After 1 day of ground war—with the U.S. using Multiple-Launch Rocket System (MLRS) fires—I had one tube left."

Skipping Crusader to emphasize precision munitions and rocket systems does not put U.S. forces at risk as some have suggested. Rather, it will reduce future risk and speed the introduction of critical capabilities.

This decision also invests in the future army, in integrated combined arms, greater deployability, and lethality. While technology influences transformation significantly, substantial and lasting change generally requires changes in operational concepts and military culture. The Army's Objective Force will represent not only a technological, but also a conceptual and cultural change. The Crusader, by contrast, would have represented a way station in that change process. While a technological advancement over the Paladin howitzer, it was conceived for a traditional, mass force counterattack role. In short, it was not critical to the Army's overall transformation effort or to our broader defense strategy.

By implementing this recommendation, we ensure that the U.S. Armed Forces will continue to overmatch the capabilities of any potential adversary now and in the future—not tank for tank, aircraft for aircraft, or cannon for cannon, as in the past, but asymmetrically. Rather than any single element alone, the combination of U.S. joint forces and precision can ensure that the U.S. maintains the advantage on the battlefield.

Some have raised concerns that these technologies are not far enough along. To be sure, there is much work to be done and I am not here to oversell any one of them. But the C-130 transportable rocket system—HIMARS—for example, is further along than Crusader. Furthermore, we have growing expertise in precision guidance systems—we are using them to great effect in Operation Enduring Freedom—and very little expertise in some of the more unproved aspects of the Crusader. For example, the system is designed to be heavily automated, but automated systems fail and the manual back-ups we would need pose are a challenging dimension that is relatively immature and unproven.

Taken together, the systems we are examining can offer greater improvements in precision, range, and deployability. By foregoing the Crusader, we have the opportunity to produce revolutionary capabilities and ensure their earlier integration into the Army. The question that must be asked and answered is: are the interim capabilities Crusader would have provided worth the delay in acquiring indirect fire systems that are truly transformational?

There are certainly honorable, knowledgeable Army generals who will say yes—I respect that. But there are also honorable Army Generals who will advise you that we should press ahead with new technologies. It has always been so.

#### CONCLUSION

Mr. Chairman, for most of the last 50 years, the U.S. military faced a fairly predictable set of threats. During the Cold War, we had one primary adversary, the Soviet Union. We came to know a great deal about that adversary, its strategies and its capabilities, and we fashioned our strategies and capabilities accordingly. The resulting mix of U.S. weapons and forces allowed us to keep the peace and defend freedom for these many decades.

Preparing for the future, however, requires a different strategy, different forces and capabilities, and most important, a different way of thinking. Rather than static adversaries and threats, we face a new security environment in which surprise and uncertainty are the defining characteristics. Thus, we must be prepared to adapt to an ever-evolving set of challenges and circumstances.

In short, we have entered a new age, and we must transform to meet it. To do so, we must prepare our forces to deter and defeat threats and adversaries that may have not yet even emerged.

I recognize that the decision to recommend cancellation comes at a time when Congress is considering the President's fiscal year 2003 budget request. Certainly, had it been possible, it would have been preferable to make this recommendation

last year. However, as I've described, at that time our focus was on developing the proper framework for the important program decisions.

Nevertheless, having reached the conclusions we did, it is clear that continuing to fund a program we know will not best meet the mission would be irresponsible and a misuse of taxpayers' dollars. If there is one thing that September 11 has taught us, it is that we can no longer ignore the warnings of the past or delay preparation for the future.

Mr. Chairman, in that 1999 speech to the Citadel, President Bush told new cadets, "I will not command the new military we create. That will be left to a president who comes after me . . . The outcome of great battles," he said, "is often determined by decisions on funding and technology made decades before, in the quiet days of peace.

Mr. Chairman, he also said to Congress: "Join me in creating a new strategic vision for our military."

"Moments of national opportunity," he said, "are either seized or lost, and the consequences reach across decades. . . . Now comes the time of testing. Our measure is taken, not only by what we have and use, but also by what we build and leave behind. Nothing this generation could ever build will matter more than the means to defend our Nation and extend our peace."

Mr. Chairman, like the President, I look forward to working with Congress, and with this committee, to ensure that the taxpayers' funds we invest and the systems we select will give the Nation the joint capabilities we will need—and, to be sure, that includes the Army and artillery. But, more important, we must work together to provide not simply what any one service may want, but rather the joint warfighting capability that will be necessary for our Combatant Commanders and our Armed Forces to deter and defend and contribute to the peace and stability that is so essential to our Nation's security in the next decade and beyond.

Thank you, Mr. Chairman.

Chairman LEVIN. Thank you, Mr. Secretary.

Secretary Wolfowitz and Secretary Aldridge, do you have any additional comments?

Secretary ALDRIDGE. Not at this time, Mr. Chairman.

Chairman LEVIN. Thank you.

Mr. Secretary, reference has been made to an article in this morning's *Washington Post*. Former Chief of Staff of the Army General Gordon Sullivan wrote a very strong article saying that the Crusader is the most technologically advanced ground combat system ever developed. Then he said the following, and I know you disagree with his conclusion, but I would like to see if you disagree with the statement of facts of General Sullivan.

He said the Crusader "was designed from the ground up to fight in the digital, network-centered battlefield, to exploit information dominance. Its advanced robotic operations and automated ammunition-handling systems allow the crew, enclosed in a protected cockpit, to exploit information instead of straining muscles. The advanced composite hull, liquid-cooled gun the mobility of the system elevate the effectiveness of our forces by 50 percent, with a corresponding reduction in resources. Crusader covers an area 77 percent greater than current systems, and has a three to one advantage in rate of fire."

My specific question is, do you disagree with any of those specific facts? I know you have a different conclusion, and there are other facts that cause you to reach a different conclusion, but in terms of those facts, do you differ with them?

Secretary RUMSFELD. I think that my testimony indicated that I do agree with a great deal of that. There is no question but that the cockpit, the automatic loader, the software, the gun-cooling system, all are technologies that can be in some cases be looked at

with respect to potential future upgrades for Paladin, and they can be looked at clearly and migrated to the Future Combat System.

I guess the only thing I might disagree with was that it is the only system ever developed. It has not yet been developed. There still is not a Crusader that exists that has that characteristic, although those technologies clearly are under development.

Chairman LEVIN. Thank you. I forgot to mention that we will proceed with an 8 minute round of questions, and we will follow our normal early bird order of recognition.

My next question is—and I think you acknowledge the fact that the Army does have a requirement for organic indirect fire support. There seems to be no dispute about that. I am wondering whether or not the alternatives which you believe should be supported rather than Crusader can be developed and fielded as quickly, let me put it this way, or on the same schedule as Crusader?

Secretary RUMSFELD. Could you put up this other chart?

Chairman LEVIN. If you could just kind of give us a yes or no; we only have 8 minutes. Are your alternatives planned to be developed and fielded as quickly as Crusader? That is my only question.

Secretary RUMSFELD. I cannot give you a yes or no. I can show you the chart, and the answer is nobody knows quite when these things evolve, but if you look where Paladin is, the green, and if you look where the other is, that is Crusader, the Future Combat Systems comes in somewhere between 2 and 4 or 5 years after the plan for Crusader. The technologies from Crusader could be migrated back to Paladin in some instances or forward into the Future Combat Systems, so the Future Combat Systems would come in somewhat earlier.

I think going back to General Sullivan's column, you are right about rate of fire, but he again ignores precision, and it seems to me precision is not something that one wants to leave out of the equation.

Chairman LEVIN. Let me ask you about that question. If that requirement was not included, or if that precision criteria was not included in the requirements, why wasn't the Joint Requirements Oversight Council (JROC) asked to review the requirement and to include precision? You did not go back to them. Why not?

Secretary RUMSFELD. Well, I think it might be a good question to ask General Pace, or even General Shinseki, but the short answer is that the JROC exists, and it looks basically at interoperability, and it has not gone back to validate the requirement of rate of fire and mobility that was selected and used for the 1994 requirement with respect to Crusader. General Pace is determined to get JROC to the point where it can do what you are asking, but it is not currently organized, arranged, or even chartered to do it.

Chairman LEVIN. Thank you.

Mr. Secretary, you described in your testimony a deliberative process, in particular, which led to the decision to cancel Crusader, and particularly you said the following: that in February of this year, you began developing the Defense Planning Guidance for the fiscal year 2004 budget, and for the fiscal years 2004 to 2009 program, so you made reference as part of a deliberative process to this Defense Planning Guidance.



It is my understanding that as of April 29, the Defense Planning Guidance process, which does include senior civilian and military leadership, had reached a very different conclusion from the one that you ultimately reached that, and rather than deciding to cancel the Crusader program, Defense Planning Guidance process resulted in a decision to study alternatives to the Crusader over the next several months and to reach a decision on the future of the program by September of this year.

Something changed between April 29 and May 2, and then again something changed between May 2 and May 8, that led you to go from a 5-month study to a 30 day study and then to immediate cancellation of the program. What changed? What specific things happened in those few days there which caused you to move from the Defense Planning Guidance plan to complete that study by the end of September, then to a 30-day study, and then to that announcement that canceled the program?

Secretary RUMSFELD. The senior leadership that was working on the Defense Planning Guidance and I decided that we would decide what could be decided and have a category 1 that said, "Do this," to the service, "go in this specific direction." Category 2 would be that they would go back and come back with several options of a different way to do it and include this option, and then an option was described. A third bucket, or basket, was that they could go back and come back with some options, and there was no prescribed option. The fourth was to come back with a plan to address how we might improve something that needs improving.

The decision as to which program should be put in which one of those baskets was something that was done toward the end of the Defense Planning Guidance process. I happened to be in Afghanistan and the neighboring countries during that week. Dr. Wolfowitz is here and can tell you whatever you might want to know about the way that process came to its closure.

Chairman LEVIN. Very specifically, as of April 29, the plan was, you are going to give us a plan with alternatives by the end of September, including the possibility of cancellation. Then there was an announcement made that there was going to be a 30-day study to come up with alternatives. Then that was truncated within a few days, and it was canceled. What specific things changed during those few days to change from a September conclusion for a study, to a 30-day conclusion for a study, to a cancellation?

Secretary WOLFOWITZ. Mr. Chairman, during the course of April, as we were working on the Defense Planning Guidance, it became increasingly clear that there were important alternatives to Crusader that had not been adequately surfaced during the course of preparing for the 2003 budget, specifically the alternatives that are being talked about here and we will be presenting shortly in the budget amendment.

In fact, it was in that time frame that I testified before your committee. When you asked me about Crusader, I summarized by saying that Crusader is sort of a little bit in between. It is a system that brings us some dramatic new capabilities, but if we can bring forward, some of the transformational capabilities more rapidly. We might see ways to put back Crusader technology into different systems.

In the middle of April, the Secretary went with me and the three service secretaries and outlined the categories for how to treat major programs in the Defense Planning Guidance as he just indicated to you. Crusader was clearly one of the ones that was being considered as a possible category 1, that is, specific guidance, or category 2, that is, study it but with specific alternatives in mind.

What was issued on April 19, was a draft planning guidance which suggested a possible September date. On April 29, Under Secretary Aldridge came to me with a very specific proposal, which suggested moving the Crusader money into a combination of the programs that the Secretary has mentioned in his testimony.

Against the background of several studies and analyses of this issue, it was very compelling that this was the right thing to do. We were then in the position of putting into the Defense Planning Guidance an alternative not to study it for 6 months, but to bring it to a conclusion.

Secretary Aldridge and I met with Army Secretary White on the afternoon of April 30. We told him this is what we were planning to do in the Defense Planning Guidance. He said he had serious reservations about that and wanted to think about it overnight. He came back the next morning, said he would like to have 60 days to study it. We said that we would consider that request, came back to him in the afternoon and said, at that point, 30 days. This was on the afternoon of May 1.

In real time, as they say, while we were having our first meeting with Secretary White, by a process that I do not know, somehow our proposed alternative was already being lobbied against all over Congress. Subsequently we had the episode with the Army talking points. We basically, in an attempt to try to have an orderly process that would have given a little more time for consultation and deliberation, ended up with something that was so deeply in the middle of your deliberations that we concluded we had to come to a more rapid conclusion so that you would have the information you needed.

I believe we have been able to do that, in fact, that the Under Secretary for Acquisition, sitting here to my left, and the Army have managed, working very intensively over the last 10 days, to come to agreement on what the alternative to the Crusader should be. We actually have agreement on the numbers. Some of the final details of language are being worked out with OMB, and I think we will have an amendment up here as we promised on the coming Monday.

Chairman LEVIN. I am kind of surprised by your truncated schedule there, because if sudden lobbying of us causes people just to change plans that way, to cancel a system which otherwise was being considered as one possibility, it seems to me that anything goes around here, because we are being lobbied all the time with everything.

Secretary WOLFOWITZ. It was not being considered as one possibility. It was being recommended strongly as the right way to go.

Chairman LEVIN. But the decision had not been made, is that correct?

Secretary RUMSFELD. Well, I can tell you that I was advised of his recommendation after it was already in the Senate and the press and the contractors—

Chairman LEVIN. The decision was not made, is that correct?

Secretary WOLFOWITZ. The decision was not made until the Secretary talked to the President about it.

Chairman LEVIN. Thank you. Would you give us the Aldridge recommendation of April 29 for the record?

Secretary ALDRIDGE. Yes, we will.

[The information referred to follows:]

#### SECRETARY ALDRIDGE'S RECOMMENDATION

On April 29, 2002, Secretary Aldridge recommended that the \$475.6 million of fiscal year 2003 funds be redirected into five programs. These were: Excalibur, Guided Multiple Launch Rocket System, NetFires, High Mobility Artillery Rocket System, and Crusader Technology.

Chairman LEVIN. Senator Warner.

Senator WARNER. Thank you, Mr. Chairman.

Mr. Secretary, your testimony today is very thorough and provides a great deal of information to this committee. You covered everything, but your decision to make this cancellation is really a decision that you make pursuant to the powers under the Constitution of the United States by the Commander in Chief, the President, because you are bound in duty to carry out his instructions.

Now, the President came up to Capitol Hill today, and this program was the subject of a discussion. We have a very firm rule not to publicly discuss meetings of this sort, so I will refrain, but can you tell us, to the extent you consulted with the Commander in Chief, the views expressed, within the propriety of your ability to share them with us as to this cancellation?

Secretary RUMSFELD. Well, I can say this, that the Crusader is a subject that has been widely discussed in the press, it has been widely discussed in Congress, it has been widely discussed inside the Department, and I have been asked about it. I said to the Deputy that I would like to have a briefing prepared that I could present where I could persuade myself and others that this weapons system was something that we ought to go forward with, that it was a good investment of \$9 million, not that it was better than the Paladin—we know it is better than the Paladin and it is a good piece of equipment—but whether it made sense in the context of our joint warfighting capability.

The more the Deputy worked, and the more that he worked with the folks in the Department, it became clearer and clearer to them and to me that it was not possible to prepare a briefing that was persuasive. It was a very close call.

The President, when I went to see him and discussed this with him, and I can say that he is solidly behind this decision. There is no ambiguity, that he is—his comments that I used here today from his various presentations on the subject of military reform are important to him, and he cares to see about this.

We know it is no fun for him to cancel a program people want. It is no fun for me. The last thing in the world I want to do is come up here and sit here and have to defend something when I know people are not going to like it. If we had gone ahead with it, likely

everyone would have been happy, and he feels the same way, but by golly, he is right. The people from 5, 10, and 15 years from now who are in the White House and in Congress and in the Department of Defense are going to be using the capabilities that we produce today, the decisions that are made today. They are not going to affect our capabilities in the next 2, 3, 4 years at all, and so it is terribly important. It is an obligation we have, and he feels that way, and he is determined to see that this is effectuated.

Senator WARNER. That is a clear response to the question.

I will follow it up then. For purposes of the next question, let us assume that action directed by the Commander in Chief is done. Can you guarantee this committee and Congress that such funds as were programmed for Crusader will remain within the Department of the Army and remain within the Department for purposes directly related to those goals for which Crusader was designed and given to be tested?

Secretary RUMSFELD. What I can do is the proposal that Under Secretary Aldridge is prepared to discuss and which we have sent up in writing, the funds would stay in the Army. They would involve things that would advance the Army's capabilities by improving Paladin by, we hope, moving forward the Future Combat System.

It also would have a benefit by accelerating precision munitions that any service that happened to use that particular munition would benefit from that acceleration. I think that is the correct answer.

Secretary ALDRIDGE. Yes. Senator Warner, a good example of the alternative can be very simply summarized in that chart. That yellow portion of the chart is \$9 billion. The idea is to take that \$9 billion and to take the rest of the chart starting in the 2008 period, the MLRS and guided MLRS that will make that an accurate system with HIMARS and all the Paladins and 109s that are left will be accurate weapon systems. So that whole chart becomes accuracy and we will take that whole area that is in that yellow area, \$9 billion, and take the blue and move it forward.

Senator WARNER. This morning, Mr. Secretary, you and I met. Could you ask Mike Wynne to step up there and point out to the Senators exactly how those funds are projected to move forward and remain within, say, the context of artillery purposes of the Army?

Secretary RUMSFELD. Just to correct the record, I think that technically the yellow is not \$11 billion. It is \$11 billion from where it starts to 2009.

Senator WARNER. But you pointed out this morning that that money for the Crusader program can, in all probability, be shifted to the Future Combat System and other programs and the whole program forward.

Secretary RUMSFELD. That is correct.

Senator WARNER. Could you point to that, please?

Mr. WYNNE. Senator Warner, my name is Mike Wynne. I am Under Secretary Aldridge's principal deputy. The way I would describe it is we are trying to introduce precision munitions across the artillery and what is not listed here, by the way, is the light-weight 155mm artillery which is now carried by the Marines and

the light forces and is scheduled to be fielded between now and 2005. This will all come in between 2006 and 2008. So this entire chart will be dedicated to precision that quickly.

Right now under the current budget, those precision weapons will come in sometime between 2012 and 2014, which would impact mostly Crusader and then, later, Paladin. There is right now work on the guided MLRS going—

Senator WARNER. My time is running along. Let me just follow up. I think you have made the point. Can you then, Mr. Secretary or either of your colleagues, assess the risk to a military operation, given that it appears that the gaps can be filled fairly quickly? Is there an added risk to our fighting forces as a consequence of this decision, or is that gap filled in a timely manner?

Secretary RUMSFELD. Well, I think that is a question that is important. It goes back to my comments where I talk about how we have to balance risks about the immediate future against transformation down the road. There is no warfighting capability that comes from an investment in something that will not be around for 3, 4, or 5 years. We know that.

There is a warfighting capability for it that comes around after 3, 4, and 5 years, and if we do not sow the ground, there will not be any flowers growing. But the answer is it seems to me that the Crusader, if it came in when it is shown there in 2007, started in, would be, without question, a better piece of artillery than the Paladin, even upgraded Paladin.

I do not think that is the right question in this sense. It seems to me the question is, is the United States during that period going to be able, by the combination of upgrading Paladin, moving Future Combat System forward, improving your rocket systems and bringing the combined power of the United States with air, cruise missiles, all of those things to attack a target, are we going to be able to deal with those problems in the future? My answer is yes.

Senator WARNER. Can you give us a termination cost as a consequence of the schedule that the Secretary has now announced?

Secretary ALDRIDGE. Yes, sir, Senator Warner. The Army has asked the contractor for a proposal on termination cost. That is a negotiable activity. We are working the details of those numbers right now, and until the negotiation is completed, we will not have the specifics of those numbers. We have not stopped work, we are still working with the contractor—

Senator WARNER. If you do not have the specifics, can you give us the parameters?

Secretary ALDRIDGE. The parameters are roughly that we will use what is remaining of the fiscal year 2002 money for termination and there may be some required in fiscal year 2003 as part of the negotiation, and it will also depend upon what degree of R&D we will retain from the Crusader that will go into the Future Combat System that the contract will continue to pursue. When all those details work out, we will have the specifics. But the parameters are roughly that. 2002 will be used for termination with some amount. What is left in 2002 that has not been obligated, I believe, is in the \$100 million range.

Secretary WOLFOWITZ. Senator Warner, I might just say too that a risk if this recommendation is not accepted is that our people will

take longer before they have accurate Excalibur rounds and accurate Guided Multiple Launch Rocket System (GMLRS). I think my own judgment is that that is a much greater risk than the risk of not having Crusaders.

Chairman LEVIN. Okay. We will move on to Senator Lieberman. We are now in a vote. Is there one vote or two, do we know?

Senator BUNNING. Just one.

Chairman LEVIN. Okay.

Senator Lieberman.

Senator LIEBERMAN. Thank you, Mr. Chairman. Thanks, Mr. Secretary. I think I am going to use my time mostly to make a statement if you will allow me to do so. Members of both parties on this Armed Services Committee have for years been talking about the critical importance of military transformation to take advantage of new technologies and to be better prepared to respond to the unconventional asymmetric threats that the United States will face to its security in the future.

Transformation is, in fact, occurring within the military now, and particularly within the Army. But the question is, is it occurring fast enough? Are we devoting sufficient resources to it and are the resources being spent in a cost effective way? There was reference made earlier to the post-Second World War period. Remember, a book was written about the pre-Second World War period called "Why England Slept." I think many of us lived in worry, with a worry that one day someone not be able to look back at this period of time and write a book called "Why America Slept."

The book will not be about why we did not spend enough on our defense, because we are spending a lot; it will be why we did not spend it wisely enough, why we did not make the tough decisions we had to make to transform. In that sense, I give you, Mr. Secretary, a lot of credit for making a tough decision here. Obviously everyone has to judge it on merits as he or she sees appropriate.

But our willingness to make hard decisions, to transform rapidly and cost-effectively so that America will be able to best meet our future threats to our security is on the line in this decision that you put before us. I know that some are concerned that this decision was somehow made in haste and without sufficient analysis. As far as I am concerned based on my experience on this committee, the analysis of the Crusader goes back at least 5 years and includes insights gained from actual combat operations over that period of time and before in Bosnia, Kosovo, and now Afghanistan.

But when I say 5 years, I speak particularly of the National Defense Panel, which in 1997 presented us with the first major study to conclude that transformation should be the highest priority for the Department of Defense. Panelists pointed out that the heart of America's continued military dominance and national security would be our ability to rapidly project and sustain combat power around the globe in the face of rapidly growing capability to deny us this vital access.

I have specific recollection of a particular day before this committee—I hope you will not resent that I bring this up—where the current Deputy Secretary of State, Richard Armitage, specifically said to us that the National Defense Panel, or he personally in his con-

sideration, reached a tough conclusion that the Crusader program should be terminated. That was 1997.

Those panelists and other analysts since then have concluded that conventional forces must be increasingly based on information, technologies, and precision strike as you have described, specifically that the NDP recommended our land forces become more expeditionary, that they evolve to lighter, greater range and more lethal fire support systems.

Those conclusions have been supported to the best of my knowledge by most all of the subsequent studies that have been made—the Hart-Rudman Commission, the Project for a New American Century, as well as both QDRs and, in fact, many of the services own war games.

Now, I understand that Crusader is a significant technical improvement over the current Paladin artillery system and that the Army considers it a critical component of the modernization of the current force. But our deliberations are and must be about the future, longer term as well as the present and near-term. Of course, I agree with General Shinseki that transforming the Army is the goal and that the Army's Objective Force, the future force, must be the highest priority.

Today the Army is being squeezed no matter how much money we give it. It is attempting to modernize its current Legacy Force to field an Interim Force, and to develop and field the Objective Force beginning in 2008. But we simply have not given the Army sufficient funds to do all three well, and we will not give the Army sufficient funds to do all three well.

I speak here as previously ranking Democratic member on the Airland Subcommittee of this committee serving under the chairmanship of Senator Santorum. Now we have switched roles. I am chairman; he is ranking. But we have seen over this period of time even as in this year the Army's overall budget has increased significantly by \$9.9 billion and procurement funds increased by 13 percent, that even with that increase the Army has found it necessary to cancel another 18 programs, cancellation which has been sustained incidentally by our subcommittee and now the full committee, including termination of certain programs that the committee restored last year at the Army's urging.

General Shinseki, notwithstanding the additional \$9.9 billion that you have requested and we have given him over last year's level, has nonetheless submitted a list of unfunded requirements totaling an additional \$9.5 billion. That cannot go on. We are not going to find the resources in that circumstance to fully fund what we are all targeting toward, and that is the Army's Objective Force.

We have to find some resources to fund that transformation. That is our urgent priority. We are not going to answer that challenge with business as usual or somehow assuming that we are somehow going to find the money later on. That is why among other reasons I have reluctantly reached the conclusion that your decision to terminate the Crusader program is the best one for our national security.

In doing so, I must say I am convinced that the American military today has an order of magnitude advantage, including the ability to employ massive fires over any adversary or combination

of adversaries that we can imagine now or into the near future. The U.S. Army particularly has a huge advantage in its ability to deliver fires on the battlefield now with the systems it has now. This despite the fact that there are other artillery systems in the world that have either a greater range than the Paladin or a higher rate of fire.

