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DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2001

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

ONE HUNDRED SIXTH CONGRESS

SECOND SESSION

ON

H.R. 4576/S. 2593

AN ACT MAKING APPROPRIATIONS FOR THE DEPARTMENT OF DEFENSE FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 2001, AND FOR OTHER PURPOSES

Department of Defense
Nondepartmental witnesses

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CONTENTS

WEDNESDAY, MARCH 1, 2000

Page

Department of Defense: Department of the Navy: Secretary of the Navy 1

MONDAY, MARCH 6, 2000

Department of Defense: Deputy Secretary of Defense 89

WEDNESDAY, MARCH 8, 2000

Department of Defense:
- Medical Programs 127
- Surgeons General 149
- Nurse Corps 187

WEDNESDAY, MARCH 29, 2000

Department of Defense: Department of the Air Force: Office of the Secretary .. 241

WEDNESDAY, APRIL 12, 2000

Department of Defense: Ballistic Missile Defense Organization 333

TUESDAY, APRIL 25, 2000

Department of Defense: Department of the Army: Office of the Secretary 383

WEDNESDAY, APRIL 26, 2000

Department of Defense: Office of the Secretary of Defense 443

WEDNESDAY, MAY 3, 2000

Nondepartmental witnesses 527

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2001

WEDNESDAY, MARCH 1, 2000

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2 p.m., in room SD–192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Hutchison, and Inouye.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE NAVY

SECRETARY OF THE NAVY

STATEMENT OF RICHARD DANZIG, SECRETARY

ACCOMPANIED BY:

ADM. JAY L. JOHNSON, CHIEF OF NAVAL OPERATIONS
GEN. JAMES L. JONES, COMMANDANT, U.S. MARINE CORPS

OPENING STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. We do have scheduled votes. There was to be a series this morning. They have now been joined together at 2 o'clock, theoretically. They have not started yet. But the whole idea is that we are supposed to have these votes three in a row. So what I would like to suggest is that we proceed to your statements without interruption, and when it comes time to go vote, we will go vote.

We will be gone roughly 20 minutes. As the vote is 20 minutes long, we will vote last on the first one and first on the last vote and the middle one as we have to be there for 20 minutes. So we will be about 30 minutes standing in recess, if that is agreeable to you. If any of you have really pressing plans or problems, we will have to deal with those.

I should start off, Admiral Johnson, by saying I am informed this may be your last regularly scheduled meeting before our committee. Time passes too quickly, Admiral. We shall regret that. We have enjoyed our relationship and look forward to being with you for the balance of your term. I do thank you for what you have done.

It is your first appearance before us, General, so we are happy to welcome you on board. And we hope you do not disappear as quickly as the Admiral has. Time just goes by too fast.

Mr. Secretary, would you like to start off, sir?

Mr. DANZIG. Certainly, Mr. Chairman.

Senator STEVENS. You may use whatever time is available here until we have to go vote with just your statements, and we will get to questions as my colleagues come in. And Senator Inouye has asked that we proceed. He is on his way.

Mr. DANZIG. Thank you, Mr. Chairman. We all have formal statements to submit for the record, if that is agreeable to you. We will each talk informally for just a couple of minutes.

I should say that I found myself thinking back to our appearance before this subcommittee last year. Thinking about the intervening year, I must say I regard it as one of considerable progress for the Department of the Navy. A lot of that progress is a consequence of the activity and the actions of this subcommittee, really everyone in this room, and of Admiral Johnson and General Jones.

I note particularly the just extraordinary cooperation between these two