Now, why do I still say we have an advantage? Because we have an unmatched, and I am confident unmatchable, integrated, automated joint system to acquire target and attack targets with resources from the air, the land, and of course the sea. I think the argument is compelling that shifting to precision munitions will bring the same dramatic improvement in the Army in direct fire capability that such a shift has brought to our air forces. If we needed improvement to today's howitzer, we should take the less costly option of improving the Paladin and investing in accelerating precision munitions and the Future Combat System and direct fire system.

So in summary, committing the \$9 billion to Crusader, especially in light of the Army's resource shortfall which I have described, will guarantee that the Future Combat System Indirect Fire System that is critical to the Objective Force, the future force the Army says it needs, will recede further and further away into the future and the development of precision munitions and their acquisition in needed numbers by the Army will be similarly delayed to the detriment of the Army's effectiveness in our national security.

The Army will be less prepared to deploy and employ land power in the increasingly joint precision regime, and its ability to meet and defeat the increasingly unconventional threats to our security will be diminished. That is why, difficult as the decision is for you and us, I intend to support your recommendation to terminate the Crusader system. I thank the chair.

Chairman LEVIN. Thank you, Senator Lieberman.

Senator Smith.

Senator SMITH. Thank you very much, Mr. Chairman. Mr. Secretary, there is a vote on. I just wanted to get a couple of quick questions to you and hopefully you can respond to them quickly so I can run and vote, but if I need further detail I may ask for it.

First of all, you made a very effective and thoughtful presentation. My concern is the 24-7 capability of the Crusader on the battlefield versus the other precision weapons, the PGMs for the most part require aircraft—as the launch platform where weather may have an impact. Specifically, the joint direct attack munitions, the GPS systems, systems optically guided, all need an aircraft launch. Can you assure us that we have 24-7 coverage with all of those precision munitions in the short-term? By short-term, I mean the time that this system would be in place, the Crusader would be in place.

Secretary RUMSFELD. You cannot guarantee 24-7, I do not think, ever. There are circumstances when there may be gaps, and I think there always will be some. It requires, for example, that GPS works and the weather does not bother it.

Senator SMITH. Well, if you have your forces under attack somewhere on the ground and the weather is bad and the cloud cover is bad, and you cannot get your platforms up there, then you are



in a situation that may be beyond your control; something has to happen.

Secretary RUMSFELD. If one thinks of all the capability that exists, there is the artillery, there are mortars, there are rockets, there are cruise missiles, there are attack helicopters, there are bombers, there are AC-130, there is Army/Navy/Air Force fighter support. There are a variety of things that can be brought to bear, and we have found that almost always you can get one or more of them functioning effectively apart from weather and apart from circumstance.

Senator SMITH. I would agree with you perhaps on the bombers, the high-altitude bombers. I am not sure I agree with you on the attack helicopters.

Secretary RUMSFELD. Not all of them, but some of them are able to function in almost any circumstance.

Secretary WOLFOWITZ. Senator Smith, one reason in this request that we are so committed to modernizing Army indirect fires is the issue that you raised about 24-7. But I think having precision 24-7 is the most important thing and that is what we will get with this program by accelerating the Excalibur and accelerating the guided rocket system.

Senator SMITH. A 10 second answer and I will yield the balance of my time. Senator Inhofe has already voted. Is there any reason why the AOA scheduled for February cannot occur before this final decision is made?

Secretary ALDRIDGE. We are spending money obviously on the program as we proceed. The analysis that we have today says this is a better alternative, so the decision that the Secretary has made is a direction for us to go use the funding, that we can use the funding earlier to start these new things rather than continuing to spend on something we think is dead-ended.

Senator SMITH. Thank you. I yield the balance of my time to Senator Inhofe when it is his turn.

Chairman LEVIN. Senator Dayton.

Senator DAYTON. Thank you very much, Mr. Chairman. First I want to say, Mr. Secretary, I recognize that you have had plenty to do since September 11 and, therefore, to conduct this review in the midst of all your other responsibilities, I certainly want to acknowledge the enormous burden that you and your colleagues have borne on behalf of our country and I pay tribute to you for doing so and then for your success in doing so.

Secretary RUMSFELD. Thank you, Senator.

Senator DAYTON. Like others here, I am trying to reconcile the change in the decision made and I have taken your point, sir, about the change in strategy, the evolution of strategy given the uncertainty of the kind of enemy we will face and the future warfare that that enemy will be conducting. I am wondering if the lessons that are being drawn from the successes in Afghanistan against the Taliban are ones that we would want to apply uniformly to, as you said, the uncertainty of who our future enemies might be and, taking the President's observations in the State of the Union Address, the possibilities of countries that seem to have much more sizable capabilities. Do you see that in this strategy that you are developing as one that is going to have that same applicability, and con-

verse of that, would the Crusader have its role to play more importantly in other settings.

Secretary RUMSFELD. Well, there is no question that lessons in Afghanistan ought not to be applied across the globe. You are exactly right. They cannot be. There are some lessons, however, that can be useful in a number of other instances. When the question is asked what has changed, it seems to me it is useful to think about it. We had the Quadrennial Defense Review with a new strategy and the new forcesizing construct.

We have had the experience in Afghanistan, we have seen how a much higher percentage from 7 percent in 10 years up to 66 percent of our munitions used were precision. Those are choices being made by people because they understand the importance of killing a target and the precision munitions do it so much better.

The advantage some smaller logistic chains, the collateral damage problem it seems to me is an important one to keep in mind. I think we are going to find that we are going to be forced to fight in places where asymmetrical efforts will be made by enemies to put themselves in close proximity. We look for example today at terrorist states, and they are literally putting more weapons of mass destruction capability right next to schools and hospitals and mosques. Purposely. They even have some buildings that are erected for that purpose in high-collateral areas.

The other thing is the bow wave has changed. As you go out 2 more years and get the 2004 to 2009 and look what is ahead of us, there is no question that we have no choice but to make decisions now and it seems to me it is that range of things, part of which is the lessons from Afghanistan that are what has changed.

Senator DAYTON. Regarding the issue of the precision, and I certainly would concur with your giving that a high priority, I refer you to the testimony from General Keane before our Airland Subcommittee on March 14 of this year. He was, of course, in a different context, very supportive of the Crusader and said that it had the advantage and could have been used in Afghanistan, as he said, to pound al Qaeda in the mountain areas. Unlike some air-delivered munitions, poor weather would not have stopped Crusader's precision fire.

Then to give Senator Inhofe, who was doing the inquiry a sense of the Crusader's range and precision, General Keane said we could put it on the Beltway out there and hit home plate at Camden Yards. That sounds pretty precise to me. The other corollary to that would be if the intent is to equip other shells from other Paladin or other such artillery vehicles from some advanced guidance system, would that not equally apply to the munitions for the—

Secretary RUMSFELD. Absolutely. There is no question. You can put precision munitions in the Crusader, and if it existed you would certainly want to do it. You can put it in the Paladin, and you can put it in any number of tubes that fit. General Keane, as is General Shinseki, they are outstanding Army officers, there is just no question about it. They say what they believe and they tell the truth, and they are honorable people and talented people.

The issue is not in my view whether Crusader is a fine artillery piece. The issue is whether the United States during the period we see up on that chart is better off upgrading the Paladin, eliminat-

ing Crusader, bringing forward the Future Combat Systems, and improving the munitions of all of those capabilities including the rocket systems; and the answer is I think we are better off.

I think Senator Inhofe had an important point. I think it was you, Senator, about the cost. There is no question but that the cost of the precision munition is higher. But you may want to comment on a solution we think we have there.

Secretary ALDRIDGE. We have an idea of taking all of the artillery pieces and using an upgraded NATO fuse and putting a slightly improved guidance system on the NATO fuse that we can bring all artillery pieces, even the ones that are so-called dumb, into the 10 to 20 meter range accuracy. That is going to be extremely effective and not anywhere close to the expense that we were going to get on the Excalibur.

We think we can get Excalibur in mass production into the range of \$30,000 a round. But it tells you, Senator Dayton, that when we get up into the DARPA net fires area, we will be able to put the weapon on the pitcher's mound in Camden Yards.

Senator DAYTON. When Secretary of the Army White testified before the house committee on March of this year, he referenced specifically this issue of the capability of the Paladin. He said if there was a serious match-up problem with the Soviets in terms of artillery, there would also be a challenge with any of the three countries that the President talked about recently: Iran, Iraq, and North Korea. The Secretary said we have band-aided the existing system, the last of which is called Paladin, about as far as we can stretch that rubber band.

He had 2 weeks previously been to the National Training Center and watched a Paladin battery unable to keep up the M-1 tanks and Bradleys that were in the attack. He said this will only get worse as we field more highly mobile systems both in our interim brigades and our Future Combat Systems. Again, I guess I would ask, are you confident that the Paladin is going to be able to bridge this gap until these other new systems come on line?

Secretary ALDRIDGE. The plan for Paladin is to have it in the inventory up until the year 2028. So we are going to have to keep the Paladin around and make it effective for a long period of time. The current Paladin average age is about 6½ years old. It is been in production since after—

Senator DAYTON. Can you address the specific operational shortcomings that the Secretary of the Army referenced?

Secretary ALDRIDGE. Yes. The Paladin is, in fact, slower than the Crusader, and we have admitted that Crusader would be a better artillery piece than the Paladin program, but we want to make the Paladin have the accuracy and when we put the Excalibur round on the Paladin, it gets out to 40 kilometers and it makes up quite a bit of the range difference that we have seen.

If you talk about the actual operations of the Army, what is the actual speed in which artillery and tanks fight in the battlefield, I think the speed factor is significantly lower than running at max speed all the time.

Senator DAYTON. Thank you, Mr. Secretary. My time has expired. I just want to say if we are going to carry the Paladin to the

year 2028, then having stretched the rubber band as far as it will go should give us pause.

Secretary RUMSFELD. Well, if I might say, the Paladin is scheduled to go out each with the Crusader coming in. I think it is not correct to say it is stretching the rubber band. I think the fact of the matter is the Paladin is a weapons system that was entered after the Gulf War. It is not something that like the B-52s that dates back 40 or 50 years. Portions of it preceded it and as most things, they evolve over time. But it is a weapons system that the current Paladins are 5.6 years old.

Senator DAYTON. I did not make the analogy to stretching the rubber band. The Secretary of the Army did.

Secretary RUMSFELD. Right. I understand.

Senator DAYTON. My time has expired.

Chairman LEVIN. Thank you very much.

Senator Inhofe.

Senator INHOFE. Thank you, Mr. Chairman. While we are on that subject, let us pursue that a little bit. First of all, I do not know who all understands this chart up here. I got the presentation in my office, and I do appreciate it. I have said many times that I think we have the best national security team in the history of this country. I hold you guys in very high regard.

What I think the problem here is, you are busy prosecuting a war, you are busy looking at a national missile defense, things that we are going to have to have, and I think this just slipped by and did not get the proper attention. This is my concern that we have, and I do not want anything that I say to reflect in any way in a negative way, because you know what I have said in the past about you.

But when we are talking about this Paladin, that is essentially the howitzer M-109. That was 1963. Now, there have been some upgrades. There are upgrades every year. There have been upgrades to the B-2. There have been upgrades to the C-17. We constantly upgrade. But this is a basic system that did start in 1963. The basic changes between that and when we started calling that system a Paladin in 1993 were the GPS and the new fire control system allowing the guns to spread out and compute their own fire area.

Still, it is manual. It is kind of like looking at the Civil War movies. They put the shell in and they fire it by hand and they pull it out and they clean out the bore. This is not a modern system, and it is a system that is, I contend, 40 years old. It is the same as it was in 1963 in terms of the maximum range, the maximum rate of fire, just the same rate of fire, cross country speed, crew size—all of that is the same as it was back in 1963.

I wish we had more members here to listen to this, because I think we have gotten some information that is inadvertently wrong. One was when you talked about how it takes 60 to 64 C-17s to move 18 Crusaders. Mr. Secretary, I do not believe that. I know that you do. I think that maybe there is a miscommunication here because in the Department of Defense Weapons Systems 2002 Book, it specifically says “in addition to strategic deployability” two howitzers are transportable in the C-17.

Now, they are talking about two howitzers that are transportable in the C-17, and I think if you have to have the resupply vehicle in them, it would only be one. I have heard this over and over and over again. That is a different thing. You always have to worry about getting ammunition to the area where it has to be used. But essentially, we are talking about one with the resupply vehicle being able to be transferred in the C-17, and two, if you do not use the resupply vehicle.

Essentially then, if you had 18, it would take 18 of our C-17s. Our C-17s have proven to be the greatest lift vehicle we have ever had. Now, you can certainly respond to that if you want to, not taking too much time because we are limited on our time.

Secretary RUMSFELD. I will just make a brief comment. It is true that what you said is technically possible. That does not include the armor. The armor has to be taken off of the Crusader, carried on a separate aircraft. It does not include the fuel, it does not include the ammunition, it does not include the vehicle that is needed to be in close proximity to the weapon.

We asked the Army and the Army came back with that answer. The answer is 60 to 64—

Senator INHOFE. I will just say, Mr. Secretary, that the Army did not read their own manual if that is what they came back saying. Now, I want to get back to something else that is very significant, Secretary Aldridge. Did you hear my opening statement?

Secretary ALDRIDGE. Yes, I did.

Senator INHOFE. In my opening statement I talked would about our attempting to find out what costs would be associated with cancelling a program at this time. I said if you only take one of those four costs that would be there, the other costs would have to do with upgrading other vehicles, that just the cost of termination according to what we got in a range from the PMs. We made the effort to find out, then we called and talked to the contractor. It is going to be in the range that I outlined between \$300 and \$520 million.

Now, I know it is a negotiated thing. They will come up with a figure, you will come up with a figure if this should happen, and you negotiate. But I am saying it is very conceivable it could be in this range. We have to get out of this mindset that we have \$475 million to reprogram into another system. It flat is not true.

Secretary ALDRIDGE. The numbers we are getting from the Army at this point, and I would highly suspect the numbers we are going to get from the contractors, which are going to be on the high side, guaranteed, because they want to get as much money from the termination as they can. But it is a negotiated term. The numbers we are getting from the Army now will give us better confidence that we are able to do the termination to complete the work in fiscal year 2002 without any significant cost.

One other point is that we want to use a lot of the technology that has been developed for Crusader in the Future Combat System, and particularly the gun, some of the armor, some of the technology—

Senator INHOFE. But to me that is the best argument to wait until the AOA to find out what we do need in this system, and at

that time if it is necessary to have the analysis, have the analysis, cancel the program—

Secretary ALDRIDGE. If we wait we will not have the ability to use the funds that will be available to us to go do the things that are identified here—

Senator INHOFE. Okay. We are not getting anywhere here, because I am contending there may not be any funds at all. Mr. Chairman, I think if you are making a mental list of those things that we really need to determine, that should be high on that list, because we do not know. You do not know, I do not, they do not know.

Secretary RUMSFELD. I do not think you can know termination cost until you negotiate the termination cost with the contractor.

Senator INHOFE. A criticism I have of the way this was put together was—and I know you guys did not put this together in terms of the handouts that were there at the Pentagon briefing—when they announced that this program would be canceled. But in this Pentagon briefing, you quoted all kinds of publications.

I have to admit, and you guys know it also, that there are a lot of newspapers out there, a lot of people in the media that do not think we need a defense to start with. But one of the highlights that you used was from a columnist for the *San Francisco Examiner*. They said if this is a white elephant, we need—well, it was a very damaging type of thing.

[The information referred to follows:]

<b>Voice of Crusader            Pentagon Briefing            May 8, 2002</b>	
<p>“[T]he Crusader [does] not fit the military’s 21<sup>st</sup>-century needs.”</p>	<p>-Editorial  <i>The New York Times</i>            May 5, 2002</p>
<p>“Weapons systems that cannot be placed in harm’s way quickly are more of a hindrance that they are worth.”</p>	<p>-Senator John McCain, Senate Armed Services            Committee CQ Weekly            May 4, 2002</p>
<p>“Keeping Crusader alive is not what this fight is about. It’s a matter of Army better and more effective. By that measure, Crusader is not the answer.”</p>	<p>-Editorial  <i>Defense News</i>            May 6, 2002</p>
<p>“[A] prudent modernization agenda would begin by canceling at least one or two major weapons, such as the Army’s Crusader artillery system.”</p>	<p>-Michael O’Hanlon  <i>Foreign Affairs</i>            May/June 2002</p>
<p>“[T]he doomed-to-be-obsolete Crusader should be at the top of the hit list.”</p>	<p>-Editorial  <i>Chicago Tribune</i>            April 28, 2002</p>
<p>“We have a number of weapons systems on line that are clearly inappropriate for future combat. The poster child of these is the Crusader self-propelled artillery system.”</p>	<p>-Congressman Mark Kirk, House Armed Services Committee  <i>Chicago Tribune</i>            April 28, 2002</p>
<p>“[T]he already-redundant 90-ton Crusader [is] a billion-dollar Cold War cannon.”</p>	<p>-Columbus Ledger Dispatch            April 21, 2002</p>
<p>“[T]he Crusader is a Cold War white elephant...a tank-like vehicle designed to repel a Soviet invasion of Europe....[F]uture conflicts will provide scant openings for a slowcoach like Crusader.”</p>	<p>-The New Statesman            March 25, 2002</p>
<p>“To call Crusader a white elephant is an insult to white elephants. You can’t fit it in a plane, it breaks any bridge it crosses, and you couldn’t get it to Afghanistan on a dare.”</p>	<p>-San Francisco Examiner military affairs columnist Conn Hallihan  <i>The New Statesman</i>            March 25, 2002</p>
<p>“This 42-ton behemoth...is a screaming contradiction to the doctrine of ‘maneuver warfare.’”</p>	<p>-The American Prospect            March 11, 2002</p>

Senator INHOFE. Now, the *San Francisco Examiner* has also said in recent publications talking about a national missile defense system—it is important that you hear this—despite the enormous sums of money spent creating innovative, high-tech weaponry is difficult. Pinpointing warheads going 15,000 miles per hour has been likened to trying to find a fly ball looking through a soda straw. Nevermind the problem of decoys or M missiles during tests, ground base, interceptors, missed targets two out of three times and they went on to the conclusion that it is a fantasy.

They use Star Wars and all of these antiquated things to try to denigrate our wanting to defend ourselves against an incoming missile. That is what they think about national missile defense system. F-22, they say already in the same article, "Drowning in \$9 billion worth of cost overruns, the plane holds the dubious distinction of being the costliest fighter aircraft ever built and is not in the view of most experts do anything any different than joint strike fighter, also in development."

[The information referred to follows:]

"Costs a Bundle and Can't Fly"

Jason Vest

March 11, 2002

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For the past decade, numerous career military officers and defense analysts--whose politics run the gamut from left to right--have held that U.S. combat in the twenty-first century probably won't mean grand, conventional battles with large standing armies. And September 11 suggests that these experts are right: Rather than a "rogue state" raining down ballistic missiles on us, or hordes of Red Chinese flexing regionally hegemonic muscle, low-tech operatives of an unorthodox army turned airplanes into bombs. For its part, the United States, in taking the fight to the parastatal entity behind the terrorist attacks, won the first round with a combination of highly mobile special-operations forces and the venerable B-52.

So what does the Bush administration do? Ask for a jacked-up defense budget: an increase of \$120 billion over the next five years (an extra \$48 billion for fiscal year 2003 alone). The increase exceeds any other nation's entire war chest. It includes tens of billions of dollars for weapons systems that aren't likely to see any action, because they're rooted in a long-gone era and, to make matters worse, they won't roll off the assembly lines for some time. "For 45 years of the Cold War, we were in an arms race with the Soviet Union," says retired Admiral Eugene Carroll of the Center for Defense Information. "Now it appears we're in an arms race with ourselves."

Of course, it would be nice if the administration funneled some tax dollars into programs that are of real use to troops or into new systems that would actually work on today's altered landscape of war. After all, as Defense Secretary Donald Rumsfeld said last year, "every dollar squandered on waste is one denied to the war fighter." No such luck. Indeed, in one case, the misappropriated dollar is not only denied the soldier but goes to a weapon more lethal to us than enemy ordnance.

The V-22 Osprey, a tilt-rotor aircraft under the aegis of the U.S. Marine Corps, has killed more Marines than the Taliban has. It's perennially in an "experimental" stage. Four prototypes have crashed in the past 10 years, killing a total of 30 men, including the program's most experienced hand. Not long after the last crash, which occurred in December 2000, a report from the Pentagon understated in calling the Osprey program "not operationally sustainable." Even Dick Cheney, as defense secretary under the elder George Bush, tried to quash it. The current administration could have followed the March 2000 recommendation by the Congressional Budget Office to find safer and better applications for the technology developed in the program--a move that the CBO estimated would save \$6.6 billion over the next decade. President Bush, however, wants Congress to give the Marines another \$2 billion for the program. Meanwhile, the Air Force has requested \$124 million for work on its own version of the disaster-prone aircraft.

How exactly this represents "transformation" of the U.S. military is unclear. But arguably even more puzzling is the blizzard of new dollars for the Army's \$9-billion Crusader self-propelled artillery system. This 42-ton behemoth--meant to replace the Paladin self-propelled howitzer--is a screaming contradiction to the doctrine of "maneuver warfare" that Army Chief of Staff Eric



Shinseki espouses. It is so unwieldy that neither the C-5 Galaxy nor the C-17 Globemaster, the two biggest aircraft in the military's cargo fleet, can carry a complete Crusader system. Although the CBO and the General Accounting Office (GAO) have reported that there is a more cost-effective alternative in the German-made Panzerhaubitze (PzH) 2000 self-propelled howitzer--replacing the Crusader with the PzH 2000 would save taxpayers \$6.7 billion--the Crusader proceeds apace with an additional \$467 million.

Elsewhere in the Pentagon, if anything's ripe for a cutting, it's the Air Force's F-22 Raptor program. Already drowning in \$9 billion worth of cost overruns, the plane that holds the dubious distinction of being the costliest fighter aircraft ever built does not, in the view of most experts, do anything very different from the Joint Strike Fighter, also in development. Nor is it a huge improvement on the existing F-15's and F-16's. While the Center for Defense Information believes that the F-22 program is too far along to eliminate altogether, a strong case can be made for reining it in, as the cost of each aircraft has ballooned by 24 percent in the past year alone. According to the CBO, restricting production of F-22's and relying more on existing F-15's would save \$10 billion over the next decade. For 2003, however, the Air Force wants \$5.3 billion--an increase of \$1.3 billion--for 23 new pairs of Raptor wings.

When it comes to cost-prohibitive aircraft, the Air Force doesn't have a corner on the market. The Bush administration has also rewarded the ineptitude of the Army's Comanche helicopter project, which is currently in its sixth incarnation. Initiated in 1983, the Comanche program has yet to deliver much in the way of results; at one point, hopes were high that an aircraft might actually be produced by this year, but the latest estimate is that the rotors may turn by 2004. As far as the GAO can tell, the only thing about the Comanche that flies is its price of production--and soar it has, from \$43.3 billion in 1999 to \$48.1 billion in 2001. The CBO estimates that buying new models of helicopters that are proved to work would enable the Army to save \$6.3 billion and still meet its mission requirements. The Bush administration, however, is pumping another \$910 million into the Comanche--prompting one senior Pentagon analyst to wonder if "this money can be followed and frozen by law enforcement as part of the war on terrorism, as the program is clearly as much a threat to the U.S. military as any marauding armed force in the world."

Indeed, it is curious that Bush--who professes outrage at the dubious dealings of Enron and Arthur Andersen--feels so confident asking Congress for all this and more (don't forget the \$7.8-billion request for additional work on missile defense) when the Pentagon's accounting practices make Enron and Andersen look like sticklers for detail. In recent years, the GAO and the Defense Department's inspector general have found trillions of dollars' worth of unsupportable accounting adjustments; the books are in such disarray that the Defense Department can't even be effectively audited. And it isn't just the Bush administration that's culpable. Members of Congress from both sides of the aisle are enabling punch-drunk procurement by voting to keep and even expand programs in the name of local jobs--all at the expense of the national interest.

Senator INHOFE. Now, I would only ask why would we use a source like that to try to denigrate, which they did in your hand-out, the Crusader?

Secretary RUMSFELD. I do not know what you are referring to.

Senator INHOFE. Well, this is a Department of Defense publication for the Pentagon briefing of May 8, 2002.

Secretary RUMSFELD. What does it do, quote a bunch of newspaper articles?

Senator INHOFE. Yes.

Secretary RUMSFELD. They put out newspaper articles every day.

Senator INHOFE. I am sorry, not you, but the Department of Defense put this out for your briefing for the May 8 briefing.

Secretary RUMSFELD. You mean for the Pentagon briefing?

Senator INHOFE. Yes.

Secretary RUMSFELD. I just have not seen it, I am sorry.

Senator INHOFE. Okay. Senator Warner brought up something that is a concern of mine and that is the President has developed some pretty firm ideas, and I just wonder if the President has really had the briefings necessary. He has had his mind on a lot of different things.

Secretary Rumsfeld, I have taken the time to call you and to call Secretary Wolfowitz. I have called everyone I can think of, everyone in the military to get advice; I have called the secretaries, all of the secretaries. I have called the Secretary of the Army to ask him on several occasions if he has had a chance to brief the President about the Crusader. The last time I called, he said he had not; he wanted to do it but had not been able to do it. Do you know if Secretary White has had a chance to sit down with the President of the United States and give him a briefing?

Secretary RUMSFELD. Senator Inhofe, Secretary White sees the President on a variety of occasions. I do not believe he has briefed him personally on it, and I know that General Shinseki has seen the President on a variety of occasions and I do not know if he has briefed him on it.

To put it in perspective, the Crusader program is 0.5 percent, less than 1 percent, one half of 1 percent of the Defense Department budget. It is a lot of money, do not get me wrong, \$470 million, but it is one half of 1 percent. It is about a percent and a half of the Army budget, and it is about 2½ percent, I think, of their investment budget.

Senator INHOFE. Exactly. I agree. However, if we can increase, use one half of 1 percent of that budget to give us superiority in an artillery system I, as one member of the Armed Services Committee, think that is a very good investment.

I do not think anyone is going to argue with the cost of the rounds. Yes, the Excalibur, if we got to the ultimate number, the lowest it has been, and I have the evidence of this, it could get down to \$36,000 a round. But we are talking about an artillery shell which is \$200 a round. If we are concerned about the superiority of our system as opposed to the existing Paladin it is outgunned in range and in rapid fire by equipment that is manufactured in four other countries and readily available on the market. This concerns me a great deal.

Secretary RUMSFELD. Senator, I do not disagree. I think that the way to think of—you are quite right on the cost of the two rounds. The problem is that you have to use a bucket of the dumb rounds to achieve what a single round can do if it is a smart round. The same thing is true for bombs. We found that. The difference is enormous. It is not just enormous in the numbers of things that have to be used, it is the number of things you can use them for.

Because if you are using dumb bombs, you cannot use them in high collateral areas. You cannot use dumb artillery shells in high collateral areas because they are going to have a spread that is very notably different from a precision weapon. So, I think comparing the two numerically is correct, but I think that we have to add that dimension to it.

Senator INHOFE. But numerically as we start off, you can actually fire a thousand dumb rounds for the cost of one Excalibur at the current time.

Secretary RUMSFELD. The problem is you could not, Senator, because you could not use dumb rounds in a lot of places where we have to fight. You need precision rounds.

Senator INHOFE. A question I had was, and it has already been answered once by Secretary Wolfowitz in previous hearings, are you confident enough that we would not have ground wars in places like Iraq, China, Iran, and other places where we would need that very precise thing according to the testimony of the uniformed officials? I do not think you are very comfortable with that.

In fact, Secretary Wolfowitz, I believe you said "I would not want to bet the farm that we would not need that type of artillery capability in the future," and you complimented it saying it is the best one out there.

Secretary WOLFOWITZ. Senator, we very much think we need to have that indirect fire capability. That is why whether we are looking at a simple comparison of Paladin versus Crusader, we came to the judgment in the 2003 budget that it was the right choice. But as we did this work in looking forward to 2004 and began to look at the other ways we could spend that money on Army indirect fire systems, we concluded that precision, mobility, and deployability were much more important characteristics—

Senator INHOFE. Let me ask you one more question. We are all concerned with the JROC, the Joint Requirement Oversight Council, and the role that it plays in these things. Was the JROC consulted in a part of the decision to terminate the Crusader?

Secretary RUMSFELD. No. The JROC basically is functioning with the vice chiefs as the members and the vice chairman as the chairman to look at requirements and look for interoperability. The JROC looked at Crusader 8 years ago, and it looked for it with respect to rate of fire and mobility, but not precision.

Senator INHOFE. Well, how about the Secretary's Executive Council (SEC)? I was very much impressed when you first took this position and you talked about the role that would play. Did it have a deliberation over the termination of the Crusader? It is made up of the secretaries of all the—not for your benefit, but for our benefit—along with Secretary Aldridge, those who are at the table here.

Secretary RUMSFELD. Pete, do you want to tell the entities that analyzed it?

Secretary ALDRIDGE. We actually did some hearings with the Army and the SEC. They were not involved in the final determination.

Chairman LEVIN. Senator Cleland.

Senator CLELAND. Secretary, my first instinct is that I am embarrassed for you and the Department for having to come here and fight out internally over an artillery piece. I would much rather you come here and match wits with your wonderful mind and your great staff about the strategic future of our Army, the strategic future of our forces, and the number of forces it will take to win what Senator Nunn calls the war on catastrophic terrorism. I would much rather argue that out about how much time it is going to be before some terrorist organization lays its hands on a weapon of mass destruction. I would rather we engage in those kinds of debates.

However, there are two disturbing things about this argument that bother me. One is the way in which it was handled. In many ways, Senator Roberts and I have seen this movie before. The Crusader decision is similar to the B-1 decision last year. Last summer Senator Roberts and I were engaged in a fight with DOD and the Air Force on their decision to consolidate the B-1 bomber force. Neither DOD nor the Air Force had analysis to support the decision. It was quite the opposite.

The data that Senator Roberts and I had was contrary to the Air Force's decision. I also want to point out that the Crusader decision mirrors the B-1 decision in that we, Congress, were notified by the media reports. The process that DOD has used regarding the Crusader and the B-1 bomber is disturbing.

I am troubled that we are here today discussing the fate of this weapon system. There are many more issues that warrant attention, as I have said. However, we did not create this process and this procedure; we are only responding to it. Rather than becoming a partner in the decision, we, Congress, are relegated to reacting rather than being consulted. That is the process.

The thing that really bothers me, though, is the substance of the decision. On the one hand, we have a former Secretary of Defense, Frank Carlucci, a former Chairman of the Joint Chiefs of Staff, General John Shalikashvili, and the former Chief of Staff of the Army, General Gordon Sullivan, as well as the Chief of Staff of the Army now, all end up supporting this system.

Quite frankly, General Sullivan's argument in *The Washington Post* today makes some sense to me. He is an Army guy who served on the ground. General Sullivan points out that the Crusader covers an area 77 percent greater than the current systems and has a three-to-one advantage in rate of fire. You keep saying that that is not precision. Well, I have been on the ground seeing a 155mm howitzer, not the Paladin, and certainly not the Crusader, and I have certainly seen the B-52 bomb strike. A B-52 bomb strike is not precision either, but we need it.

I will say to you that it does bother me if you are asking us to in effect ratify the decision you have already made that eliminates this program of the Crusader, where we have already pumped \$2 billion into it and exchange it for what? You have not even analyzed the alternative. You do not have an alternative. That chart is not an alternative. You have not analyzed alternatives. Now, what are potential alternatives?

As far as I can tell, there is a system called Excalibur, which, I gather, is a round of some sort, some family of guided munitions still in research and development, some guided multiple launch rocket system. Development is underway. That is all I can find out about it.

DARPA, the Defense Advanced Research Projects Agency, has something called NetFires in research and development stage, a prototype has yet to be tested. In my part of the world, they call that a pig in a poke. Quite frankly, based on what I gather are the requirements of the war of terrorism, where we are already in harm's way in Afghanistan at this very moment, this weapon system could be utilized and expand the range of the 101st Airborne and the 10th Mountain Division and the range of our artillery sup-

port for our Special Operations Forces. It could be used there now. It could be put on a C-17 and flown there in 24 hours.

That is real. I understand that. I get that. I do not get that chart. I do not get no analysis of alternatives. Where is the so-called cost effectiveness in all of this? I mean, supposedly over \$400 million is going to be "saved for higher technology purposes?" Where is it going to go? What other weapons system is this going to be part of? That is kind of mush and iffy thinking as far as I am concerned.

So I cannot buy a pig-in-a-poke, not with the troops in the field out there. They need increased artillery support. I am going to support Senator Inhofe's amendment and gladly so, because, number one, I think the Army needs more troops, which is a subject for another hearing and another amendment which I will be proposing. I think the Army also needs greater firepower and lethality and greater range of coverage artillery support of all the troops on the ground. You can see it in Exhibit A in Afghanistan today.

Mr. Secretary, why after pouring \$2 billion down on this artillery piece did your staff, your top people, not buy the argument of a former Secretary of Defense, a former Chairman of the Joint Chiefs of Staff, and two of the most recent Army chiefs of staff? It seems to me that is pretty compelling testimony. Why did not you buy that?

Secretary RUMSFELD. Senator, let me make a couple of comments and ask Deputy Secretary Wolfowitz to make a comment. First, I would like to clarify something that Senator Inhofe and you raised; you said just put it in a C-17 and take it over. The answer I gave you, to be very precise, is 60 to 64 C-17 sorties to lift 18 Crusaders, 18 supply vehicles, the battalion, what you need to function and operate, is what it takes to move from the United States somewhere in Texas to the Middle East, for example.

If you are going to Korea, it would take 50 to 64 depending on how it was done. That includes the 18 Crusaders, the 18 supply vehicles. These 18 tubes is what you are getting. The ammo, the fuel, the water, the food, the command, the control, the crew, and what the unit needs to go and function. In other words, how they go and fight. I did not want to leave you with an inaccurate impression there.

Senator, you asked how can you not take the advice of the former Secretary of Defense and the former Chief of Staff. These are fine people. I do not deny that. They're friends of mine. They are the people who make the system, a lot of them, and that is fine. They ought to be for it. I have said it is a good system. There is nothing wrong with it. The question is not whether the Crusader a good system; the question is how can the taxpayers best put their money to see that we have the fighting force we are going to need for the future.

One other thing I would say. I do not know if you were here when I mentioned it, but when the Army came to me 25 years ago and said they wanted to have an M-1 tank with a diesel engine, the Army was unanimous. We decided to go with a turbine engine, and the Army thinks that is a good idea today. The very people who opposed it think it is a good idea today.

The cruise missiles. The military did not want cruise missiles. They wanted to trade them off about 25 years ago and we insisted.

The cruise missile has been a very fine weapon. The Air Force was not enamored of GPS. Over time, the Air Force recognizes how critically important GPS is. The Air Force wasn't enamored of unmanned aerial vehicles. In fact, General Jumper was, as an individual, as it turns out.

But JDAMS. JDAMS were not the top of the list of the military. These situations have to be looked at that you should expect the services to come up with what they honestly believe is best, and there is no question that the Crusader is a better weapon than the Paladin, and we all acknowledge that.

The Department as a whole has to look at what the joint warfighter has to deal with. He is not interested in what the Army thinks is the best piece of artillery, in what the Navy thinks is the best cruise missile, or what they think is the best airplane. He is interested in what he can bring to bear on a target in a given situation. It is that joint combined capabilities that make the difference.

So, while I have a lot of respect for those people, it does not bother me that a Department could come, and there was plenty of analysis. The PA&E was involved in it and others were, the Joint Staff was in different pieces of this. Paul, you might mention some of these are actually—there is more development in some of them than there is in the Crusader.

Secretary WOLFOWITZ. Yes. If I might, Senator, just on this issue of whether it is a pig-in-a-poke. The Guided Multiple Launch Rocket System is a system that is already far ahead of Crusader. The High Mobility Artillery Rocket System is another one that is far ahead. The Excalibur round, and we can give you detailed information on every one of these programs, which was planned for a 2008 IOC which would be the same as Crusader, we actually believe with this new funding we are requesting could be accelerated as early as 2004, 2005.

You are absolutely right, I believe, about the need for indirect fires. We already demonstrated 10 years ago that our then-existing artillery and guided rocket systems were devastating to Iraqi forces. The systems that we are talking about here would be even more so, and it is the judgment, in fact, that those are more urgently needed than the high rate of fire and range that could be delivered by Crusader.

Chairman LEVIN. Thank you. Senator Santorum.

Senator SANTORUM. Thank you, Mr. Chairman. I just would like at the beginning to in part associate my remarks with Senator Lieberman. As the Chairman of our Subcommittee on Airland, he and I have been very concerned about this bow wave that is out there, very concerned about the Army's ability to make their tough decisions to modernize and at the same time field an Interim Force which this subcommittee has been the only subcommittee questioning the wisdom of doing so, and the financial strain it puts on modernization as well as maintaining a Legacy Force. I think we have been able to see some of the fruit being borne by some of the decisions on that issue. That is the cancellation of other programs and this one. There are 18 other programs that were canceled this year in the budget.

I understand your analysis and why you are doing it from the standpoint of whether this is truly a transformational system, and whether it fits in with the transformation. My concern is one of finances principally. But I obviously have to consider your comments about whether this is, in fact, an appropriate system for transformation.

I asked Secretary Wolfowitz, when he called me last week and we talked about this, were there any other proposals given to you, options given as far as downsizing of the amount of Crusaders that you are going to buy. The reason I asked that is because all the literature suggests that Crusader has three times the firing rate of the existing Paladins. So why are we doing a one-for-one replacement of 480 Paladins for 480 Crusaders if we have three times the fire rate?

When you are also talking about, as the Army seems to suggest that they want to be lighter and more lethal, having the same number of battalions of Crusaders, which is a heavier system than Paladin, it does not sound lighter. It sounds lethal, but it does not sound any lighter to me. So one of the things I asked Secretary Wolfowitz was were there any options being laid on the table where we could take a system that fires at three times the rate, and maybe reduce our buy by two-thirds and still have the same capability as the current Paladin gun system.

If we did that, obviously the \$11 billion program is not an \$11 billion program anymore, number 1. Number 2, because of the increased automation of Crusader, it is a highly automated system where the Paladin is not, we would have a dramatic reduction in force structure associated with operating those artillery units.

I asked my staff to put together a financial analysis of how this would work out, and if we, in fact, reduced the number of active duty howitzer battalions from 20 to 7 and reduced the number of personnel necessary to support those battalions, we would have an annual cost savings of \$403 million. Now, there are two components of that: one is you are buying less Crusaders; and two, we have a lot less people involved in operating these systems.

My question to you is, first, did the Army ever approach you when you worked at terminating this program because of your concerns about cost and suggest that this might be a viable option?

Secretary WOLFOWITZ. I would say to the contrary, Senator. You might not have been here when Secretary Rumsfeld described the process in which we went through all of this here to produce a briefing that would be compelling to him about the decision to put Crusader in the budget. One of the things we went through in some eight meetings I had with the Army and multiple meetings that Secretary Aldridge's staff had with Army staff was to locate a way of showing you could actually get a significant force structure reduction out of Crusader. We never got an option out of the Army that showed that.

But the other point is that as it became clearer and clearer to me that the real alternative was not to compare Crusader versus Paladin, but to look at what improved accuracy could get for you. Improved accuracy could have enormous effects including in lethality, including in avoiding collateral damage, but also in re-

ducing the huge requirement, and it is huge, to deliver artillery shells.

If you can hit a target with 30 rounds—say one round instead of 30 or one round instead of 100 or 150—it is going to have a big effect on that piece of your force structure. But what I found ultimately compelling was this argument for precision and for deployability.

Senator SANTORUM. I guess, Mr. Secretary, I accept that argument. I accept that we have to be higher tech and we have to be lighter and higher tech means more lethality. I also share the concerns of others which is just having the raw firepower capability as an arrow in our quiver here is not something as you said you can dismiss out of hand.

My concern is really not with you, but with the Army, as it has been for quite some time as I have served as a member of this committee. We have a member here from Georgia who suggests that he is going to offer an amendment to increase end strength. I would just suggest the opposite. We need to be talking to the Army in particular about not trying to hold on to people and to try to do what business is doing, what we are trying to do here which is to substitute technology for people and use the cost savings to increase our lethality and our efficiency.

What I have seen here is a case in point of the problem with the Army. The Army has not come forward and said, yes, we want to give up people to have a mission that is more affordable and more lethal and higher tech. What you are telling me is in your meetings with the Army, they never put that on the table, is that correct?

Secretary WOLFOWITZ. Essentially, yes, sir.

Secretary ALDRIDGE. Senator, could I just make a quick point? One is we have about \$2 billion left to spend just through the fiscal year 2007 for the Crusader R&D. If we kept even whatever the size of the number of Crusaders we bought, we would still have a \$2 billion bill and the R&D could not be applied to these new capabilities.

Second, in terms of firepower, if you talk about a command center, command and control post, which is a typical Army command post of 20 by 20 meters, it takes 147 dumb artillery rounds to kill it. It takes three Excaliburs to do so. That is firepower when you can kill that target with three rounds immediately.

Secretary RUMSFELD. The important part of that is that it is not just the fact that it takes three rounds to kill something. The logistics part of it is just enormous. The cost of bringing along the extra hundreds of weapons that are not needed if you have a precision weapon is just enormous. It is enormous in terms of dollars, and it is enormous in terms of time that you are capable of deploying and it is enormous in terms of maintaining it and moving it.

Senator SANTORUM. Again, I accept all those things, but I think what you are saying is we need to go to precision weapons. I accept that. But I think what we are saying here is that there also is a place for this kind of firepower, a potential need for this kind of firepower. At least it is been testified over and over again that there is a need for this, and what you are saying is yes, we accept that need but we have a greater need for precision weapon.



What I am saying is that at least for the analysis that I have looked at here, there is a potential to accomplish both. Now I understand the R&D costs and that funding gap, but it seems to me that the gap under this analysis is a lot closer, particularly if we can reduce personnel costs because those are not just 1, 2, and 3-year costs. Those are long-term costs and very expensive costs over the long-term—again, I do not fault you, I fault the Army for not coming forward with what I think would have been, well, let us just put it this way, would make your job a little harder to make this decision that you just made.

Secretary WOLFOWITZ. Senator, could I just make two points? Number one, we have enormous capability to deliver massive firepower. We demonstrated that 10 years ago even with the systems of 10 years ago with our artillery and rocket systems. I think all the evidence from Desert Storm, no offense to the Air Force, that the Army artillery systems, rockets, and howitzers were much more devastating to the Iraqi artillery than anything we could do from the air. We have a lot of that capability already, and accelerating HIMARS and GMLRS will give us more of that mass.

Point number two, and I think it is an important point, is this recommendation that we are making to Congress is not just to terminate Crusader, but to keep that money in Army indirect fires. I do think that one of the reasons for the phenomenon that you were describing and you are concerned about—that I believe the concern on the part of the Army is that if they say here's a savings that we can offer in order to get something that is more efficient, before they know it the savings will be taken and the efficiency will not be provided.

This is a two-part recommendation. It is a recommendation to terminate Crusader, but to keep that money in systems that we vitally need. If we don't make good on that second part of it, the kind of resistance that you are describing will just grow.

Senator SANTORUM. Mr. Chairman, I know my time is up, but I do want to make a point that the second part of your recommendation is vital, that we need to fund the Objective Force and we have done so in our subcommittee, even above what you recommended, and we do need to work to make the Army more relevant to the fighting of today.

Senator INHOFE. Senator Akaka.

Senator AKAKA. Thank you very much, Mr. Chairman. I appreciate your willingness to hold this hearing so quickly, and I want to thank Secretary Rumsfeld and General Shinseki for joining us this afternoon and I want to say thanks to Under Secretary Aldridge for dropping by. I want to join others in telling you that I am disturbed and concerned about the way the Department of Defense has handled the Crusader program in the past few weeks.

In most situations I consider the Secretary of Defense to be the expert, expert on the needs of men and women serving in the Armed Forces. I rely on his advice and direction for what the Department needs to execute its mission of preserving our national security. A lot of my trust in his expertise and advice of his staff is based on my belief that he relies on those in the Department, both uniform and civilian, to determine what is best for the Department of Defense.

I am having a very difficult time with this issue because it seems apparent to me that the Army is not being heard on this issue. I understand and support the need to transform the Army to be a lighter and more lethal force. I wholeheartedly support efforts to improve the technology necessary for the United States to maintain its superiority on the battlefield.

I also, however, value the opinion of those who utilize the weapon system under discussion and must rely upon it for the safety of our men and women in the military.

I am concerned with the precedent this action sets with respect to the Department's budget request. We rely heavily on the President's budget request to shape the authorization and appropriations, legislation for the Department of Defense. The Department's modification regarding Crusader so late in the process causes me to wonder whether this is going to be a continued practice by the Department.

Normally when the budget request is received for a fiscal year, we rely on the information provided. My question to you is: are we now to expect that the budget request we will receive in the future will be subject to such changes and should not be relied upon as reflective of the Department's priorities for the upcoming fiscal year?

Secretary RUMSFELD. Senator, just to walk through the process, of course, we started working in the Department of Defense on the budget for the year 2003 in the spring of 2001. It then is worked on and brought along with the services and then with the Office of the Secretary of Defense and it is sent over to the Office of Management and Budget in about November 2001.

It then is decided by the President and sent to Congress February 1, 2002, this year. This is for the year 2003. Congress starts working on it in February, March, April, May, June, and July, all the way through the year until it is finally passed the authorization, the appropriation, the supplementals, whatever it may be, and it starts on October 1.

This is a fast-moving world. There inevitably are going to be amendments proposed to budgets that are fashioned a year and a half earlier. There is not any other way to do it that I know of, and I feel our obligation is that as we proceed with our work and as we develop defense strategy and go through the Quadrennial Defense Review. As we take the proposals from the services and meld them together into something that makes sense from a joint standpoint, not from a service standpoint, it is interesting what the services propose. But it is not determinative, it shouldn't be, because the warfighter does not go out and fight with the Army or fight with the Navy; he fights with all of those capabilities together, as you well know.

So I guess the answer is, Senator, yes, there will continue to be amendments proposed. I do not know of anything that can be done about it. I wish there were some other solution.

Senator AKAKA. As I have said, I have been bothered by what has happened in the last few weeks, and I have wondered about the motive. Can you tell us where the option of cancelling the Crusader came from? Was this something that was first advanced by the resource community, the acquisition experts within the Depart-

ment, or somewhere else in DOD? I am trying to understand the primary rationale and what it is behind your decision. Can you explain that?

Secretary WOLFOWITZ. Senator, let me try to explain. Over the course of the first months of this year as we were developing Defense Planning Guidance to develop the 2004 budget, we heard increasingly, particularly from the staff of the Under Secretary for Acquisition, the staff of Program Analysis and Evaluation, but also from outside experts including some retired Army officers, including some senior generals, from some members of the Army Science Board, and from people in DARPA that the real alternative to Crusader was not simply Paladin, that looking at it in terms of platforms was the wrong way to look at it, that the right way to look at it was in terms of technology and particularly the technology of precision strike.

It was that analysis and that study which was quite considerable and consumed many hours that eventually led Under Secretary Aldridge to come to me late in that process of developing the planning guidance with the recommendation that there was this clearly better way to spend that money than to continue down the road with Crusader, and that is how we got to this recommendation.

Senator AKAKA. Thank you very much. Thank you, Mr. Chairman.

Chairman LEVIN. Senator Bunning, you are recognized.

Senator BUNNING. Thank you, Senator. I appreciate that. First of all, I would like to enter into the record a letter of July 5, 2001, to General Henry H. Shelton from General Shinseki. For the record I would like it to be put in.

[The information referred to follows:]

UNITED STATES ARMY,  
THE CHIEF OF STAFF,  
July 5, 2001.

Gen. HENRY H. SHELTON,  
*Chairman of the Joint Chiefs of Staff,*  
*9999 Joint Chiefs of Staff Pentagon,*  
*Washington, DC.*

DEAR CHAIRMAN: At the capabilities of the SLRG tomorrow, the QDR IPT may propose the termination of the Crusader. I know of no warfighting analysis supporting this recommendation and the risk such an action creates for the Joint Force commander is unacceptable. After consulting with the other Service Chiefs, we believe a decision to terminate Crusader without warfighting analysis would be a serious mistake.

Until the Army fields its Objective Force, it will continue to have a critical shortfall in combat capability. Identified during Desert Storm, due to the obsolescence of its cannon artillery. Then and now, many of our potential adversaries have more capable artillery systems and in larger numbers. Since Desert Storm, we have reduced our active division strength from 18 to 10 as well as reduced key combat systems—Abrams Tanks and Bradley Fighting Vehicles—in these divisions by 25 percent. Also, the Army reduced the number of artillery battalions by 35 percent while also reducing the number of howitzers within each unit from 24 to 18. These decisions were based on projected delivery of key combat enablers, a critical one being Crusader. Crusader mitigates this existing risk with its revolutionary fire support technology—technology that ensures decisive overmatch while the Army transforms to the Objective Force.

Crusader embodies more than two-dozen cutting-edge technologies, providing a more efficient and effective developmental path for the Army's Future Combat System. It allows the Army to validate doctrine and tactics for combat that rely on cockpit automation, robotics, and information exploitation in lieu of soldier-performed tasks. Crusader also provides unmatched synergy within the Joint Force as it cap-

italizes on advanced technologies to integrate with manned and unmanned ground and aerial platforms that employ information-dominant, network-centric warfare. Crusader-equipped battalions will provide the Joint Force Commander with continuous, immediate, all-weather, 360-degree precision fires at an unprecedented 50-kilometer range and a sustained rate of fire over 11 rounds per minute (vice 1 round per minute for Paladin). Current and future Joint Forces require a strategically deployable system with enhanced mobility, sustainability (through reduced bulk ammunition demand) and higher operational ready rates. When combined with a reduction in system weight by one third, this weapon provides a dramatic increase in lethality per system deployed. Crusader unequivocally meets warfighting requirements.

A decision to cancel Crusader would not only jeopardize an essential battlefield capability, but also eliminate a vital technological bridge for the Army's ongoing transformation. The Crusader is the cannon artillery system we are counting on to guarantee landpower dominance in this new century. I ask for your support for retaining this critical system.

Sincerely,

ERIC K. SHINSEKI,  
*General, United States Army.*

Senator BUNNING. I am embarrassed. I am embarrassed for all three of you, Under Secretary Aldridge, Deputy Secretary Wolfowitz, and Secretary Rumsfeld who have come before this committee with a predetermined decision and no consultation with Congress of the United States after the QDR was finished, after all of the process that you went through to come up with the 2003 budget for the military, and then to hear the explanation you have given not only Senator Inhofe but almost everybody who has asked the question about how quickly you changed that decision once it became public. It went from 60 days to 30 days, and it went to 4 days just like that.

Now, it is hard for me to trust that decision. We honor the President of the United States today, who always said trust but verify. I am having a very big problem verifying the decision you have made with all of the explanations you have given today. I question why the same group of people who have had 15-plus years on the V-22 to make it airworthy, and it still is not because you postponed the testing of it again and would not think about the \$1.5 billion that is in the budget this year for that program.

Let me ask you if this is accurate, because what we read sometimes does not have a darned thing to do with accuracy. In eastern Afghanistan at dawn March 2, U.S. troops assaulted Taliban and al Qaeda strongholds deep in the mountains with the expectation that 25 minutes of planned air strikes had softened or eliminated enemy resistance as Operation Anaconda kicked off.

When the U.S. bombers and strike force had gone, the enemy popped out and took deadly aim at the troops that had come from my Fort Campbell, the 10th Mountain Division and the 101st Airborne Division springing off their helicopters.

Back at U.S. military headquarters, staff officers frantically demanded more air strikes as units on the ground reported being under heavy mortar fire and requested immediate evacuation of their wounded. One of the officers of the 10th Mountain Division asked for helicopters. It is too risky, they were told. The artillery that the Army would normally use in this situation had been left at home, and instead the troops were depending on air support. Now, is that accurate or inaccurate?

Secretary RUMSFELD. Senator, I would have to ask General Franks to ask the commander who was in charge of Anaconda to track back and trace that. I do know one piece of it that you and I have talked about, and that is the artillery issue. When you asked me that question in a private meeting, I asked General Franks about the question as to artillery and was advised that someone had made a request of the land component commander as to whether or not they were going to bring their artillery with them when they deployed to Afghanistan. The decision was made apparently below General Franks by the land component commander that the artillery would not be appropriate in that situation, and they instead, as I recall, brought mortars. But I do not know technically the other pieces of it.

Senator BUNNING. Could you, Mr. Secretary, have General Franks at least give us the courtesy of verifying one way or the other whether that was factual or whether it was not?

Secretary RUMSFELD. I will be happy to do so.

[The information referred to follows:]

The Central Command Commander provides the following information in response to your question: [Deleted]. This situation would have existed regardless of the use of mortars, artillery, or close air support.

Fire support during Operation Anaconda was adequate. [Deleted].

Senator BUNNING. I remember also a while back when you, Secretary Wolfowitz, and Under Secretary Aldridge came before this committee and asked for verification of your positions, and you told us—and I asked one question of all of you. You have to tell us the truth.

I asked the same thing of the military people who were sworn in. I mean the Secretary of the Army, Secretary of the Navy, Secretary of the Air Force. Hope and pray to God that that is what we are getting today. I am having difficulty because of the circumstances under which this program has been canceled.

You are supposed to be the experts, but I do not think anybody on this committee had any idea of what your intentions were when you submitted that budget. It was not until the day that this committee went into markups at the subcommittee level for this year's budget that we got wind of anything about the Crusader.

Now, either that is poor timing or that is the way you wanted it. I do not know. Maybe you can explain that to me. But we were going in to markup on the Defense Authorization Bill in the subcommittees the day we heard about the Crusader. Can somebody answer that?

Secretary RUMSFELD. I would be happy to. Would you put the other chart back up? Senator, the way this process works is that Congress, one house or the other, is continuously meeting on either a supplemental or—

Senator BUNNING. I was here when you had the chart up.

Secretary RUMSFELD. There are, I think, just a handful of days where some body of Congress, committee or the whole House or Senate is not engaged in some aspect of the budget. The budget, as I said, is one that we prepared last year and worked over the summer, end of the fall, submitted to OMB in November, sent up here in February. There inevitably are going to be amendments to it.

I do not know any other way that we can do business. As we go through the defense planning process, defense guidance process for 2004 to 2009, which is what we are in right now and which studies are being done and which will end and then will build the budget in summer or fall, we are going to have decisions come along.

Then the question is what do you do with those? If you have your study complete, if you have done your work, if you have come to a conclusion, or whatever changes and you see where you are and you say, well, should we tell them now since that is where we are or shouldn't we? If we wait, more money is spent. It is awkward, I agree with you. To have it in the middle of a markup is not your first choice.

Senator BUNNING. We are having a difficulty getting a budget to the floor for 1 year in the Senate, as you might expect. My time is up. I understand that, Mr. Chairman. So I have some very serious reservations about your program. Thank you.

Chairman LEVIN. Thank you very much.

Senator Byrd.

Senator BYRD. Thank you. Mr. Secretary, I come to this question today without feeling very sure-footed about where I am going to come down on it, as has been the case.

I think I have to give you the great credit for your courage in cancelling a weapons system. This isn't something that's done every 24 hours here. You're entitled to a great deal of credit for having made a tough decision. I think I might be able to imagine, at least, the pressures that were on you. Having said that, I'm not, in my own mind, convinced one way or the other yet.

Let me ask you a question on another issue, if I might. During the past 24 hours, new details as to who knew what and when about the September 11 attacks have surfaced. President Bush and many of his top advisors were told by the CIA on August 7 that Osama bin Laden planned to hijack commercial airliners. Mr. Secretary, were you aware of this CIA report?

Secretary RUMSFELD. Let me take my time and respond very carefully about that.

Senator BYRD. Certainly.

Secretary RUMSFELD. I get daily—well, maybe 4 days a week, on the average, I get a briefing from the Central Intelligence Agency, as do any number of senior people. There are interruptions from time to time. You read through it, and you ask questions, and give assignments of additional work you'd like done. Sometimes you keep some of the less classified materials to read at a later time. Anyone who gets those briefings is at a senior level and is not the individual who is the person who would take action on an actionable piece of intelligence. So I don't want to leave the impression that what I'm going to say next is necessarily correct. But to my knowledge, there was no such warning, no alert about suicide hijackers or anything.

There have been concerns about hijacking for months and years. I mean, that's why we have air marshals. That's why people have worried about hijacking for a long time. But I certainly don't recall having been presented or ever read anything that suggested anyone was going to hijack an airplane and fly it into a building.

On the other hand, one has to assume that there was not sufficient granularity to issue specific warnings, or specific warnings would have been issued, had there been anything that would have been sufficiently actionable of the nature that you have described. In my view, as far as I'm aware, the people responsible for taking appropriate action took action that was appropriate, given the nature of the intelligence.

I know that from time to time the Department of State issues warnings to their various embassies in parts of the world to the effect that they ought to be on notice, high alert, or they ought to move their people out of the embassy. We do that constantly. Our combatant commanders have that responsibility for force protection, as you well know, and they are, every day, changing alert levels, depending on their assessment of that information.

But, in my view, I have not seen anything authoritative. All I've done is seen an article in the paper. I think it would be grossly inaccurate to suggest that the President had a warning of suicide hijackers about September 11. There's no question but that there were, and are today, daily repeated warnings about various types of threats all across the globe which are looked at by people who care about this country, care about U.S. interests, and take actions that are appropriate. A very small fraction of them are the kinds of intelligence that one would characterize as actionable. For example, a specific threat on a specific ship in a specific port, and, therefore, you might build your force protection, or you might get the ship out of port so you don't have another situation like the U.S.S. *Cole*. Those things are constantly being done. But anything that would be characterized as what I've seen in the press that would have suggested that the President had or should have had or might have had actionable intelligence with respect to what took place on September 11, I think, would be grossly inaccurate.

Senator BYRD. When were you aware of this intelligence report?

Secretary RUMSFELD. First of all, I'm not sure it was—when we say “intelligence report,” I think we think of the Central Intelligence Agency. My impression is that—what I look at tends to be fused intelligence. It will come from all intelligence sources, including the FBI. It's not clear to me that I would want to differentiate as to where this came from, because I simply don't know. I certainly don't recall anything about the flight schools, for example, in Arizona until well after September 11.

Senator BYRD. I know that hindsight's pretty good. It's 20–20, or better, I guess. Can it get better? I also know that the intelligence community must receive hundreds—

Secretary RUMSFELD. Oh, thousands.

Senator BYRD.—thousands of tips on a regular basis. Sifting through these must be not only a time-consuming job, but a very frustrating one. But this alert, this threat, was strong enough to present to the President of the United States, so it had to be serious.

My concern is that the threat, like the FBI memo dated July 10 that warned of bin Laden's use of flight schools, which you just mentioned, to train for terror attacks was virtually ignored. Were you about to comment on that?

Secretary RUMSFELD. I think that that would not be a—I think that any implication that it was ignored—that the President had it and it was ignored by the President, it seems to me, would not be correct.

But I'm really not the right person to be asked about this. As I say, I have so many things that I do, and one of them is not that. I scan them.

You said something had to be sufficiently important to be presented to the President. I think that may be a misreading of the situation. Not surprisingly, it is not—threats, you cannot validate, generally, without a lot of work. As the threats come in, they then—the work goes into the process of trying to validate them.

The question is what does one do if their task is to fuse intelligence and present it to policymakers, ought they to present a threat unvalidated? The answer is: sometimes yes, sometimes no. They do sometimes. So the number of threats that we see at that level are not a few. They're quite a few.

Senator BYRD. Yes.

Secretary RUMSFELD. Most are not correct. Most prove not to have been the case. Most prove not to have been actionable.

Senator BYRD. Yes. I realize my time's up. The CIA briefing was presented, as I understand it, to the President at his Crawford ranch on August 7. The intelligence community certainly knew of the potential of Osama bin Laden and his terrorist network. There is a track record of bin Laden using aircraft as weapons. He reportedly tried such a tactic in Paris in an effort to destroy the Eiffel Tower. His plans were thwarted by a SWAT team when it shot the terrorist.

In light of the alert and the Paris incident and the knowledge that bin Laden's terrorist network is well trained, let me ask this question as a closing question. Why was it that AWACS radar planes were not sent aloft to guard against this danger? It seems to me this would be something in your bailiwick. Why was it that AWACS radar planes were not sent aloft to guard against this danger to monitor for a rogue or a hijacked aircraft? Why were those planes left on the ground until after the attacks occurred? Could you answer that?

Secretary RUMSFELD. Senator, I can't—in answering, I would not want to validate the premises in your question, because I am not knowledgeable enough about what you have said. I don't know what the President was briefed or when he was briefed or where he was briefed about what. I just really cannot address that.

Senator BYRD. I can appreciate your answer, but it seems to me that the AWACS radar planes—in the light of the track record of Osama bin Laden—should have been sent aloft to guard against this danger. So I'm concerned as to why those planes were not sent aloft until after the attacks occurred.

Secretary RUMSFELD. Well, I guess the answer would be that the people who deal with that very likely had no reason to believe that the hijackers would take planes filled with Americans and, for the first time in the history of our country, fly them into buildings. It was an event that was unprecedented. It had not ever been done before in our country. The minute—the hijacking problem was a continued threat for many years beforehand, and we all knew that.



But the way that was dealt with was entirely differently. The airplanes were equipped with beacons and indicators and radio signals that they could send if they were in a hijacked situation. The FAA had procedures. It is perfectly possible to put planes on alert and track things once that hijacking alert goes out. But that is a very different thing from what took place on September 11.

Senator BYRD. Mr. Chairman, I have exceeded my time. You have been very liberal, thank you. Thank you, Mr. Secretary.

Chairman LEVIN. Thank you, Senator Byrd.

Senator McCain.

Senator MCCAIN. Thank you, Mr. Chairman. Mr. Secretary, first of all, I want to say that I support fully your decision. I know it was not an easy one. I know it's always difficult and very disappointing to large numbers of supporters of a very excellent weapons system. I also know that other tough decisions are going to have to be made in the future. This is only the first, since anyone who looks at the projected number of weapons systems that are on the drawing board or proposed or in various stages of development—we will not have sufficient funds to fully fund all of these systems.

I think Senator Lieberman already referred to the “Transforming Defense: National Security of the 21st Century” report in December 1997. Back in 1997, they concluded, as far as land forces are concerned, “become more expeditionary, fast, shock-exploiting forces with great urban operations capability, reduce systems that are difficult to move and support, shift to lighter, more agile automated systems.”

As far back as 1997, we are pretty aware that there has to be a transition and a transformation as a result of the end of the Cold War and the new challenges that we face in Kosovo, Bosnia, and in Afghanistan. Again, it was proved, the efficacy and, indeed, the requirement for precision-guided weapons and, frankly, a kind of mobility that even those of us who study these issues were probably not aware of.

I'd also add, Mr. Secretary, that during the Presidential campaign, I had the privilege of campaigning with the President. He stated unequivocally on numerous occasions all over America that we had to transform our military establishment, that changes had to be made, and that tough decisions had to be made; he was fully prepared to make them. I know you didn't make this decision without full consultation and approval of the President of the United States.

Finally, let me say, I've seen this debate going on about the timing. I'm a bit entertained, Mr. Secretary, because just last December, I happened to be combing through the Defense appropriations, not authorization, bill and found that we were going to lease/purchase a hundred 767s. I didn't hear any complaints about the timing and we didn't even have a hearing. We didn't have a hearing. The chairman of the committee was not even consulted. There was not a phone call from your Secretary of the Air Force to the chairman of this committee to obligate this—the taxpayers of America to somewhere around \$26 billion.

So the argument that you didn't adhere to some certain time schedule, frankly, is not too persuasive. The way that we are doing

business around here, by putting in billions and billions of dollars into the Defense Appropriations Bill, which we always consider last and vote on just before we go home for Christmas, is not exactly a model, I would think, for any kind of process in making decisions as far as our nation's defense is concerned. Someday maybe this committee will reassert its jurisdiction and authority, at least I will continue to work in that direction.

So, Mr. Secretary, I know there's no good time for a decision such as this. There is no good time. Not Christmas Day, not when we are going into markup, not any other day. I wish that circumstances would have been such that we could have fully briefed every member of this committee, which the Appropriations Committee does not do when they are putting the Defense Appropriations Bill together.

I guess I would just ask a couple of questions. For example, the Paladin is supposedly 40 years old. Is that true?

Secretary RUMSFELD. Well, I'm no expert. Senator Inhofe and I have talked about this. There's no question but that the basic artillery piece started decades ago, which, of course, is also true of most of our weapons. The F-16s, they go—

Senator MCCAIN. Under this kind of calculation, the F-18 would be about 40 years old?

Secretary RUMSFELD. I guess. The fact is that the Paladin that we now have is about five and a half—5.6 or 6.6 years old, average age, and it was entered into the force in its current configuration in 1992 after Desert Storm, and that there are elements of it that preceded that.

Senator MCCAIN. By the way, Mr. Secretary, you know that the engines for the Crusader are made in Arizona, and a lot of the testing of the Crusader would take place at the Yuma Proving Ground in Arizona. So I take that into consideration, as you do as to where these weapons systems are manufactured and where they will be employed and tested.

But I am of some confidence that the artillery systems that you are putting in place earmarked for the United States Army will require expenditure of funds, testing and development, et cetera. Isn't that an accurate statement here?

Secretary RUMSFELD. Would you respond to that, please?

Secretary WOLFOWITZ. There's no question that, in fact, we're not talking about reducing the Army budget, reducing the budget for Army artillery. In fact, I believe that actually by investing more in systems that have, I think, a longer future to them and accelerating those systems and keeping Army artillery relevant for future battlefields, if one's talking about sort of business or commercial interests, then we're actually enhancing the future of artillery.

Senator MCCAIN. Mr. Secretary, what role would the Crusader have played in Afghanistan?

Secretary RUMSFELD. That's a question, I think, that probably would be better asked of General Franks, but the period of systematic organized ground action was relatively brief. The deployment of Crusader is not a simple matter. Is it a complex matter. You have to either have a port, or you have to have airfields that can take those aircraft and that are sufficiently secure from attack that you can get them off the aircraft and get them reassembled, put

back together, and then find ways to get them from where that airfield is to where the battle is; that is not an easy thing, given the weight. It's a heavy piece of equipment.

Senator MCCAIN. In Kosovo, the entire operation was carried out from the air. As I recollect it, the war in Afghanistan was primarily from the air until we reached, sort of, mopping-up operation. But the initial battles such as outside of Kandahar and other places, using Northern Alliance troops, but with the major weapons being precision-guided missiles from the air. Is that an accurate—

Secretary RUMSFELD. That's true, but that didn't work until we had forces on the ground imbedded with those militias in a way that they could provide the targeting and provide the coordination that began to make just an enormous difference.

Senator MCCAIN. My time is expired. Mr. Secretary, I hope that you succeed here. I think that all of us should be aware that if you fail here, it will be very difficult to make any other of the much-needed changes and transformations that you committed to at your confirmation hearings in response to questions from the members of this committee. I thank you.

I thank you, Mr. Chairman.

Chairman LEVIN. Thank you, Senator McCain.

Senator Collins.

Senator WARNER. Mr. Chairman, could I address the chair before my colleague starts?

We have a second panelist, General Shinseki, who is waiting. I would strongly recommend that we not go to another round of questions, following the exercise of a question period by those who haven't had an opportunity to do so. In fairness to him, he's been waiting for some period of time. Frankly, I think reporters and others following this hearing would want to hear his views firsthand, before the newspapers have to go to bed, as the old saying goes or the news cycle is gone. The Secretary has fully replied with good statements.

Chairman LEVIN. Even though I thought the media was 24/7 these days, never goes to bed, never rests, I think it's a good suggestion. Is there any opposition to that idea that we go directly from this round to General Shinseki?

By the way, Senator Dayton had to leave to preside over the Senate. He will be back after his hour of presiding is over at 7 o'clock. I'm sure we're still going to be here, and he's very vitally interested in this subject.

So if there's no objection, we will just have one round of questioning, and then we'll go to General Shinseki. Okay? Is that all right with everybody?

Senator Collins.

Thank you for the suggestion.

Senator WARNER. Thank you, Mr. Chairman.

Senator COLLINS. Mr. Secretary, senior Army leadership from the Secretary to the Vice Chief of Staff have testified repeatedly before this committee about the transformational capabilities of the Crusader. Strong testimony from the Army was given before this committee as recently as March 14. Did you consult with senior Army officials and the Secretary before making your decision, or did you essentially inform them of your decision?

Secretary RUMSFELD. Senator, I guess the answer is that we went through a process over a year and a half where we had meeting after meeting after meeting. The Crusader was discussed in any number of meetings with the civilian and the military leadership of the Department. The technical question of “did someone consult before the final decision was made,” it seems to me, is an awkward one, because what took place was that I was out of town, and the Deputy was chairing a series of meetings during the week. I was in Afghanistan and the neighboring countries. I came back, and it ended up, before he made a final recommendation to me, before I ever spoke to the President, it was in the press. It had leaked to the contractors. The contractors had called Congress. The whole iron triangle worked in real time, just magic. As Senator Bunning said there’s no question but that it ends up being untidy.

I don’t know quite what one does about it in Washington, DC, when you have the intimate relationships between the contractors, Congress and the Department of Defense, and everyone has an interest, and everyone’s interested, and the minute someone hears something, before someone even finished a meeting, they were receiving phone calls about the issue.

Now, I think the answer is that the senior Army officials had, over a period of a year and a half, a great deal of involvement in this. They briefed me. They briefed the Deputy Secretary. On the other hand, it is perfectly possible for someone to say at the last moment that they did not know the last decision. But that’s true with everything, with me, with the President. The President—we have interagency things, just as we do in the Pentagon where we have inter-service things. When the services make their recommendations, it comes up, and they have to be melded together at some point, because the combatant commanders don’t fight Army or Navy or Air Force. They fight joint, and they have to. So someone has to pull that together.

Senator COLLINS. That’s certainly true. What I’m trying to determine was the extensiveness of consultations and whether or not you would disagree with press reports that said that Army officials were surprised by your decision.

Secretary RUMSFELD. There’s no question but that a single person in the Army could say they were surprised. There’s also no question but that I could say I’m surprised. When we have a big interagency discussion and the President goes off and makes his decision, I’m not in the room when he makes his final decision and he announces it. That’s the way it is in big, complicated organizations.

Senator COLLINS. Right. I’m not talking about a single member of the Army. I’m talking about the senior leadership of the Army.

Secretary RUMSFELD. Well, the Deputy Secretary was dealing with them every day.

Secretary WOLFOWITZ. We had months of intensive discussions with the Army at all levels, including staff levels, including my level with the Secretary of the Army, and a great deal of exchange of views. As the Secretary said, when it came to the final moments of the decision, who was in the room was a different issue, but we had extensive discussions with the Army about Crusader and also as these alternatives developed.

Senator COLLINS. Under Secretary Aldridge, defense programs that have been cancelled in recent years, for the most part, because they were in violation of the Nunn-McCurdy law. What is the cost status of the Crusader program? Were there any significant cost overruns or any breaches of the Nunn-McCurdy law?

Secretary ALDRIDGE. There's only been one program that I'm aware of that's been terminated based on Nunn-McCurdy. That was the Navy Area System that I did not certify. There is no problem with the Crusader program. It's in system development and demonstration phase, which is essentially the engineering development phase. The decision was going to be made to enter into that phase in April 2003, so it has not entered into engineering development as of this date. The program was on schedule—it was within the cost estimates. There was some uncertainty with regard to performance, with regard to its weight, because they still had problems in getting its weight down. But it was not an issue of cancelling a sick program. The program was proceeding. It was a question of what is the right alternative to the program, not because it was in trouble.

Senator COLLINS. Mr. Secretary, Senator Santorum mentioned the issue of the manning—the personnel costs of DOD. People are expensive. There are lifetime costs associated with it. It's my understanding that the total crew for the Crusader for both the howitzer and the resupply vehicle is only 6 people, where you would have to have, for the Paladin, a total of 27 members of the crew to have the equivalent fire power. What was your assessment, as far as the life cycle costs and the manning costs, for the two systems?

Secretary ALDRIDGE. Let me address that. As we have said on numerous occasions, it was not a question of Crusader versus Paladin. I mean, we understand. The Paladin is an older system, although it's still only 6½ years average age. But the Crusader was going to be a better system with a better gun, with a better cockpit, with more data and so forth.

But, as we look into the future, if you go to the Future Combat Systems, which—there is no disagreement between the Office of Secretary of Defense and the Army as to the ultimate objective. The Future Combat Systems is the right direction with all of its lethality, mobility, and survivability, et cetera. So the question was—we were heading in that direction and Crusader got in the way, because it was a \$9 billion bill that prohibited us from moving in that direction as fast as we would like to have gone.

When we get to the Future Combat Systems, we're going to be looking at a lot fewer manning per unit. For example, the NetFires concept, which is, essentially, a 15-tube missile in a box that is highly mobile, taking only two people to run the whole thing, so it doesn't require all the firepower and manning, and it could be operated much less expensively than any of them even Crusader or Paladin.

So we need to move in that direction, and we need to get there faster. That's what the reallocation of these resources will allow us to do. While we're getting there, we can make the old artillery much more effective. Excalibur gets into the field 2 years earlier. It's much more accurate than it would be with Crusader, because

Crusader was going to deliver Excalibur in the year 2008—associated with Crusader. We can actually now make it available for Paladin, for the lightweight 155 and for any other artillery gun that will carry that 155, including our allies.

Senator COLLINS. Thank you, Mr. Chairman.

Chairman LEVIN. Thank you very much, Senator Collins. Senator Hutchinson?

Senator HUTCHINSON. Thank you, Mr. Chairman. I understand and know General Shinseki has been waiting patiently, and I'll try to be brief. Much of this has been hashed and rehashed. I was gone during part of it, so forgive me. I know there's been some acknowledgment—we've all got parochial interest. I think everybody on this committee, and hopefully everybody in the Senate and Congress, cares most of all about our country and the defense of our country, but we also care about jobs in our states and our communities, and these programs all involve that.

The Department has indicated that the Crusader funds might be used for transformational weapons systems like the MLRS system and the HIMARS, both of which are produced in Camden, Arkansas, so I have an interest in this, as well.

If I could just ask Secretary Wolfowitz to help me in walking through the time line on the decision-making process in recommending termination of the Crusader. I know that the chairman went through this, and I was scribbling down dates and making notes, and I'm sure I didn't get it all right.

April 29, there was, I understand, a Secretary Aldridge recommendation for termination. At some point, there was a discussion with Secretary White. Secretary White, who had reservations about that recommendation asked for a 60-day review. That there was a decision then to give a 30-day review of that recommendation or a further analysis. Am I on track on those dates at all, or—help me out, Paul.

Secretary WOLFOWITZ. Let me back up, because there was—it was a long process that began long before April 29. Forgive me if I'm repeating things that you heard already, but I think you may have been out of the room.

Starting early this year, we began both looking at how to present the issue, the argument for Crusader in the context of the 2003 budget. We also began to work on the defense planning guidance that would guide the 2004 budget. Over the course of those briefings, discussions, and extensive analyses by civilian staffs of the Under Secretary of Defense for Acquisition, the office of PA&E. Along with a number of outside people we consulted with, including retired generals, we increasingly, frankly, had some doubts about the strength of the case for Crusader. But, more importantly, we developed a much stronger appreciation of what the real alternatives were and that the real alternatives were precision systems and lighter systems like the HIMARS or the NetFires or the Future Combat System.

So all of that started to come together in April. I'm sorry Senator Bunning isn't here, but I think it is important to emphasize that in every step in this process we have tried to be as clear and direct with Congress as we can. We don't turn off our brains on the 2004 budget when we're up here talking about the 2003 budget. I was

asked by the Chairman on April 9 about Crusader. As I said earlier, what I said then is that Crusader is a system that brings us some dramatic new capabilities, but if we can bring forward some of the transformational capabilities more rapidly, we might see ways to put that Crusader technology into a different system. That was on April 9.

By April 29, Secretary Aldridge had come to me with a very specific proposal for how to do exactly that. We met with Secretary White on the evening of April 29, discussed that alternative, and my decision—I believed we should proceed in that direction. He said he wanted to think about it overnight. He left my office. It turned out, even as we were meeting, we were starting to get phone calls because of that iron triangle communication that the Secretary referred to.

He came back the next morning, May 1, and said he would like 60 days to study the alternative. We said we'd consider that, told him in the afternoon that that was too long, given where this body was in its deliberations about the budget. We thought we could do it in 30 days. But, frankly, the enormous amount of debate and discussion that had been generated by those leaks and, I think, to some extent, by the unfortunate talking points, made it clear that if we're going to have information here in a timely way for this committee to make its decisions, we had to do our analysis faster. That's how we got to where we are. We have, in fact, completed that analysis. Secretary Aldridge's office and the Army had come to an agreement about the right way to design that alternative, and we will be presenting that here shortly in detail.

Senator HUTCHINSON. It just seems to be—I think——

Chairman LEVIN. I didn't quite hear. What will be here shortly? Excuse me.

Secretary WOLFOWITZ. The specific allocation of money in the budget amendment will be here shortly.

Senator HUTCHINSON. Ideas as to where you would recommend the Crusader funds—how that would be used for other——

Secretary WOLFOWITZ. Right.

Senator HUTCHINSON.—transformational programs.

Secretary WOLFOWITZ. Right.

Senator HUTCHINSON. The question that the chairman asked at one point was what happened between May 2 and May 8, because there was an agreement, or there was a decision to give 30 days of further analysis and review, and we ended up with a decision that happened much, much quicker. Though we can talk about expedited analysis, it seems to me what really happened was that there were talking points, and there were leaks. By the way, my office didn't get those talking points. I don't know how we got left out of the loop on that. But that's really what happened. That seems to me that as far as further analysis, further review, or further evidentiary, gaining greater knowledge on it, that really wasn't what happened. That really wasn't the issue.

The issue was that we had leaks, we had talking points, and, therefore, without regard to 30 days of additional analysis and review, here was the final decision. I understand that decision-making process had been long and there was a complete analysis and that you're satisfied with the decision. But the fact in my mind is

there was an agreement, we're going to look at this 30 days more, and that ended up being truncated for a May 8, announcement or recommendation.

So do you, Secretary Rumsfeld, just for my comfort level, do you anticipate making other cancellation recommendations on programs in the coming weeks?

Secretary RUMSFELD. Senator, if I knew of any, I would do them today, because time is money. I don't know if you were here when I mentioned about our Defense Planning Guidance process, but we really had four baskets. We said, in the first instance, do this, and we don't want to discuss it anymore. Second is, come back with several options, but make sure one of the options is this, because we think that's the best option. The third is, come back with options of any type. We don't have an opinion. The fourth was, come back with a plan as to how we can improve some capability that this country needs.

A whole series of programs were put in those various baskets, and those studies will be coming along in the next 30, 60, 90, and 100 days, some places 6 months. We would like to see that we could get them done as we build the 2004 to 2009 budget. I mean, that's our job.

Senator HUTCHINSON. Mr. Secretary, you know where those baskets are a lot better than I do, and you know, where all of those are in the process. My question was, do you anticipate any of those coming to the point that you're going to be making those decisions and recommendations in the coming weeks?

Secretary RUMSFELD. My answer was my—to the best of my ability, if I knew one, I would tell you right now. I do not know how those studies are going to come out. I just can't know.

Senator HUTCHINSON. Mr. Chairman, as Senator McCain said, there's never a good time to make a tough decision. I agree with that. There's not a good time. There may not be a good way. But there's certainly a bad time, and there's certainly a bad way. From my perspective, there was some mishandling of this decision-making process.

Thank you, Mr. Chairman.

Chairman LEVIN. Thank you, Senator Hutchinson.

Senator REED.

Senator REED. Thank you, Mr. Chairman. I recognize that it's been a long afternoon. I have one general question. But I also recognize that this is a tough decision that you've made, Mr. Secretary. Regardless of the conclusion, I think we recognize the fact that you're not shy about making tough decisions, and that's a quality that I think should be recognized in a Secretary of Defense.

A lot of what we're all speculating about is what the battlefield of the future looks like. I just want to get your response to the notion that somehow related to eliminating Crusader is perhaps the perception that we won't be fighting in the future with heavy forces—with tanks, with self-propelled artillery, with mechanized infantry—that the battlefield will look a lot more like Afghanistan and other places than it does the central plains of Europe or previous scenarios.

That is an important question, because the United States Army is not the sole force for that type of warfare, but that's its marquee



mission. There's concern that this decision goes beyond simply one system, but embraces a view of what the battlefield of the future will look like. I would just like to have your comment about that.

Frankly, I guess one could argue that if we do feel the future we're fighting with heavy forces, particularly if we feel that our opponents might be capable one day of denying us space assets, like GPS, of operating in a toxic environment, that this Crusader looks a lot better than it does today when we're making the match-up based on recent experience in Afghanistan.

Secretary RUMSFELD. Senator, that's an important question, and there is no question in my mind but that the Army—that this decision ought not to be interpreted in any way as suggesting that the United States is not going to need an Army or that we're not going to need artillery. We are. If for no other reason, the deterrent effect of having that capability is what keeps other countries from developing those capabilities and believing then that they can use them against us. So the fact that every aspect of the United States Army did not end up being used in Afghanistan, which was distinctly different and, I would submit, unique. It's land locked. It's a long way from here. It's got difficult situations on its borders. It's mountainous, porous borders. So I think we ought not to think that Afghanistan's the model for the future.

I do think that our forces are going to have to be—we're going to have to have capabilities that we will characterize with respect to some of our forces, a good portion of our forces, that are light, that are rapidly deployable, that are lethal and precise. That doesn't mean that the other capabilities aren't going to be needed. So it's not an accident that we're suggesting that the funds from this particular weapons system stay with the Army and provide the kinds of things that were on that earlier chart.

Senator REED. Thank you, Mr. Secretary. Again, this has been a long hearing. We still have not heard from General Shinseki, and I think the difficulty of your choice has now been visited upon us. Thank you very much.

Secretary RUMSFELD. Thank you.

Chairman LEVIN. I believe Senator Sessions has not had a round. Senator Sessions.

Senator SESSIONS. Thank you, Mr. Chairman. I can see relief fade on the panel. [Laughter.]

Mr. Secretary, I just want to tell you, you've done a tremendous job as the Secretary of Defense of this country, even better the second time. You have really served us well. You understand the complexities of modern warfare, and you know the history of the American military. I know this has not been an easy decision.

I have people I respect on both sides of the issue. My respect for Jim Inhofe is just unbounded. There's nobody on this committee that's spent more time seeing the troops and talking about these issues than he. But I'm inclined to believe that we've just got to make this move. I intend to support you in it. It's quite possible, I believe, that we could leap ahead.

Tell us about this money. We've got \$8-or-so billion, \$9 billion left to spend. If we stop this program, can you accelerate some of these other programs that are out there in our plans? Can they actually be speeded up if you make this decision?

Secretary RUMSFELD. I think two things happen. The first thing is something bad doesn't happen. That is that as we go forward to the bow wave, the Crusader will not shove out Future Combat Systems farther than it already is, and I think that's a good thing. Second, we do—

Senator SESSIONS. When you say "shove out" our goal to reach the Future Combat System, it's being shoved out because the money isn't there to bring the Future Combat System up sooner, because it—

Secretary RUMSFELD. The bow wave that we would face if we had all of these programs and platforms in the budget, the bow waves, as they go up and become at the stage of deployment, starts going up like this. That means everything gets squeezed. What gets squeezed is what does not exist. What does not yet exist is the Future Combat System.

So there's no doubt in my mind but that the funds can, in fact, strengthen the Paladin, accelerate the Future Combat Systems, migrate the technologies from Crusader, which, in a number of instances, are impressive, into other systems, and advance Excalibur and bring forward some precision munitions, which we believe will have a significant effect on the battlefield.

Senator SESSIONS. Well, I think it's important for the American people to realize that you have—you're not cutting the defense budget.

Secretary RUMSFELD. That's true.

Senator SESSIONS. You came to this office, and you've recommended and presided over tremendous increases. As a matter of fact, we were under \$300 billion, I believe, when you took office. Then it was up \$40 billion, now up to \$379 billion in 2 years, plus the supplemental that I'm not counting in there. So that's a tremendous advancement in our commitment to our national defense, but even with that, as you noted, we've got to pay for salaries and health care and overhead and all of those things. Even with that, we don't have a dime to waste, not one dime to waste.

Secretary RUMSFELD. Exactly right.

Senator SESSIONS. I don't know the perfect answer, but I know that this isn't a decision you made just in the last few days. You've been wrestling with this decision since the day you took office. There's been hearings and meetings and committees and Congress has known this program has been under review, as have been several others. So, Mr. Chairman, I'm glad we don't have to have Congress meet down here and sit on that table to answer how we do our decision making process. [Laughter.]

It's pretty good all in all, all things considered, I think, the procedures that you have utilized. So, I will yield my time. Thank you, Mr. Chairman.

Secretary RUMSFELD. May I make a couple of comments, Mr. Chairman? One, I do want to thank Senator Inhofe. He has invested an enormous amount of time in the Army, in artillery, and his comments and suggestions in my view have contributed to a constructive development of a record.

Second, I want to clarify one thing I said to him. I said to him that the data had come from the Army with respect to the airlift of 60 to 64 in one case, and 50 to 64 in another. I double checked

it, and it turns out that the battalion information on operation and organization came from Fort Sill's draft plan for the Crusader battalion. It was meshed then with TRANSCOM's airlift loading model to produce the data that I presented. That's where that came from.

Next, we've talked a lot about what military people recommend, generals and admirals, and it's important what they recommend, and we care about what they recommend. I think the reality is that if any general or admiral is asked whether they would trade the capabilities this country has for the capabilities of some other country that may have a weapon that shoots farther or shoots more rapidly and has to go up against the joint strike capability that our country has, I think there isn't a general with his head screwed on that would not, in a second, say he wouldn't trade ours for anybody's.

Next, I think it's important that we've spent this time on this subject, not because Crusader is the only thing that's important, but transformation is important. It seems to me that if—you have to ask the question: If not now, when? Is there nothing—is there nothing—that we're doing that we can ever stop? We have to be able to address important issues, get them up on the table, talk about them, and, in an orderly constructive way, come to some conclusions with respect to them. The choices are not easy.

President Bush is determined during his term to contribute to transformation of the Armed Services. I am determined to do so. When I was confirmed, I said I was not accepting his request that I serve as Secretary of Defense to sit on top of the pile and tweak and calibrate what's going on, but I did believe things needed to be done, and I intended to make recommendations to Congress and to work with Congress to try to see that that's done.

I would say, last—several Senators have mentioned it—we simply have to care about the taxpayers' dollars. We have an obligation, because, as Senator Sessions says, the dollars, as many as there are, and it's many, many billions of dollars, hundreds of billion dollars, we still are not doing things we could be doing, we should be doing. We need more ships. We need a more modern aircraft fleet. To think that we should be reluctant to make changes in programs and to not transform and to not modernize and take those steps, and, instead, to continue doing things that we might better not do or is attractive as they might be or might not be the very best way to do something, I think, would be unfortunate.

So I appreciate your taking the time to do this. I look forward to working with you to see if we can't leave a better military for our successors.

Chairman LEVIN. Just a couple of comments. First of all, for the record, we will expect, Secretary Aldridge, your recommendation of April 29, I believe.

Second, I would make part of the record a portion of the Army Inspector General's report, a redacted portion, but it addresses an issue which has been very troubling to many of us, and that is subparagraph B on page 45, which says the following—this is the Army's own Inspector General—“The evidence established that the Vice Chief of Staff of the Army, the VCSA, received a document from a defense contractor source on April 30, 2002 which addressed the termination of the Crusader program. Prior to receiving this

document, the Army was unaware of any proposed change to the Crusader program.” That’s the Army’s Inspector General who says prior to receiving a document from a contractor on April 30, the Army was unaware of any proposed change to the Crusader program. That is a highly disturbing finding of the Inspector General. [The information referred to follows:]

SECRETARY ALDRIDGE’S RECOMMENDATION

On April 29, I recommended that the \$475.6 million of fiscal year 2003 funds be redirected into five programs. These were: Excalibur, Guided Multiple Launch Rocket System, NetFires, High Mobility Artillery Rocket System, and Crusader Technology.

ARMY INSPECTOR GENERAL’S RECOMMENDATION

The evidence established that the VCSA received a document from a defense contractor source on April 30, 2002, at 0901, which addressed the termination of the Crusader program. Prior to receiving this document, the Army was unaware of any proposed change to the Crusader program.

Finally, Mr. Secretary and your colleagues, let me just say this.

Secretary RUMSFELD. If I’m not mistaken, if I may, on that subject, so it’s part of the record right there—my recollection is that that occurred also before the Deputy Secretary advised me of his recommendation, or I advised the President of my recommendation.

Chairman LEVIN. Okay.

Secretary RUMSFELD. So the contractors were Johnny-on-the-spot.

Chairman LEVIN. Yes. There’s one thing that we shouldn’t let the contractors do, or anyone else do, with leaks, and that’s drive public policy.

Secretary RUMSFELD. That’s right.

Chairman LEVIN. I think what troubles me process-wise here the most is that after there is a process put in place that says we’re going to look at the pros and cons and the alternatives for 30 days, that because something is leaked to the press, then suddenly there is a change of course, and a policy decision is made that had not previously been made.

We cannot allow leaks to drive policy in this town, or else we’re all going to be driven crazy. Leaks occur every single day, and we will make some bad policy decisions, because leaks are a way of life around this place. So I think that when you acknowledged that it was leaks to the press that suddenly truncated that 30-day process, and now we’re not going to let that 30-day process finish, where the pros and cons are completed, where the alternatives are looked at, tough decisions are made tougher. There’s no doubt these are tough decisions, but they’re made a lot tougher when there’s a process put in place, the alternative are supposed to be looked at, and a decision is supposed to be made, then there’s a leak, and boom! That’s it. We’re now making a decision, and that’s the end of that.

Secretary WOLFOWITZ. Mr. Chairman, if I might just say—

Chairman LEVIN. I’m going to have to bring this to an end. I think you’ve had plenty of time to comment. I mean, someone’s going to have to have a last word here, and it’s going to—

Senator WARNER. I’d like to have a word.

Chairman LEVIN. You can have a word. [Laughter.]

In that case, since I'm the chairman, I'm going to have the last word, so I'll finish after Senator Warner.

Senator WARNER. Mr. Chairman, I think we've had a very good hearing. I approached you on the seriousness of this matter. Our colleague over here, we met as late as yesterday afternoon on how we would put this hearing together. So in every way, I think you've been eminently fair, which is your style, to your members and fair in getting the facts out. We've built a good record and we'll have to assess that record.

Mr. Secretary, I was impressed with your concluding remarks. We always have to be conscious of the taxpayer. But to you, my good friend, contractors have freedom of speech, but they don't drive policy. However, they're the ones who are building the equipment enabling the Armed Forces of America today. I value some of their views and some of their expertise and frequently call upon it. They will not have the final say with me, but I wish to go on record that they are a valuable part of our defense structure. The industrial base is something we're constantly concerned about.

Secretary WOLFOWITZ. Mr. Chairman?

Chairman LEVIN. I reserved the last word, but Secretary Wolfowitz, why don't you get the second-to-the-last word?

Secretary WOLFOWITZ. I just wanted to say, what drove our decision on timing was the need to get information to this committee in a timely way for your deliberations and a decision that we could do so, and we have been able to do so.

Chairman LEVIN. That runs exactly counter to the chart you put which says there's always deliberations going on.

Let me now have the final, final word. One other thing for the record, and that has to do with the cancellation costs. We're going to need more information on that. Would you give us, to the best of your ability and for the record, the comparison of cancellation costs if cancelled now compared to if terminated at or after Milestone B. I know there's negotiations that have to take place that affect that, but I think you can give us the range of the likelihood of those costs.

[The information referred to follows:]

#### TERMINATION COSTS

Negotiations between the prime contractor, United Defense Limited Partnership, and the Department of the Army have been initiated. The prime contractor has been asked to prepare an initial rough order of magnitude as to the termination costs. The data have not been provided to the Army as of September 11, 2002.

We've been informed, and I don't know that it's accurate, that termination costs would be significantly higher than they would be if we went to a Milestone B. It may or may not be true, but we need some information on that point, because the taxpayer dollars are critically important, and we want to make sure that every dollar that is spent for defense will make us stronger.

Mr. Secretary, you and your colleagues have been here a long time today. We appreciated your being here. We appreciate you, Secretary Wolfowitz, Secretary Aldridge, for all the work you do. We will now move to our second panel.

We're going to take a 10-minute stretch. [Recess.]

We'll come back to order, and we welcome you, General Shinseki, to the committee this evening. We very much look forward to your testimony. I'm going to ask Senator Warner, who's going to have to leave us in a few minutes, if he would make a welcoming statement.

Senator WARNER. Thank you, Mr. Chairman. General Shinseki, I will stay for part of your statement. I've read your submitted statement. Unfortunately, I must leave shortly to go to the Senate floor for a debate on a pending bill about the enlargement of NATO. I have some views that are at variance with other colleagues. The Chairman of the Foreign Relations Committee is awaiting my presence on the floor so that we can engage in a colloquy on that subject, which is very important to our overall future security.

So I thank you for this opportunity. As I look back on my years here, I'll never forget the day that you came before this committee for confirmation, with a magnificent introduction by our valued colleague, Senator Inouye, and your strong testimony. You're a soldier's soldier. This has not been an easy chapter, but you're up to it, and you will so express your views today as a professional, the professional that you are, sir.

General SHINSEKI. Thank you, sir.

Chairman LEVIN. General Shinseki, I'm not going to repeat what I said in my opening statement. Did you by any chance hear it?

General SHINSEKI. I did, sir.

Senator LEVIN. Okay, so that you are aware of the fact that we said some things that relate very much to what the difference is here, that's an honorable difference, that we expect you to give us your best professional view and your personal view, as you've committed to do, and that we think this strengthens our country when we have this kind of exchange. Then after it is all over, we know that, as a good soldier and you believing in the civilian control of the military, you will do your duty to carry out any legal order that's given to you, and it's an honorable tradition. You're an honorable person. We all admire you, and it's now your turn to give us your testimony.

**STATEMENT OF GEN. ERIC K. SHINSEKI, USA, CHIEF OF STAFF,  
UNITED STATES ARMY**

General SHINSEKI. Thank you, Mr. Chairman, Senator Warner, and other members of the committee. I have a longer written statement, Mr. Chairman, that I'd like to have entered for the record.

Chairman LEVIN. It will be made part of the record.

General SHINSEKI. I'd like to make a very short opening statement here.

Mr. Chairman, Senator Warner, distinguished members of the committee, it's again my great privilege and thanks for the opportunity to appear before you.

Over the past several weeks, lots of exchanges have occurred on the subject of today's testimony. Some of it has been captured publicly in print. I, for one, regret the degree to which some of those utterances have gone beyond what is normally what we're accustomed to in the normal course of our business.

For example, some have characterized this acquisition process as a disciplinary action between the Office of the Secretary of Defense and the Army. However, the SECDEF has a mandate to set priorities within limited resources, and he has done that. So descriptions by those characterizing this as a pitched battle are not helpful.

Some describe Members of Congress as being driven primarily by special interests. I've had occasion to work with many Members over the past 3 years, and with all of you from this committee, and in some cases because the Army was having to make its own tough decisions to terminate or restructure some 29 programs. These were difficult discussions. Without fail, Members supported the Army and sided with what was best for the national security. So allusions to Members' self interests are not helpful in understanding this issue.

Some have described the leadership of the Army as slow to change, lethargic, trapped in a Cold War mentality, lacking in talent and toughness. Well, that's not accurate either. So those discussions are equally not helpful.

What is helpful to this discussion is to try to understand why this service chief, who has been devoted to fundamental and comprehensive change in the Army, would have supported a weapons system that does not match the characteristics we laid out 3 years ago for our own future Objective Force. Crusader is heavier than we want for the Future Combat Systems that we have characterized as being more deployable, more agile, more lethal, and more survivable than today's systems.

Three years ago, we directed corrective action to move Crusader in the direction of a lighter and more deployable configuration. Frankly, it didn't go as far as we wanted. 60 to 40 tons is about as much shedding as could be accomplished in this amount of time. Nevertheless, this 30 percent reduction provided a C-17 deployable indirect fire system.

Why would we have continued to support a need for Crusader? Because there is a requirement for organic indirect fire in the close fight to support and protect soldiers who are carrying the toughest part of battle, the last several hundred meters of the fight. We didn't have any other solutions for this requirement in the mid-term. We need to have a solution for this requirement, and we will find one.

We wanted to provide soldiers the best available warfighting capabilities to fight, win, and survive the rigors of combat. We owed them that effort, and we still do. Every decision we make rests upon that principle—as best we can, to provide soldiers what they need to execute successfully the missions that we send them on. That is and has been the basis for the Army's position on issues of this sort: the accomplishment of the mission and the welfare of our soldiers.

We have a valid requirement for organic indirect fire, and we will move aggressively to solve that requirement. We will work closely with the Office of the Secretary of Defense following decisions, appropriate decisions, that are rendered to find solutions. We appreciate their commitment to support an accelerated time line in reaching those solutions on behalf of soldiers.

Mr. Chairman, thank you for this opportunity once again to represent the Army. I look forward to your questions.

[The prepared statement of General Shinseki follows:]

PREPARED STATEMENT BY GEN. ERIC K. SHINSEKI, USA

Mr. Chairman, distinguished members of the committee. Just over 2 months ago, Secretary White and I reported to you on the posture of our Army. Then, as now, the Army embraces an ethos of service to the Nation. Its primary mission is to conduct prompt and sustained ground combat to fight and win the wars of the Nation—decisively. Because of that ethos and that mission, the Army decided 3 years ago to undertake fundamental and comprehensive change to prepare for the requirements of the dynamic strategic environment we envisioned for the early 21st century. That commitment was to undertake change so dramatic and fundamental that we felt we could not simply call it “modernization,” but labeled it “Transformation.” We felt it had to be far- and wide-reaching enough to touch the culture of the Army, a proud and battle-tested culture. So on October 12, 1999, the Army articulated its vision for its future that defined how we would meet the Nation’s requirements now and into the foreseeable portion of the 21st century. With the help of this Congress, we have been steadily generating momentum and building support for that vision—a vision that addresses our people, readiness, and transformation. Army Transformation is first and foremost about dealing with the volatility and uncertainty of the 21st century strategic environment. It leverages the potential of emerging technologies, new concepts for warfighting, greater organizational versatility, and the inspired leadership that would generate a force that is more strategically responsive, more deployable, more agile, more versatile, more lethal, more survivable, and more sustainable than the forces we have fighting the global war on terrorism today. It would also provide stability in those regions where American presence contributes to keeping the peace, deterring potential adversaries, and reassuring our Allies about our willingness to take on the tough missions asked only of a global leader. These are the capabilities we must have. The events of September 11 and our operations since that day have validated the need for Army Transformation and the urgency to move even faster. In crafting our vision, we believed that Army Transformation was essential if we were going to keep this great Army the best, most dominant ground force for good in the world.

Transforming the Army involves the management of risk—balancing between today’s readiness to fight and win wars decisively and tomorrow’s need to have the right capabilities in order to be equally ready every day hereafter for the foreseeable future. It requires having a consistent overmatch in capabilities while simultaneously reducing our vulnerabilities to those who would threaten our interests—and then dominating them should they miscalculate.

Army Transformation encompasses synchronous change in the Army’s cultural imperatives: doctrine, organization, materiel, training, and soldier and leader development. Going beyond the mere modernization of materiel, Transformation is a fundamental review of how the Army addresses its cultural imperatives in order to execute a doctrine for full spectrum dominance in the 21st century. Thus, Transformation will result in a different Army, not just a modernized version of the current Army.

As we transform, we must have a reliable and continuous process for assessing the emerging threats and assuring that we have required capabilities to defeat them decisively. To pursue this kind of capability, the Army described a transformation process requiring synchronous change along and among three primary vectors: an Objective Force vector, a Legacy Force vector, and an Interim Force vector—one Army, not three, managing acceptable levels of risk while maintaining warfighting readiness for the Nation.

The Objective Force is our main Transformational effort; it is the force of the future and the focus of the Army’s long-term development efforts. It seeks to leverage advances in technology and in organizational innovation to transform land-power capabilities. Better than 90 percent of our science and technology investments are focused on this future Objective Force.

By comparison, the Legacy Force of today’s Army—which serves in Afghanistan, Kosovo, Bosnia, the Sinai, Korea, the Philippines, Kuwait, and Saudi Arabia among other locations—enables us to meet our near-term military commitments. Until the future Objective Force is fielded, the Legacy Force will provide the formations within which soldiers will fight our Nation’s wars, engage and respond to crises, deter aggression, bring peace and stability to troubled regions, and enhance security by developing bonds of mutual respect and understanding with allies, partners, and



even potential adversaries. The Legacy Force is a product of Cold War designs that include operational shortfalls that we cannot wait for the Objective Force to correct.

Most evident among these operational shortfalls is the gap between early arriving light forces, which deploy quickly but lack staying power for protracted, high intensity conflict, and later arriving heavy forces, which provide decisive combat capabilities but are slower to deploy and difficult to sustain once deployed.

This gap in capabilities, revealed during the Gulf War over 10 years ago, requires an Interim Force to bridge the shortfall in capabilities between today's light and heavy forces. With your support and OSD approval, the current budget funds an Interim Force consisting of six Stryker Brigade Combat Teams, which we will begin fielding early next year.

Another operational shortfall of even longer standing has been in organic indirect fires. There are three roles for the employment of indirect fires: the suppression of enemy forces, destruction of enemy capabilities, and protection of friendly forces. Indirect fires suppress enemy forces, keeping them in their "holes" and unable to engage our formations as we maneuver to destroy them. Suppressing fires enable ground forces to create synergy between their ability to maneuver and their ability to distribute and focus direct and indirect fires in the execution of combat maneuver doctrine—fires enable maneuver, and maneuver facilitates the execution of fires. Effective synchronization of fires and maneuver leads to decisive outcomes over our adversaries.

If a target can be identified and accurately located, that target can be destroyed. Those targets may include enemy forces, equipment, or infrastructure. Precision munitions play an enhanced role here. Accurate, organic, timely indirect fires at the immediate disposal of ground commanders have been the critical means by which to destroy enemy indirect fire assets that threaten our soldiers—the counterfire mission of artillery.

Finally, there is uncertainty and risk in every operation; commanders need the responsive capability to rapidly and effectively generate "walls of steel" to deny the enemy any opportunities by protecting the exposed flanks of our forces, a mission which will become even more important on a future, non-linear battlefield where enemy formations will be more widely dispersed. Indirect fires used in this protective role isolate portions of the battlefield and prevent enemy forces from maneuvering, reinforcing, or attacking our formations.

Successful ground combat against determined enemies requires responsive and timely indirect fires. Organic and inorganic indirect fire support are important to ground combat operations, but organic fires have been indispensable to success.

A variety of platforms—cannons, mortars, missile and rocket launchers, attack helicopters, unmanned combat aerial vehicles, joint air assets—and enablers such as target designation and network capabilities, better sensors, more responsive fire control, more accurate fires, and more lethal munitions contribute to the complementary delivery of those fires.

The Army's need for organic fires requires responsive, immediate, 24-hour-a-day, 7-day-a-week, accurate support in all weather and terrain, capable of re-engaging fleeting targets, and sustainable for as long as they are required. These indirect fire capabilities are what we must provide to our soldiers as they fight to win the close battle.

Secretary White and I have testified consistently about the need to fill these requirements. That requirement remains valid today, and we intend to fill it. My testimony on that requirement has in the past, and is today, based solely on my best, professional military judgment. We have also testified in the past that the redesigned Crusader artillery system best satisfied that requirement in the mid-term. For fiscal year 2003, the President's budget submission funded that weapon system, and we supported that budget. Now, as part of a process that demands making hard, critical choices among a wide variety of priorities—all of which are dominant—the President and the Secretary of Defense have decided to recommend terminating that system. They have done so in reinforcing their commitment to Army Transformation and the need to accelerate it. They have also validated the continuing requirement for responsive, organic indirect fires for ground forces.

The Army has its order, and we are executing it; we are moving aggressively to try to find alternate solutions to satisfy this requirement in light of this decision. The Army will manage risk and remain ready even as it transforms.

Mr. Chairman and distinguished members of the committee, nearly 3 years ago, the Army committed itself to transforming the way it will fight to win the wars of this new century. This committee elected to underwrite Army Transformation at a time when little help was available anywhere, and Transformation was a new and unknown term. Today, when one considers the magnitude of what we have accomplished with your support, it is staggering.

In closing, let me express my continuing gratitude to members of this committee, to our soldiers and civilians and their families for what they do for the Nation, and for how very well they do it, and to all of our men and women in uniform. They are doing the heavy lifting in this global war on terrorism; they are fulfilling our ongoing commitments to peace and stability around the world; they are training hard to fulfill today's missions and preparing for those that will arise in the future; and they remain the centerpiece of our formations. We can never do enough for them. It is with their welfare, their requirements, and the accomplishment of their missions in mind that our decisions have been and will continue to be made.

Chairman LEVIN. Thank you very much, General. We'll have 8-minute rounds for questions. Let me call on Senator Warner first. Senator WARNER. Thank you.

General, I think the fundamental question before us is, do you, in your own personal and professional opinion, believe that this system is essential for the future transformation of the United States Army?

General SHINSEKI. Senator, my best military judgment is contained in the President's budget in which Crusader is a part. It's there because it meets both mid-term need, in terms of risks that we understand and we've been carrying for some time, and it also has technologies that we believe will be transferable to any future weapons capabilities that would go into that future Objective Force. In fact, we see that the Crusader capabilities would have been around for a significant period because of the units in which this weapons system was intended to be introduced.

Senator WARNER. So I judge that your answer is yes, that it is still needed, in your professional judgement.

General SHINSEKI. The requirement is still there, yes, sir.

Senator WARNER. Then that's an answer that requires a follow-up. The requirement, if it continues, can that requirement be fulfilled by the alternatives that have been addressed today in earlier testimony, alternatives, we are advised, which can be moved up such that they become available operationally to the Army earlier than previously stated?

General SHINSEKI. Senator, we have not completed an assessment at this point. I think if we go back to what was intended as an assessment timeline, an analysis of alternatives was scheduled for spring of next year. That analysis over a period of time has been moved to a much shorter timeline, September, and then about 30 days. Frankly, we have not done the analysis.

What is described as opportunities for earlier fielding all have capabilities that are useful, but we would have to look at what Crusader would have provided and then compare that to what is the likely contributions of all of these systems.

Senator WARNER. You state forthrightly you have not had the opportunity to do the analysis.

General SHINSEKI. Have not.

Senator WARNER. But I judge that the previous panel feels that they've had the opportunity to do that analysis and have so stated today that in their judgment the alternative options provide the Army with artillery capability which will be stronger than could be offered by Crusader. So have you studied their analysis which gives rise to the opinions they shared today?

General SHINSEKI. I have not had that opportunity, Senator.

Senator WARNER. All right. My questions are completed. I thank you, General.

Chairman LEVIN. Thank you, General.

Senator WARNER. I find those answers very forthright and somewhat astonishing.

Chairman LEVIN. In your judgment is Crusader the best approach to meeting the requirement, based on what you know?

General SHINSEKI. It is in my best judgment. It's the reason why we had it in the President's budget—in the mid-term it addressed the risk that we have been dealing with for some time, since the experiences of the Cold War—or the Gulf War, our inability to keep our artillery systems with our tanks and our Bradleys. In fact, we had to slow our pace of attack down in order to keep artillery with us, the range issue that we had, by being outranged by enemy systems. For these reasons, Crusader fixes what we've known has been a shortfall in our fire for 10 years now.

Chairman LEVIN. Could you be a little more explicit on what that shortfall was that was ascertained during the Gulf War that—

General SHINSEKI. Well, it was the lack of the ability of our artillery to keep up with our tanks, for one thing. So you would make a movement with a maneuver force, and then you'd have to slow the attack down for the artillery to catch up. When they got into position, the potential for being outranged by our adversaries also put our maneuver at a disadvantage, and so you had to get far closer in under the potential fire of our enemy artillery in order for us to be effective. It's that—

Chairman LEVIN. So range and speed?

General SHINSEKI.—breakdown in the calculus of how we would like to fight.

Chairman LEVIN. So in terms of both range and speed?

General SHINSEKI. Range, speed, the volume of fire that we're able to put out. Paladin, on a sustained rate of fire, is somewhere between 1 and 3 rounds per minute. The Crusader will fire a sustained rate of fire of 10 rounds per minute.

Chairman LEVIN. So 3 to 10 times greater.

General SHINSEKI. That's correct. Three to four times greater.

Chairman LEVIN. Three to four times greater. In your best judgment—well, let me ask what your reaction was to any cancellation of Crusader. If so, when?

General SHINSEKI. I don't know that I was asked directly any question like that. In the period of time that discussions have been underway for the Defense Planning Guidance, there have been studies that were designed to try to answer the question of trade space and options. One study dealt with a Crusader in a variety of options, one of which was cancellation. This is the study that we were in the process of putting together. That study was never accomplished.

Chairman LEVIN. Why?

General SHINSEKI. Just time.

Chairman LEVIN. Were you in the middle of a 30-day study when this was cancelled?

General SHINSEKI. Well, we were putting together a study that was designed to answer the question by September.

Senator LEVIN. Then at the end of April, was there not a decision made that within 30 days the Army would be putting together an option paper looking at various alternatives?

General SHINSEKI. That's correct. There was at one point a discussion of termination with other alternatives, and that study is what we were in the process of putting together, the 30-day study.

Chairman LEVIN. So termination was one of a number of alternatives which was being looked at?

General SHINSEKI. One of the options, that's correct.

Chairman LEVIN. That was the study that was, in effect, going on when the termination decision was made. Is that correct?

General SHINSEKI. That's correct. We were really pulling together the study, in fact, and putting the study group together.

Chairman LEVIN. Did somebody call you into the office and say, "Hey, we know that you're in the middle of a 30-day study, but the decision has now been made to terminate. What do you think of it?"

General SHINSEKI. I was informed of that 7 or 8 May by the Secretary of the Army.

Chairman LEVIN. Were you surprised?

General SHINSEKI. I was surprised that it was terminated.

Senator LEVIN. You weren't consulted prior to that decision, relative to termination?

General SHINSEKI. Not to terminate.

Chairman LEVIN. Do you know of anybody, any uniformed member of the Army, that was consulted prior to that decision to terminate Crusader?

General SHINSEKI. I am not personally aware of anyone.

Chairman LEVIN. We had some testimony relative to the statistics that it would take 60 to 64 C-17s to move 18 Crusaders and resupply vehicles with their basic ammunition loads and ancillary vehicles and equipment. The GAO said it would take four C-17s to move two Crusaders and resupply vehicles with their basic ammunition loads. Now, do these figures sound accurate? Would you explain when you would fly two Crusaders and when you would fly a battalion of 18 Crusaders or when you would deploy by ship? I mean, how does that issue get into your thinking?

General SHINSEKI. Well, I think it's important on how the question is asked. I think if you ask someone what it takes to fly an entire Crusader battalion, you're going to get a computation that has trucks and bullets and water associated with that.

But I think it's important to remember that the Crusader program today is not the Crusader program that was in place 3 years ago. Three years ago, we decided to take the Crusader program and restructure it and focus those assets into a single offensive/counter-offensive corps that we intended to be the punch, so to speak, if we had to go to a large war scenario. That corps deploys by sea, not by air.

At the same time, we directed that, because of the planned weight of the Crusader at that time and roughly about 60 tons, as I recall. The Army directed that that was going in the wrong direction, and we wanted immediate movement to take the size of the Crusader down. Today, I believe the transportable weight of the Crusader is about 40 tons.

We would still send Crusaders by ship. That is the intent, for them to go with the heavy corps. If we had a contingency in which you needed massive fire power on a short-notice basis, you could take a gun platoon of Crusaders, three-gun platoon, with its associated resupply vehicles, and you could probably get them out the door on about six aircraft. They would be three times the fire power, but they would also be transportable. The contingency for which you would do that is to either have them in a contingency where perhaps just that gun platoon was required to augment other light forces that are on the ground, or it is the lead contingent to provide fire and security as the heavier force comes in by sea.

The intent of flying an entire battalion of Crusaders, I don't think, was ever in anyone's computation. But if asked, I'm sure that there is a number there that would be significant.

Chairman LEVIN. In other words, that was never the plan.

General SHINSEKI. It's never been the intent to ship a battalion of Crusaders by air.

Chairman LEVIN. By air. I think Senator Akaka is next. Then we'll also go back to the transporting of the Crusader.

Senator AKAKA. Thank you very much, Mr. Chairman, and thank you, Senator Inhofe. I have to preside at 7:00, so I'll ask just one question. I have others, but I'll ask one question.

General Shinseki, you know that we're very, very proud of you and your work, your position and what you've stood for as an Army man. We certainly prize your opinion. So my one question to you at this time—and this would be asking your opinion—what is the impact of the decision to terminate the Crusader program? What impact would that have on the United States Army and its transformation plans?

General SHINSEKI. Well, there are several. But the two I would point out is, one, dealing with the risk that we know that we've been carrying in terms of a shortfall in artillery capability that the Crusader was intended to fill. That window of risk is extended now until we find a replacement system for it. We are going to work aggressively to do that. It is a shortfall in fire. We don't want to be extended any longer than we have to.

The second impact would be to the kinds of technologies that are resident in the Crusader: the command and control, the lightweight materials that are tied to the tungsten gun mounts and other aspects of lightening components of weapons systems, the pre-robotics investments that go into the cockpit of the Crusader, the liquid-cooled cannon that puts out 10 times the amount of sustained artillery fire than a comparable system, and the range of the weapon. Given the high rate of fire and just what that does to a gun tube, and yet to be able to get the range that this was intended to get are all technologies that we think are important and we would find ways to keep for transformation purposes. We'll find a solution here.

Senator AKAKA. Thank you very much. Thank you, Mr. Chairman.

Chairman LEVIN. Thank you very much.

Senator Inhofe.

Senator INHOFE. Thank you, Mr. Chairman. Before asking a question, Mr. Chairman, I think it would be important to clarify something that has nothing to do with the testimony of General Shinseki as to the cost of termination.

I outlined four areas of cost of termination. One was the contractual cost of termination. I think it's very important that we get the direct answer that you have asked for, Mr. Chairman, as to what that cost is going to be, because the range that I have heard I used in my opening statement. I believe that to be true. In the event we would have a free ride to the AOA, which would answer all these questions that haven't been answered today—in other words, if that \$475 million is going to be met or exceeded in termination costs, either direct or indirect, then I think we need to know that. I believe that it would come close to that amount. If we wait until the end of the contract period, which would reach the AOA sometime in March, the cost of termination would be zero. It's very important that we all understand this if what I'm thinking is true and, so, we need to find this out. I think it's very important, Mr. Chairman.

The question comes up: Can the requirement be satisfied by alternatives? I think, General Shinseki, that we don't really know that until we see the analysis of those alternatives. One of the things that came up was a question as to whether or not it could be used in Afghanistan. On March 14, General Keane gave us an answer to that, and he went into more detail in his answer than I'll go in. He talked about how specifically two of those would have to come in. It might take two C-17s to bring them in on short notice. Then he talks about the road to Kandahar and how to get them down to Gardez and all of that.

But then he said we could have used the Crusader in support of our troops, who were attacking in the mountains and get responsive artillery fire with that degree of precision at considerable range and distance that we can't do with any of our other systems. We'd have to get considerably closer to the mountains than what we could today with this system—and we would have had to have more forces to protect them. Do you agree with that statement that General Keane made?

General SHINSEKI. I do, Senator.

Senator INHOFE. Another question has come up as to whether or not this would be in lieu of moving to the Objective Force or as support for the Objective Force. I remember testimony that you had that I used in my opening statement when you said that technology is what we need to continue to develop so that in years ahead, as we go to the Objective Force capability, which is what we all want to get to, is to transition this into robotics systems that we're looking at. Does that statement still stand today?

General SHINSEKI. It is. It does.

Senator INHOFE. Thank you, sir. General Shinseki, I also think it's important to kind of pursue this a little bit, because there is a lot of talk about precision. Of course, if we're talking about the Excalibur, that's something that would have, if anything, more precision, because you have a longer range in the projectile that could be used with the Crusader, as opposed to the Paladin. But I believe there are times in combat, and I'm going back long ways to my

Army days, but when the sheer number of artillery rounds are more important than precision, such as suppressive fire and final protective fire. Would you agree with that, and would you elaborate a little bit on the necessity to have the sheer volume of rounds used in combat?

General SHINSEKI. May I take a little bit of time to answer that question?

Senator INHOFE. Yes.

General SHINSEKI. I would suggest to you that there is a doctrine we follow in warfighting, and that doctrine emphasizes several things. One is that we went on the offense—you must be able to defend well, but you have to be able to have offensive capability, because that's what breaks down the other side.

When we talk about winning on the offense, it is also about seizing the initiative, making the first move and being bold about it, and then denying that initiative to your adversary, who wants it as well, and then building momentum and putting so much pressure on him that he either collapses or leaves. If you're going to do that, the elements of synchronizing that kind of warfighting doctrine, which is ours, talks about four or five things as being elements of how you synchronize that power. One is fire. One is maneuver. Protection is a third. The fourth is leadership. The fifth is information, because it empowers all of that. But the two primary pieces of this is fire and maneuver. Generally we talk about that being both a direct and an indirect fire capability.

Indirect fires are a key part of the synchronization between a maneuver and direct fire, because it does several things. One, if you have accurate locations on enemy capabilities, you can apply destructive fire on them, indirect destructive fire. Precision works there. If you have imprecise locations, or if you just know that there's enemy force out there, but you don't have them accurately located, precision doesn't help you very much. The ability to suppress a large area by a volume of fire, dumb rounds, cheaper dumb rounds, if necessary, is effective, because it will keep him in his hole. That allows you to make the maneuver to such a point that you can then do the close fight.

The array of fire available—indirect fire—available to a commander run the spectrum of mortars, cannons, of which Crusader would be a piece, missiles, rockets, attack helicopters, and then high-performance air platforms that deliver munitions from the air. All of them have utility in this discussion of fire.

A precision 2,000-pound bomb has great utility when you have an uncomplicated, accurately-located target. There is no better weapon. But if that target is complicated, either by concerns about collateral damage or the close proximity of friendly troops or innocents to such point that the size of the warhead is not useful, precision all by itself doesn't matter.

At some point in this close battle of fire and maneuver, we get to engaging the enemy in such distances where you come down to a select number of weapons systems that are useful. Rockets are not useful because of the large footprint over which they throw their bomblets. High dud rate of those bomblets is not something we like marching through. So you come down to the cannon capabilities—mortars, short ranges with mortars, and then your cannon

artillery—which means that if you have cannons that can mass fire and keep your enemy in his holes until you achieve that close battle where you can take down his objectives, they are very useful.

Precision warheads for those cannons are also of importance. For example, Excalibur, which was part of our program, which was something that was intended to be developed and fielded some time around 2012, I believe. With the decisions to accelerate, we'll pull that forward and see what's possible.

Senator INHOFE. That's an excellent answer. I appreciate that.

Mr. Chairman, there are two other things I'd like to add and I know my time has expired.

Chairman LEVIN. We're going to have a number of rounds, so you can proceed.

Senator INHOFE. The question was asked by the chairman about the 3-to-1 ratio, and you started off saying 10-to-1. In a sustained rate of fire, isn't it true that if the ratio is 10-to-1, that it would be 10 per minute, as opposed to 1 per minute on the Paladin.

General SHINSEKI. The Paladin, at a sustained rate of fire, would be a 1 round per minute, and the Crusader, a 10-round sustained rate of fire.

Senator INHOFE. That's good. I appreciate that.

All right, Mr. Chairman.

Chairman LEVIN. General Shinseki, if the Crusader funding was used instead for precision munitions and for accelerating the indirect fire capability of the Future Combat Systems, do you believe that those technologies could be available in time to fulfill the requirement the Crusader was intended to meet?

General SHINSEKI. I don't have a good answer for you, Mr. Chairman. Frankly, when we laid out our timelines for the Future Combat Systems, a non-line-of-sight weapons system as part of that transformation effort was not intended to be addressed until about block III, which would have been 2014 timeframe. Part of that was driven by the belief that, in the interim, the Crusader's capabilities would give us significant fire along with the residual Paladins in the force.

I do appreciate the apparent commitment here that says that we are being asked to accelerate a variety of weapons' warheads and also Future Combat Systems non-line-of-sight cannon, which is the artillery variant of that, to try to get that into the fiscal year 2008 timeframe when Crusader would have been fielded. I'll have to go and take a look.

Chairman LEVIN. How long would it—

General SHINSEKI. If it's possible, we'd like to do that, but I'm not—

Chairman LEVIN. How long would it take you to give us your opinion on that option? Is that a matter of days? Weeks?

General SHINSEKI. Not in weeks. I mean, I'd have to go and look. This was not something we had even addressed as part the initial block I package for future a combat system. It was way out there, and I'll have to go and try to find out what it would take to get a good answer for you. At this point, I'm more interested in a good answer than a fast one.

Chairman LEVIN. Yes. Could you let us know as quickly as possible when we could get your answer to that question?



General SHINSEKI. Yes, sir, I'll do that.  
[The information referred to follows:]

TECHNOLOGY ASSESSMENT

In the memorandum from the Under Secretary of Defense (Acquisition, Technology, and Logistics) to the Secretary of the Army, subject "Crusader Artillery Program Termination," dated May 13, 2002, the Under Secretary of Defense directed the Army to review the Crusader program, identify desired technologies, and report the results before June 30, 2002. I believe that it would be premature, at this time, to speculate on our ability to transfer, accelerate, or develop these technologies by a specific timeframe prior to completing the review directed by the Under Secretary of Defense. The results of our review should be available after the end of June 2002.

Chairman LEVIN. Is it your opinion that Crusader represents the surest way to address the shortfall of fire support in the mid-term?

General SHINSEKI. That was my best military judgment, that that was the solution to the problems we had discovered and have been carrying now for about 10 years.

Chairman LEVIN. One of the questions which was raised relates to the question of precision and accuracy. We heard from the first panel that when the JROC reviewed Crusader 8 years ago, in terms of the requirement for rate of fire and maneuverability, they did not review Crusader for a set of requirements relative to precision and accuracy. Is that correct?

General SHINSEKI. That may be correct. I just don't have that information off the top of my head. But I will tell you that someplace here in the development of Crusader, the probable error at about 30 kilometers, because your dispersion will vary with greater range. But at 30 kilometers, a Paladin will be several hundred meters in dispersion, more than 200, something less than 300. At the same range, Crusader's design was to get inside a hundred meters, 95 meters in circular error probable. So whether it was intended as a key performance parameter or not in the design, that kind of accuracy has resulted.

Chairman LEVIN. Is there any reason why there could not be a JROC to re-validate the requirement to include accuracy as one of the criteria?

General SHINSEKI. I'm sure that could be done. In fact, the concerns about the accuracy of the weapons system resulted in Excalibur being put into study and development so that after the Crusader arrived, that we would have greater precision with a good bullet and Excalibur. It was our understanding that it was not going to be available much before 2012. We in the Army decided, through our systems review process, to move that up to 2008. That decision has yet to take effect. I mean, it was our intent to do that so that it would arrive at about the same time that Crusader did so that range and precision capabilities would arrive at about the same time. That was our intent.

Chairman LEVIN. The Inspector General of the Army concluded, after doing his interviews, that the evidence established that the Vice Chief of Staff of the Army received a document from a defense contractor source on April 30, which addressed the termination of the Crusader program. Prior to receiving this document, the Army was unaware of any proposed change to the Crusader program. As far as you know, was that accurate?

General SHINSEKI. That's correct. In fact, I think perhaps the only person that knew at that point was the Vice Chief whenever this information came in and—at least some indication that consideration was underway, not that the termination decision had been made.

Chairman LEVIN. One of the fundamental questions that we face is the relationship of the cancellation of Crusader to the transformation of the Army. Now, you've been the godfather of transformation. I think if anybody is connected to the transformation, at least in the Army, it is General Shinseki. Yet the argument has been made against the Crusader that it is not transformational. So General, Transformation, what is your comment about that issue?

General SHINSEKI. Well, sir, I wish 3 years of trying, my tenure in office, to drive this weapons system in the right direction would have given us a lighter gun. But in 3 years, taking it from 60 to about 40 tons is what was achievable. We would have continued to demand better sizing for the system. But there is an understanding, when you're dealing with recoil engineering, that there is a certain point at which a base foundation for a recoil system—frankly, you just can't make the rules, the scientific rules, go beyond what is in the realm of the possible.

We were looking at new rules for the Future Combat Systems, but in the mid-term we still had a problem with dealing with this 10-year shortfall in fire that we've tried to fix. So where weight is concerned, we didn't go far. It just didn't go fast enough and far enough. But where all the other technologies with Crusader is associated more than convinced us that we needed this to fill the requirement that we understood since the Gulf War that we have had as an issue of risk.

Translate that a few years forward now in post-Anaconda and post-Afghanistan. In the first 2 days of Operation Anaconda, 28 of our 36 casualties were due to indirect fire from mortars. It would have been in our interest to put together the capabilities to have turned those guns off, turned those mortars off, found them and be able to lift the burden of fire falling on our troops.

At that close range, my sense is there were all kinds of aircraft available overhead with available munitions. But at the range of engagement, 50 to 100 meters, just the size of the warheads of those air munitions would have precluded us from using them. So there is a point here in which cannon artillery with long reach that has the ability to mass fire, even though the specific locations of enemy forces is imprecise, we could have used and we would have used.

Another aspect of this—

Chairman LEVIN. Is that what Crusader is intended to be able to do?

General SHINSEKI. That's correct, to support with suppressive fire in the close fight.

We use artillery in the close fight in three ways: to destroy enemy capabilities, and that's a little more precise. If we know where they are, then it's to put as much pressure as possible—as many rounds on that single location. If we don't know exactly where they are, they're in an area, then a volume of fire, suppressive fire, is what we would use. Then in the protection of our

forces, cannon artillery would be the kinds of things that we would fire concentrations on the flanks of our units as they're moving to protect them from being penetrated. We'd also use cannon artillery to smoke. There is a protection element if you're able to mask your own locations in that kind of close fight to get the heat off of you. Crusader would have been capable of doing all of these.

It is the responsiveness and the accuracy and the timeliness of cannon artillery that right now is one of the issues we are trying to solve. That's not to say that we don't have a large choice of weaponry that are available for indirect fire. But, as I indicated, some point in close proximity, some of those fires become less useful. Rocket fire, for example, the very large footprint, the imprecise footprint that goes with rocket fire keeps you from using them within a thousand meters of friendly forces, sometimes 2,000 meters.

The minimum range on multiple rockets is 10 kilometers. So if you're in contact inside that 10-kilometer range, that pattern of fire that's so powerful that we would like to accelerate is less useful in that circumstance, and you have to go with cannon artillery and mortars to be able to cover your indirect fire requirements.

I would say in the first couple of days of Operation Anaconda, we probably had the best indirect support plan that was intended for that operation with available aircraft hovering overhead in order to provide support and tremendous capability from those platforms and the pilots that flew those missions. As I recall, the average time between a call for immediate close-air support from the arrival of munitions was something like 25 minutes. Twenty-five minutes gets measured a lot of ways, but if you're sitting there taking incoming mortar fire, 25 minutes is a long time; cannon and mortars are intended to return fire in 2 to 3 minutes.

So this is also part of the equation, and that is having a selection of capabilities is always in the best interests of the ground commander and the soldiers fighting these formations. Being able to deal with these problems as was played out here in Anaconda, cannon artillery would have been entirely useful.

Chairman LEVIN. Thank you very much.

Senator Dayton.

Senator DAYTON. Thank you, Mr. Chairman. General, I apologize for missing your testimony. I was presiding over the Senate for the last hour. I'm sure I had to inform my mother, who sees me on television more presiding, that it's like the rookies carrying the water pail for the veterans; there's a lot that falls on you when you're hundredth in seniority in a troop of 100. So I apologize having missed you. I don't know what questions have been asked. I'll review the record when I have a chance. If there are any gaps, I'll submit the questions in writing.

General, you say that your testimony has in the past and is today based solely on your best professional military judgment. I respect that enormously.

I'm new to this committee. When I joined it, I was advised by the distinguished chairman and by our distinguished Senator Warner to put the interests of the country ahead of any of my state's concerns. I acknowledge certainly that Minnesota has an important part of this project, important to the people who have been working

very hard on it. I've toured that operation, and when something is cancelled because it isn't performing properly or because it's delayed or because it's over budget, then I think that people can understand when they believe that they're carrying a mission to fulfill the service of their country just as important to them, in which they deserve pride, just as men and women in uniform do. It's obviously very difficult.

But I'm in the position of being new to the committee. I recognize that it's men and women like yourself, the ones who are on the line, who have the experience in these areas, but also whose lives will be at risk, depending on whether we fulfill our obligation to provide you with all that you need, the best possible equipment, munitions, technology, and everything else that we possibly can.

So, I have taken every possible opportunity to ask the generals, the battalion commanders, and the regular soldiers in what they think of the Crusader. I was out at the National Training Center in California a little over a year ago. I witnessed the tank exercise there, and asked half a dozen or so battalion commanders and others what did they think of the Crusader. I got uniform, strong, high marks, and genuine enthusiasm for it and a desire for it to come online as soon as possible.

I had the opportunity in the last couple of months, to ask the outgoing and the incoming commanders in chief in the areas like Korea and all of Europe what their views are on Crusader. Again, uniformly, very positive, very supportive, very definitive that the Crusader would have a important role to play, especially in terrain in areas such as Korea or in Easter Europe, or, God forbid, anywhere else in the world.

Then I take the testimony that has been presented just within weeks by others and by you, who again, are putting forward in a different context your own sincere views on this and the importance of it and the need for it. It's difficult to then pirouette, because of a decision that's been made, which I certainly respect those who did so, and I agree with those who have observed that these are difficult decisions.

Inevitably, if anything is going to be eliminated, it's going to involve people—Americans who are working and states and districts of those of us who would be, therefore, affected. But are we doing the right thing by America? Are we going to leave your men and women with what they'll need now and in the interim and then the long run—perhaps long run is more conclusive. But can we walk out of this room and look the men and women of the Army in the eye and say that what we're doing is right for them?

General SHINSEKI. Well, Senator, the requirement for Crusader, if not Crusader, we will find a system that will solve the problems that the Crusader was intended to solve. We have to do that.

Senator DAYTON. Thank you, Mr. Chairman.

Chairman LEVIN. Thank you very much, Senator Dayton.

Senator Inhofe.

Senator INHOFE. Thank you, Mr. Chairman.

General, I checked with industry since we heard about accelerating the Excalibur up to 2008. I asked the same question about the Crusader, and found that, yes, it could actually be accelerated up to 2006.

I would like to ask you what kind of upgrade would be necessary in order to have the Paladin fire the Excalibur? Would it have the same capabilities as if fired from the Crusader? I understand that there's no question as to the propellant-charge capacity of a Paladin, in terms of being able to project the same range. Do you have any thoughts about the upgrades that would be necessary to bring the Paladin up to that capability?

General SHINSEKI. Well, Senator, they both fire 155 munition. The Excalibur munition that was being designed with the Crusader in mind is not able to be fired out of the Paladin, so we'll have to redesign it as a .39-caliber warhead.

There are some challenges with firing out of the Paladin because of trying to get through the amount of force that is imposed on the warhead. To my understanding, we have not solved that problem yet. So there's a good bit of work to be done.

Senator INHOFE. General, there's a lot of questions and conflicting testimony about the descriptions and the capability of the Crusader. In your manual, the United States Army Weapons System 2002, I'm sure you've read the section in there about the Crusader. To your knowledge, is this accurate?

General SHINSEKI. As I recall, to the best of my knowledge, it is.

Senator INHOFE. Okay. What's the Department's record for developing new systems? How long does it normally take? Is there some risk involved here when we're talking about maybe moving faster than we originally thought we could do? There's even been some slippage in the Crusader, although, by and large, it's on schedule.

General SHINSEKI. Slippage on the Crusader was driven by our decision to—

Senator INHOFE. Make it light?

General SHINSEKI.—to take it from 60 down to a much lighter weight. In doing that, that's delayed it a couple of years.

Senator INHOFE. Did you hear the testimony of Senator Santorum?

General SHINSEKI. I may not have caught all of it, Senator.

Senator INHOFE. All right. I'm sorry he isn't here. He kind of came up with an argument that the Crusader would replace Paladin at the one-to-three ratio. When you're looking at AOA, wouldn't it be wise to look at one of the alternatives as being maybe cutting the numbers of the Crusader down, as opposed to altogether eliminating it, on the same ratio that it is fire power to overcome the Paladin?

General SHINSEKI. Certainly.

Senator INHOFE. That could be one alternative, couldn't it, if you look at it?

General SHINSEKI. I think we may have already taken that alternative, Senator. When a decision was made to find a better artillery system than the 109 that went to the desert, tank battalions were downsized by 25 percent. Mechanized infantry battalions were downsized by 25 percent. Artillery formations were downsized eight to six guns, by about 25 percent. All of that betting on a couple of things. One, that we were going to find a solution, in terms of artillery cannon fire that was going to fix the problem. Two, that we were going to field an armed reconnaissance capability that was going to be able to tie to that better gun that was going to provide

the weight of fire. Three, that we were going to have a digitized link between all of this that would give us the kinds of capabilities that would allow us to take these downsizing decisions, that the risk associated with making our tank and infantry battalions and our artillery battalions smaller in order to husband those resources and get a new capability. At that point, we didn't know what it was going to be called. It ended up being Crusader as the fire piece of that.

Three years ago, the Crusader program involved over 1,100 systems. The Army decided that we were going to focus our transformation on a different set of requirements that went to faster, more deployable, and more lethal. But it did not want to take unacceptable risk in not having at least one of our formations—one of our four corps, the counterattack corps—having the best of all capabilities in the event that the worst of situations happened, and that was to have a large war. So that's where Crusader was focused. The buy was downsized to something like 480 systems.

Senator INHOFE. From around—

General SHINSEKI. Eleven hundred—almost 1,200—down to 480 systems and focused on this one corps. The rest of the Army came down in tanks and mechanized systems. So, in some way, the downsizing that would have come out of that analysis of alternatives was taken up front. That's why when we ascribed the risk that we incurred, we imposed, we accepted here in the 1990s and we've been carrying ever since, what Crusader was intended to fix was, again, to accommodate the risk that was accepted in the 1990s. We'll have to figure out how to solve that problem.

Senator INHOFE. You saw the chart that I had up here earlier. I think I showed that to you at one time. I don't know whether it's over there now or not, but it shows the Paladin and then the Crusader, and then it's a chart showing rate of fire and range and the fact that there are four countries that are manufacturing an artillery piece that is better in range and rapid fire than our Paladin, although all would be inferior to what we would come up with a Crusader.

General SHINSEKI. Right.

Senator INHOFE. My concern is this. We talked about the expense out there. I mean, you go out there, you might have an MLRS, a guided MLRS, as an alternative when you're in the field. Each round would be in the neighborhood of, I think, \$36,000. A round for an Excalibur would start off around \$200,000. It's my understanding that if we got in a real accelerated program in buying these that you wouldn't be able to get below around \$36,000 a round, while your regular artillery shells would be around \$200 to \$300. But you've got to make decisions in the field.

My concern has always been, sure, we want to have the Excalibur, and we want to have that capability and the guided capabilities, and we want to have the rockets and the missiles, but we still have to keep that rapid fire capability of artillery shells. We're going to have to have that for combat.

I took the time, General, to go over to Germany and see these alternative systems, the next best one being the PzH 2000 in Germany. Still we have the need for that, and if we decide that we're not going to use the Crusader in the future, what we're saying is,

in my opinion, is that we're willing to send young troops out with less equipment and less capability than a prospective enemy might have. I would contend when you have four countries making systems, and they're on the open market today, that they could get into almost anyplace that has the money to buy it. That's my concern. Is that a concern to you?

General SHINSEKI. It is. That's what was intended to be addressed here with the Crusader's capabilities.

I guess, Senator, I would tell you I agree with the requirement for suppressive fire, as I described why and how that role would fit. That's not to suggest we're not interested in precision at some point. Bullet warhead is entirely useful under a select set of circumstances. Where you have imprecise targets, that precision warhead is an expensive investment and is being used in the same way you'd end up using a cheaper warhead that didn't have all that technology tied to it. But having that warhead for the right target is entirely useful. But there are a set of targets just in the business of—

Senator INHOFE. But that doesn't replace the need for the—

General SHINSEKI. No.

Senator INHOFE.—artillery, the dumb bombs.

General SHINSEKI. A suppression mission associated with ground combat is still one of the major requirements.

Senator INHOFE. Mr. Chairman, I'm very proud of the General. He's answered every question I had, and he's been very forthright and honest, and a lot of pressure is on him, and I appreciate it very much and am glad to be a member of the Army caucus with you.

General SHINSEKI. Thank you, Senator.

Senator INHOFE. Thank you, Mr. Chairman.

Chairman LEVIN. I just have a few more questions. About 2 years ago, the Army began referring to the Crusader as a Legacy to Objective Force System. I think that means or meant that the Crusader would have a role in the Legacy Force, the Interim Force, in the Objective Force, and the transformed force. So do you consider, then, the Crusader a transformational system, or aspects of it a transformational system?

General SHINSEKI. In terms of a technology that it provides to us, those technologies are transformational. About the only thing that doesn't fit our definition of our future transformation is the weight of the Crusader. As I indicated, we started after that 3 years ago. We got it to where it could physically go. There may be more opportunities here, but it just didn't go fast enough. But all of the other technologies associated with Crusader are transformational.

I think, when we talk about weight, we ought to ensure that at least we put it in the right perspective. Certainly, weight is transportable weight—what fits and how much tonnage. But if you generate a system that has three times the capability and, therefore, for the same amount of fire power can ship only a third of what you have now deployed, and it takes you, say, 50 percent of the lift that you would have to use today to send your current systems, then there is a difference—a measurable difference in lift. So the weight of the individual system is less of a factor to be considered.

As we look for whatever is going to meet the requirement that the Crusader was intended to meet, weight will continue to, I think

just engineering-wise, be an issue here, and what we need to ensure this metric is the fire power that is comparable and how we get that in the theater and make sure we've got a good comparison between those factors.

Chairman LEVIN. But if it's the technologies that are useful in that Objective Force, why not just buy the technology? Why buy the whole system?

General SHINSEKI. I'm sure that there's probably a better answer for that, just buying the technologies, but I don't know that they exist out there on the marketplace. I mean, they are tied to a development program that tried to make this weapons system fix all of the problems that we understood, our shortfall on fire. So it's very definitely tied to Crusader.

Can it be transferred to some other system? Maybe so. But no analysis has been done, and I would think that an analysis would give a better answer than I've just given.

I don't know that the technologies exist out there. Liquid-cooled cannon—I mean, it's only tied to the Crusader. So we'd have to go and try to understand what that means if we were to transfer that to something else. A smaller logistics footprint—because inside the Crusader, we were using spray cooling of electronics and then, imbedded electronic manuals and diagnostics—I think that's transferable. I mean, it's particular to the Crusader for us, but that's transferable.

Titanium gun mounts, I think the first time for us on an artillery piece, and we'd have to understand how to take that and move that forward. Cockpit design and the layers of fire-control procedures that we were able to eliminate with a system like Crusader because of its independent operation with the accuracy of its sub-location and then the range, I don't know that it exists anyplace else. We'd have to go and understand how we could transfer that.

But I think those would be the examples I would give you of the technologies that we would like to see carried forward.

Chairman LEVIN. I want to go back to the transformation in general again. If we decide to proceed with Crusader, to fund it, does that slow down transformation?

General SHINSEKI. I don't—

Chairman LEVIN. Does it accelerate—pardon?

General SHINSEKI. I don't believe so. I'm trying to interpret what "slows down" means for someone who's been pushing this transformation as hard as I think I've been pushing it for 3 years.

Chairman LEVIN. Well, the opposite is that if we cancel this system that allegedly was designed for a different strategic context, that this will accelerate the transformation to the future Army.

General SHINSEKI. I'd have to go and make that assessment. I don't have a good answer today for how cancelling Crusader would accelerate some of those initiatives that we have been asked to go and consider, the HIMARS, the guided MLRS, Excalibur. There'll be some improvement to the fire process. Not all of it addresses what Crusader was intended to address in terms of a platform that would keep up with our formations, our offensive formations, the reach and the mass of volume of fire delivered. I'd have to give you a better answer.



Chairman LEVIN. If you could, give us a timetable for that assessment in the next couple of days. I'm not saying give us the assessment. If you could just give us an idea as to how long that assessment would take.

General SHINSEKI. I will.

[The information referred to follows:]

#### ANALYSIS OF ALTERNATIVES

A formal Analysis of Alternatives (AOA) is a comprehensive, complex undertaking. An AOA is a specific type of analysis mandated by Department of Defense policy to evaluate the operational effectiveness and costs of alternative materiel systems to meet a mission need required for milestone decision reviews of acquisition programs. This analysis typically includes special consideration of system performance, training and logistics, as well as costs and force effectiveness. The AOA examines the weapon system capabilities in both present and future operational environments and organizational concepts by running several joint context scenarios including the alternatives developed in the study plan.

Prior to the Crusader termination recommendation, the Army had initiated an overarching AOA in preparation for the Milestone B decision in April 2003. The AOA was to have been completed prior to the April 2003 Milestone decision. The Crusader AOA Senior Advisory Group, comprised of Army and Office of the Secretary of Defense representatives, approved a study plan to look at the system in comparison to four other alternatives. These alternatives included the present system, the M109A6 Paladin as a base case, as well as an improved Paladin, investing in precision munitions in lieu of Crusader, and finally, accelerating the proposed Future Combat Systems (FCS) indirect fire variant.

The Army's recommended course of action is to continue with the AOA along the timeline described above. An appropriate decision of this magnitude requires a comprehensive analysis. This analysis requires time, resources, and coordination among multiple agencies. Additionally, the Crusader AOA should logically be synchronized with the FCS AOA, which cannot be further accelerated prior to the April 2003 timeframe. Anything short of this course of action would result in an effort lacking the necessary analytical underpinnings required.

The Army is, however, prepared to develop a white paper that will examine the impact of fielding alternatives to Crusader to provide fires in close support of maneuver. This conceptual paper could be delivered within 75 days, assuming 15 days to develop and coordinate the terms of reference. The paper will be based in large part upon military judgment and not analytical data as there will not have been enough time. Then, proceeding with the AOA as originally planned, we are prepared to provide emerging results, to include initial cost, training, and logistical impacts in December 2002.

Chairman LEVIN. Finally, you're facing this huge modernization bow wave between 2008 and 2010 with the Crusader, Comanche, and FCS all being fielded at the same time. How much of that is unfunded in the Program Objective Memorandum (POM) and in the extended planning period, number one? Related to that, if you were required to pay a \$9 billion bill, would you chose to do it by terminating Crusader? If not, how would you pay that bill? There's really three questions there. Maybe I should split them up for you, but they're all related.

General SHINSEKI. I don't have a good idea of what the unfunded bow wave is at this moment. It would have been something we would have calculated in the 2004-2009 POM bill process. There would be an Unfunded Requirement (UFR), and it's probably a significant one.

As I've testified previously, about \$10 billion a year of unfinanced requirements is what has been carried. Some would ask, "Well, how did the \$10 billion increase in this past year get applied?" As I've testified before, about \$3.3 billion went to defense health. About \$1.9 billion went to compensation, in terms of pay raise.

These are all good moves, but they were off the top; about \$1 billion in pricing, just pricing adjustments; and then about \$3 billion that went into programmatics; about \$900 million into the readiness recapitalization of selected current systems; about \$700 million into FMTV, the family of medium tactical vehicles, requirements that we've been long in need of addressing; about \$500 million in chemical demilitarization; and then the remaining \$900 million into a variety of programs. I would say about \$200 million of that into FCS and Objective Force programs. That's what happens to this plus-up when it gets divided.

Chairman LEVIN. Senator Dayton, Senator Inhofe, any other questions?

Senator DAYTON. I'd just say that on Monday, I sat through about a 2 hour hearing in the Governmental Affairs Committee on the transformation of the postal service. Now after, what, a 5 hour hearing on the transformation of the Army, I guess—I hope you're using the words—you and the postal service are using the word differently, because I would hate to see the post office end up looking like the Army, or vice versa.

But with all due respect to the postal service, I want to give this group credit—you, General, and the Secretary and others. As I think others have said, too, if there's not agreement, that's a healthy tension to have. But I think that the meat on the word "transformation" that you have placed on it, the amount of forethought, not that all the questions are answered, and, as I say, there may not even be the right kind of transformation. But, that aside, I think that the seriousness of purpose with which you and the Secretary and all have undertaken this and have been able to articulate what it is that you're leading the Army toward is really commendable. The citizens' freedoms depend on your leadership. I think all of America is well served. So I thank you.

General SHINSEKI. Thank you, Senator.

Senator INHOFE. Mr. Chairman, let me make one comment, for the record. In the previous panel, I talked about the JROC and whether or not it should have been appropriate for them to be advised and be a participant in this decision. I'd like to say that, under the functions of JROC, what I'll now read into the record, it says, "Conduct program reviews between formal acquisition milestone-phased decisions as required to assure system performance meets original missions needs and to address synchronization of evolving requirements with and among current acquisition programs." I think that pretty much describes what we are doing here, and I think it would have been very appropriate to have their involvement in it.

Whenever we talk about how we would spend this money and reprogram it, Mr. Chairman, we've just got to find out if there's going to be any money should this be terminated, because I have seen a lot of estimates that it could actually cost more to terminate, and then we would not have the benefit of the analysis. So I just would hope we'd keep in mind that there may not be any money to reprogram anyway.

Chairman LEVIN. We would ask you the same question about termination costs. Could you ask your deputy for acquisition to take a look at that issue and give us, for the record, an assessment as

to what the termination costs will be, the range if it's terminated now compared to if it were to be terminated at Milestone B, for instance.

General SHINSEKI. I will do that.

[The information referred to follows:]

#### CRUSADER TERMINATION COSTS

We are currently working to refine our initial estimates of the costs associated with terminating the Crusader program for fiscal years 2002 and 2003. In determining the total cost impact to terminate Crusader, we have to include not only the costs associated with termination of the contracts, but also the in-house costs at Picatinny Arsenal and the Tank and Automotive Command, where the program is managed, the impact to other government activities where work supporting the Crusader program was being performed, and the impact to other programs that shared development work, facilities, or industry overhead with Crusader. To better define our current estimate of the costs associated with terminating Crusader, we have formally requested the prime development contractor to provide us with is not to exceed price for the termination by May 23, 2002.

Our current estimate of the costs associated with terminating Crusader now is approximately \$290 million. Of the \$290 million, about \$16.5 million is in-house cost, \$4.3 million for other government agencies, \$42 million for other programs impacted, and the remainder is our current best estimate of the costs associated with the termination of Crusader's development contracts.

Our estimate of the costs associated with allowing the program to continue to the planned Milestone B decision in April 2003 is approximately \$385 million.

Chairman LEVIN. Also, if you would, for the record, add anything further, particularly with that last question in mind as to how we're going to pay that \$9 billion bow wave bill. Add any thoughts about what your priorities are. We have a real problem, and I know we've got to face it. The Army's got to face it. We have \$9 billion, I believe, unfunded in the Program Objective Memorandum, according to my figures, and we've got to pay for it somehow.

If you have any further thoughts for the record as to whether terminating Crusader is something you'd be willing to do if—before you'd be willing to do other things that might be on someone's list for the chopping block, it is a factor. The department points to that as being one of the reasons for their decision to recommend termination of the Crusader. So we'll leave the record open for that purpose, as well.

General SHINSEKI. I would just say, Senator, over the last 3 years, the Army has cancelled something like 29 programs, restructured 16, and taken the results of that, nearly \$13 billion, and focused it into the things that we've said were important. The results of that analysis were contained in the budget we submitted based on our assessment and best military advice that I could provide.

I will go and take a look and try to answer your question. We are prepared to make other tough decisions. The fact that Crusader was retained for the budget was not a decision taken lightly, and I'll go back and take a look.

[The information referred to follows:]

#### THE PROCUREMENT "BOW WAVE"

The Army "bow wave" pertains to the Army's research, development, and acquisition (RDA) program in the extended planning period (EPP). The EPP extends beyond the current Future Years Defense Program (FYDP), in this case, fiscal year 2008–fiscal year 2019. The bow wave is the difference between the requirements during that period, and the anticipated funding level. In fiscal year 2003 constant dollars, the requirement is approximately \$32 billion per year while the funding

during that time period is about \$25 billion per year. This difference creates a \$7 billion RDA bow wave.

The Army has a plan to reduce the effects of this bow wave in the EPP. First, the Army plans to continue to take risk by not funding certain Legacy Force modernization programs. In the past 3 years, the Army terminated 29 different programs and restructured another 16 generating more than \$24 billion for higher priority Transformation programs. In the current FYDP, the Army only funds about 60 percent of its requirements for modernization of the Legacy Force. By continuing to accept risk in the Legacy Force, the Army will be able to reduce the bow wave by \$3–\$4 billion per year. Next, the Army plans to continually reevaluate its RDA portfolio for programs that can be reduced as the technologies associated with the FCS mature. The Army expects to generate several billion dollars per year of savings in the future by doing this.

The Crusader and Comanche requirements are fully funded in the Program Objective Memorandum (fiscal year 2003–fiscal year 2007). Since the costs to develop and acquire the FCS are still emerging, we are not in a position to say the program is fully funded at this time. We will be in better position to articulate the resource requirements and any unfunded requirements for FCS when the fiscal year 2004 budget is submitted.

Lastly, the Army’s strategy to reduce the bow wave in the EPP is consistent with its priorities to field six Interim Brigades by fiscal year 2007, field the first Objective Force unit of action by fiscal year 2008, and have initial Objective Force operational capability by fiscal year 2010. Although the analysis remains to be done, it is our belief that terminating Crusader will not significantly reduce the bow wave since Crusader funding is not a large component of the Army’s program. Crusader procurement was to be completed by fiscal year 2015, and the Army’s requirement for indirect fire support still exists, and those requirements will need to be determined. Because of these reasons, the Army would not have chosen to terminate Crusader to pay down the bow wave.

CRUSADER PRECISION

Precision is and has been a requirement within Crusader’s Operational Requirements Document (ORD) since its inception. However, it is not a key performance parameter (KPP). Improved accuracy will provide this howitzer with an overmatching lethality to achieve greater damage against the anticipated suite of threat targets. The howitzer will be firing at longer ranges and a much more rapid rate-of-fire than predecessor systems. To maintain effectiveness, greater emphasis on accuracy at greater ranges and rates of fire will be required.

The updated ORD, currently being staffed within the building, has the following requirements for precision circular error probable (CEP).

Range (kilometers)	Precision (meters)
15 .....	55
25 .....	95
35 .....	155
40 .....	210

CEP is defined as the radius of a circle within which 50 percent of the projectiles fired will impact. Precision measures the tightness of sequentially fired, identically aimed projectiles. Contributors to precision error are random variations in muzzle velocity, projectile drag effects and gun pointing. One of the technological advancements onboard Crusader which addresses these variations is the integrated Projectile Tracking System (PTS). The PTS tracks each round fired along its flight path and computes its “did hit” data, which is then quickly compared to “should hit” data. These computations are then quickly applied to each subsequent round, making each of them more accurate than the previous shot. In fact, Crusader has already demonstrated a CEP of 96 meters at 30 kilometers, surpassing the established requirement.

Target location accuracy must also be considered. Forward observers, unmanned aerial vehicles, and other target acquisition sources provide locations of targets for indirect fires. This determines the aim point at which howitzers will shoot, but there may be inaccuracies in the location.

The best solution set comes from combining weapons precision with precision munitions and minimum target location error. When there is an exact target location or a very small target location error, precision munitions can maneuver directly to the target and are effective. For example, Excalibur’s ORD requirement for accuracy

for detonating projectiles is 30 meters or less with respect to the aim point, ensuring maximum effectiveness and to minimize collateral damage.

Precision, while not a KPP of the Crusader system, is nevertheless, extremely important, and every effort is made to be as accurate as possible. For close support of maneuver, the paramount requirement is volume, or rate of fire, and range. We can overcome inherent inaccuracies as observers can adjust fires onto the target. As a result, weapon precision, though an important requirement, was not stated as a KPP. Visibility on this requirement, as well as all others, is ensured as the system goes through the Army Requirements Oversight Council/Joint Requirements Oversight Council (AROC/JROC) process. Crusader went through a system review in 1997 where the Office of the Secretary of Defense made precision a "special interest" topic to be briefed at the next Milestone review. The Army has maintained continuous oversight of this significant requirement throughout its development. Further, this area, among others, will be reviewed again as Crusader is scheduled to go through an AROC/JROC later this year in preparation for Milestone B, scheduled for April 2003.

Senator INHOFE. Yes, and isn't it true, General, that these downsizing—these cuts, these cancellations—were done by the Army, not by DOD. You were working on this. Were some of these decisions to downsize-predicated on the assumption that we would have a Crusader?

General SHINSEKI. That is correct.

Senator INHOFE. Thank you very much.

Chairman LEVIN. General, you have served our Nation with great honor and distinction, and you have maintained that tradition today. I know it was a very uneasy place for you to be, but you have carried it out, I think, with great honor and with great dignity. It has been of great assistance to this committee. It will, I hope, benefit the decision that we're going to have to make, along with the House on this matter.

So, with that, we will stand adjourned, and again, please accept our thanks.

General SHINSEKI. Thank you, Mr. Chairman.

[Questions for the record with answers supplied follow:]

#### QUESTIONS SUBMITTED BY SENATOR CARL LEVIN

##### SCHEDULE FOR FIELDING NON LINE OF SIGHT FUTURE COMBAT SYSTEMS

1. Senator LEVIN. Secretary Rumsfeld, the plan to cancel the Crusader program is partially based on the development of indirect fire systems as part of the FCS program. However, the FCS indirect fire systems are still high risk science and technology programs and are not expected to develop operational prototypes and enter system development and demonstration (SDD) until fiscal year 2007, according to the Army. For example, DARPA is expecting that NetFires will have a SDD phase that lasts 2 to 4 years. This will mean that NetFires will probably not be ready for deployment at least until fiscal year 2011. The Army has indicated that the deployment date may be even later, in fiscal year 2014. Your testimony indicated that FCS indirect fire systems would play an important role in providing indirect fire capabilities after 2010. It is important to note that most programs run into technical difficulties, which often delay their development schedules. Given the above considerations and assuming the absence of Crusader, what will happen to our indirect fire capabilities in the fiscal year 2010–2014 timeframe if the production date of the non line of sight portion of FCS slips?

Secretary RUMSFELD. In the event that non line of sight portion of the Future Combat System does not materialize in the fiscal year 2010–2014 timeframe, the Department would have to place a higher reliance on other alternatives to accomplish the indirect fire mission. The defense program provides a rich mix of indirect fire systems. These systems include other towed and self-propelled artillery systems, mortars, rocket and missile systems, attack helicopters, bombers, AC-130 gunships, naval surface fire support, and joint assets such as tactical aircraft (and their precision munitions), and cruise missiles. While Crusader would be better than any field-

ed howitzer, it represents only a single element of a broad array of U.S. indirect fire systems.

#### MULTI-ROLE ARMAMENT AND AMMUNITION SYSTEM

2. Senator LEVIN. Secretary Rumsfeld, the Army is developing a new 105mm howitzer system as part of its Multi-Role Armament and Ammunition System (MRAAS). This is being highlighted as an alternative to Crusader. However, the system is not planned to enter SDD until 2007. How long will it take for the system to get through SDD and into production and deployment?

Secretary RUMSFELD. The MRAAS is currently a Science and Technology program that will be evaluated and is a potential candidate for FCS Block II fielding. It provides direct and indirect fire capabilities from a common armament system design to support the lethality needs of the Army's Future Combat System. Included in the development of three munitions, all based on common cartridge configurations, are: an advanced kinetic energy munition for 0–41 kilometers Line of Sight; a 2–15 kilometer Beyond Line of Sight; and an 4–50 kilometer Smart Cargo Round for Non Line of Sight engagements. The benefit to the Army of the MRAAS System is the reduced logistics footprint associated with a common armament and ammunition configuration. MRAAS was not specifically designed to replace the Crusader. Under its current funding profile, MRAAS could enter SDD in fiscal year 2007. If the Army decides to go forward with MRAAS as an Acquisition Program, then MRAAS could enter Production in fiscal year 2011 and be deployed to the field in fiscal year 2012.

3. Senator LEVIN. Secretary Rumsfeld, how does this date change with any technical problems that may occur?

Secretary RUMSFELD. Unforeseen technical problems would add time to field the system.

4. Senator LEVIN. Secretary Rumsfeld, how does the fielding date of this system factor into the Crusader cancellation decision?

Secretary RUMSFELD. There is no relationship between the fielding date of the MRAAS and the decision to terminate Crusader.

#### ACCELERATING TECHNOLOGY TRANSITION AND DEPLOYMENT

5. Senator LEVIN. Secretary Rumsfeld, the GAO has noted repeatedly that cost, schedule, and performance problems are more likely to occur when programs start with technologies at lower technology readiness levels. Is there a concern that artificially setting an FCS demonstration and deployment date, in the absence of the answers to many technical and doctrinal questions, will drive this program into the same problems?

Secretary RUMSFELD. The Department of Defense will review the Future Combat System in May 2003 prior to its entry into System Demonstration and Development. At that time, the Department will assess the technology readiness levels (TRL) of the critical components of the Future Combat System. The formal assessment of the TRLs is required to establish confidence in the demonstration and deployment dates.

6. Senator LEVIN. Secretary Rumsfeld, how will that affect our indirect fire capabilities in the timeframe fiscal year 2010–2014?

Secretary RUMSFELD. If the Non Line of Sight variant of the Future Combat System is not fielded in the fiscal year 2010–2014 timeframe, the defense program provides a rich mix of indirect fire systems. These systems include other towed and self-propelled artillery systems, mortars, rocket and missile systems, attack helicopters, bombers, AC-130 gunships, naval surface fire support, and joint assets such as tactical aircraft (and their precision munitions), and cruise missiles. While Crusader would be better than any fielded howitzer, it represents only a single element of a broad array of U.S. indirect fire systems.

7. Senator LEVIN. Secretary Rumsfeld, accelerating FCS to operational status will require an efficient transition of technologies between the Army and DARPA. This connection has traditionally been very difficult to make. How will you ensure that these technologies will be accelerated through a notoriously slow acquisition system?

Secretary RUMSFELD. The Director of the Objective Force Task Force, LTG John M. Riggs, is responsible for ensuring an expeditious and efficient transition of DARPA technologies into the Future Combat System. The Under Secretary of De-

fense (Acquisition, Technology and Logistics) will review the progress of the technology transition against the program's milestones. Additionally, we have established acquisition initiatives to improve the acquisition process. These initiatives include the use of spiral development, interoperability mandates, realistic costing, competitive sourcing, and the publication of new regulations to shorten the acquisition cycle.

8. Senator LEVIN. Secretary Rumsfeld, how will you ensure that there is adequate time for doctrine development and testing and evaluation?

Secretary RUMSFELD. The Future Combat System will undergo a major program review in October 2002. The Milestone B decision will be in May 2003. This will be the initial opportunity to examine the complete program as all of the vehicle configurations will be established and decisions will have been reached as to which technologies will be in Block I. If there is inadequate time for test and evaluation, schedule adjustments will be made as a result of the programmatic review.

#### UTILIZING CRUSADER TECHNOLOGIES

9. Senator LEVIN. Secretary Rumsfeld, one of the plans that OSD has for a canceled Crusader system is to use any technologies that are appropriate as part of an accelerated FCS program. How will this be possible given the fact that many of the subsystems, technologies, and expertise reside with contractors who are not necessarily part of the FCS team?

Secretary RUMSFELD. Once the appropriate technologies are identified, the Director of the Objective Force Task Force, LTG John M. Riggs, will be responsible for integrating the technologies into the variants of the Future Combat System. All technologies that were developed under the Crusader program can be applied to the Future Combat System. The Department of Defense funded these technology developments and is entitled to apply them to any new initiative irrespective of whether or not the originating contractor is a member of the Future Combat System team.

#### JOINT REQUIREMENTS OVERSIGHT COUNCIL

10. Senator LEVIN. Secretary Rumsfeld, in your testimony, you indicated that the Joint Requirements Oversight Council (JROC) is limited to looking at requirements and interoperability issues. This is in conflict to the understanding that Congress has had as to the role of the JROC, which was to include program reviews between formal acquisition milestone phase decisions, validation of mission needs statements and capstone requirements documents, operational requirements documents and key performance parameters, and overseeing the Joint Warfighting Capability Assessment Process. Has the role of the JROC changed and if so, what organization will provide the Chairman of the Joint Chiefs with advice to support his Title 10 responsibilities?

Secretary RUMSFELD. Your understanding as to the role of the JROC is correct and that role has not changed. The major responsibilities of the JROC are to oversee the requirements generation system, validate systems acquisition milestones before they are sent to the Defense Acquisition Board, oversee the Joint Warfighting Capabilities Assessment process, and advise the Chairman, Joint Chiefs of Staff regarding warfighting capabilities, requirements, and priorities. Crusader is an Army-only program and the Operational Requirements Document approval was delegated to the Chief of Staff of the Army on November 10, 1994; but Key Performance Parameters approval/validation was retained by the JROC.

#### QUESTIONS SUBMITTED BY SENATOR STROM THURMOND

##### IMPACT ON ARMY'S TACTICS

11. Senator THURMOND. Secretary Rumsfeld, although resources and capability are key in determining whether or not to proceed with any weapon system, the need for the system to support the warfighter in a tactical environment must be included in the decision making process. In reaching your decision to terminate the Crusader, I understand you received input from both the budget and testing and evaluation communities. What input and from whom did you receive an evaluation of the tactical implications of terminating Crusader?

Secretary RUMSFELD. The input that led to my recommending to Congress that Crusader funds be redirected is documented in two reports prepared by the Office of the Director, Program Analysis and Evaluation. These reports are:

- “Crusader: Overview of PA&E Analysis”, April 23, 2002.
- “Achieving A Transformation in Fire Support”, June 2002.

12. Senator THURMOND. General Shinseki, what are the implications of Crusader’s termination on the Army’s capability to fight a conventional conflict?

General SHINSEKI. The Army will be forced to accept risk in the short term. Crusader was a critical component of the total combined arms capabilities of our armored and mechanized forces of the Counterattack Corps—the Army’s premier digitized, combined arms force and the Nation’s strategic hedge as the Army transformed to the Objective Force. The reason we had Crusader was to increase the contribution of indirect fire support. We had to have extended range lethality to impose far greater killing power before forces were in contact, not over-rely on tactical assault for decisive results, account for enemy long-range precision lethality, and provide fires in close support of maneuver from dispersed locations. Superior lethality was possible from much smaller firing units to get the job done. Crusader provided very responsive and reliable fires on demand to forces in contact with comprehensive coverage over expanded operating areas.

While Crusader was to go initially to the Counterattack Corps, it was always intended to be available to support the Interim and Objective Forces, as required. Crusader would have remained in the force through 2032, well beyond retirement of the Counterattack Corps. Crusader was intended to help provide the operational hedge that allowed the time for the development of Future Combat Systems non-line of sight cannon in approximately the 2014 timeframe.

Without Crusader, the Army must now accept extended risk in this force as it transforms. Crusader brought about a transformation in dominant maneuver. It’s unique characteristics were accurate, lethal fires at extended ranges out to 50 kilometers; high trajectory discrete or volume cannon fires against all threats in all terrain and weather conditions; high rate of fire of 10 rounds per minute to get the job done with smaller teams and less exposure; family of munitions effects scalable to mission, on-board C4, and sensor-to-shooter links for unprecedented agility of fires in response to forces in contact; and survivability and mobility.

The loss of Crusader leaves us with a shortfall in terms of range, rate of fire and capability to conduct mutually supporting operations. This shortfall will not be fully mitigated until we have fielded the Future Combat Systems non-line of sight cannon combined with the networking of other Army indirect fires and systems and the ability to routinely employ Joint capabilities.

#### DEVELOPMENT PROCESS

13. Senator THURMOND. Secretary Aldridge, the decision to terminate the Crusader is based in part on the understanding that systems more capable and transformational are in the development process. In fact, your briefing indicates that the Excalibur precision artillery shell which is scheduled for delivery in 2013 could be moved up to 2006. Considering that it currently takes decades to develop new technology, what assurance can you provide that Excalibur will be ready in 2006 and how do you plan to change the acquisition process to achieve this goal?

Secretary ALDRIDGE. In order to maintain the Excalibur program on course for an Initial Operational Capability by 2006, I have elevated the status of Excalibur to Acquisition Category ID. I am the Milestone Decision Authority. Additionally, we have established acquisition initiatives to improve the acquisition process. These initiatives include the use of spiral development, interoperability mandates, realistic costing, competitive sourcing, and publication of new regulations to shorten the acquisition cycle.

#### TERMINATION PROCESS

14. Senator THURMOND. Secretary Aldridge, although I am not totally familiar with the process the Department uses to evaluate a weapons system, I understand it is very detailed and thorough. Can you assure us that you followed the established process and that this process will stand the scrutiny of a formal investigation?

Secretary ALDRIDGE. The Department uses a very structured process for program initiation and for program restructure which involves the Defense Acquisition Board (DAB). DOD 5000 defines these rules. However, DOD 5000 does not specifically address program termination and a DAB is not required. The Department of Defense had developed a study plan and started work on a rigorous AOA for Crusader. However, now that the President has submitted a budget amendment that proposes to



redirect Crusader funds, the Department will not pursue that work. We will now refocus all analysis efforts on the Future Combat System. The study plan envisioned reporting initial results on the base case in October 2002, interim results in February 2003, and final study results in April 2003. The schedule for the study was already very accelerated, and it would not be possible to complete the full study in a shorter period time.

The AOA was to look at the planned Crusader system as the base case and examine as alternatives: (1) a "feasible upgrade" to the Army's existing system, the M109A6 Paladin and its Future Artillery Ammunition Supply Vehicle; (2) alternative munitions, both guided and unguided; and (3) accelerating the fire support technology programs linked to the Future Combat System. The Department has done thorough analyses of indirect fire approaches that support the decision to terminate Crusader. These analyses of indirect fire approaches that support the decision to terminate Crusader are documented in:

- "Crusader: Over of PA&E Analysis," April 23, 2002
- "Achieving A Transformation in Fire Support," June 2002.

#### WHY TERMINATE CRUSADER NOW

15. Senator THURMOND. Secretary Wolfowitz, last year the Department conducted a series of strategic reviews including one of the conventional forces. In a press conference, Mr. David C. Gompert, who headed the group on conventional forces, answered when asked about the need for Crusader that: "The answer I concluded was no, it doesn't really make that much of a contribution." Based on that assessment and similar findings by other groups, why did the Department continue funding the program in this year's budget request?

Secretary WOLFOWITZ. Mr. Gompert's study group provided valuable input. However, it was not the only input which was used in deciding to terminate Crusader. Subsequent to the strategic reviews, the Department conducted a Quadrennial Defense Review and other assessments leading to the Defense Planning Guidance. The termination process intensified after the publication of the Office of the Director, Program Analysis and Evaluation report "Crusader: Overview of PA&E Analysis," April 23, 2002.

#### COST COMPARISON

16. Senator THURMOND. Secretary Wolfowitz, I personally believe that Crusader is a quantum leap technology and that it is long overdue. At the same time, I believe we must transform our forces to not only prepare them to fight the next war, but also to take advantage of the technology that is on the horizon. We must also be mindful that our Legacy Forces will be with us for the next 20 years and that they must be capable and modernized. Can we afford to both transform our forces and modernize our Legacy Forces?

Secretary WOLFOWITZ. In order to afford the transformation of our forces and at the same time modernize our Legacy Forces, the Department will be making demanding decisions. The decision to terminate Crusader and use other DOD assets for the indirect fire mission is an example of the difficult decisions which must be made as we balance transformation and modernization.

17. Senator THURMOND. Secretary Wolfowitz, what analysis has been done to determine the various costs of modernizing the Paladin artillery system, producing the Crusader, and developing and fielding both the Excalibur and NetFires Systems?

Secretary WOLFOWITZ. In determining these costs, the Department has drawn on a variety of analyses. Key among them are:

- Formal analyses of alternatives for Crusader's Milestone I and scheduled Milestone II acquisition reviews.
- Analyses conducted in 1999, when the Army changed its orientation to a lighter, more deployable force and Crusader was restructured to reduce its weight.
- Analyses supporting the 2001 Quadrennial Defense Review.
- Analyses conducted for the fall 2001 program review and the fiscal year 2003 budget development process.
- Analyses undertaken during the spring of 2002 examining the status of the Crusader program and exploring transformation alternatives.

These analyses are summarized in the Department's June 2002 report to Congress, "Achieving a Transformation in Fire Support."

## DELAY IN TERMINATION

18. Senator THURMOND. Secretary Aldridge, what would be the impact, in terms of cost and new system development, of the decision to delay the Crusader termination until next April when a formal milestone review is to be completed?

Secretary ALDRIDGE. The termination costs are subject to negotiation with the prime contractor and will include government costs such as salaries and test range support. The Army estimates that approximately \$58.5 million of Fiscal Year 2003 Crusader funding may be required for termination in addition to residual fiscal year 2002 funds. The cost to continue Crusader until its scheduled Milestone B decision would have been approximately \$277 million. The cost of a new system is unknown at this point and will be defined once the variants of the Future Combat System are formally costed.

## TECHNICAL ISSUES WITH CRUSADER

19. Senator THURMOND. General Shinseki, what are the current technical issues in the Crusader development and what steps is the Army taking to correct the problems?

General SHINSEKI. Currently, there is no high technical risk in the Crusader development. The moderate technical risks in the Crusader development are cannon reliability and hardware/software integration. Each area is being addressed by a robust risk mitigation plan. Cannon reliability growth is a risk area because demonstrated reliability of prototype hardware is not currently meeting the planned growth projection to the objective requirement. Crusader is mitigating this risk by aggressive reliability growth testing on self-propelled howitzer prototype hardware at Yuma Proving Ground. This testing is identifying cannon failure modes, enabling implementation of design solutions before completion of the cannon design at the September 2002 cannon critical design review. Also, an intensive reliability analysis effort is identifying additional potential cannon failure modes not seen in prototype testing. These failure modes are also being addressed during the ongoing design activity. Finally, an intensive system reliability analysis to improve reliability across all Crusader subsystems is being conducted to ensure that Crusader meets the system level reliability requirement. These mitigation actions continue to reduce risk and are expected to continue to close the gap between prototype hardware reliability performance and the objective requirement.

Hardware/software integration is a moderate risk area because of the sheer volume of code, the number of functions within the system, and the degree of difficulty in real-time control of ammunition handling hardware. The initial software development focus was on system-wide architecture implementation and basic functions and is currently transitioning to optimizing performance. At this stage of the program, fixing software defects is challenging because of the number of interfaces that must be dealt with and the complexity of the functionality that resides in the code. Also, fault and tolerance performance allocations remain to be verified to mitigate safety and collision avoidance issues.

Crusader is mitigating hardware/software integration risk with several approaches. The Integrated Crusader Environment and Crusader Integration Test Stand assets, along with a self-propelled howitzer prototype are successfully mitigating the risk associated with the firing functions of the hardware. Modeling and simulation has mitigated the collision avoidance and safety aspects of the software directing the hardware. Half of the objective software is developed and tested, thus mitigating the risk to the software development cycle in system development and demonstration. The software is broken out as separate threads to optimize functionality to program event needs and used in the approach of incremental development. Incremental development has allowed for checkout of the hardware/software interface by first exercising the single-step motion, and then transitioning to the functional operations of the hardware. The completed software also incorporates a "halt on fault" capability to mitigate any risk of personal injury or hardware damage.

## FUTURE CAPABILITIES

20. Senator THURMOND. General Shinseki, what are your assessments, both in terms of capability and development, of the Excalibur artillery round, the NetFires system, and the Precision Guided Multiple Launch Rocket System?

General SHINSEKI. Excalibur provides global positioning system (GPS) based precision capability for delivery of 155mm cannon munitions where precision is critical

to the engagement of the target. Today, we do not have the ability to engage high-payoff, discrete targets or targets in urban environments with great precision while minimizing collateral damage. While Excalibur was being developed for use with Crusader, its technologies for GPS-based precision must be incorporated into munitions for the Future Combat Systems cannon. Not only is greater precision afforded by the employment of Excalibur, but also the range of the weapon platform is increased, so that less frequent repositioning is required. As a result, enhanced flexibility is generated. Excalibur, however, should not be viewed as a general-purpose munition suitable for all target types. Judicious target planning must be stressed in order to maximize the capabilities of this valuable combat multiplier. Excalibur is in development and we expect to field the Block I (unitary) in fiscal year 2008.

The Army is pursuing NetFires as part of the Objective Force for a nonline of sight missile capability for the Future Combat System equipped unit of action. This system will operate within a networked system of systems that is enabled by a revolutionary command, control, and communications architecture that dynamically links all relevant sensors, fires capabilities (Army and Joint), and other assets. NetFires is made up of the munitions to include the precision attack missile and the loitering attack missile, the container/launch unit, and the command and control interface. The extended range and precision of these missiles provide an enhanced capability to destroy enemy forces and systems at extended ranges.

The GMLRS family of munitions provides increased accuracy at extended ranges enhancing the ability to destroy enemy forces at depth. It is composed of both a dual-purpose improved conventional munition (DPICM) and a unitary variant. GMLRS unitary allows destruction of targets while minimizing collateral damage and unexploded ordnance hazards. GMLRS DPICM is in development with a scheduled fielding date of fiscal year 2006 and GMLRS unitary would be a new start program.

[Whereupon, at 7:48 p.m., the committee adjourned.]

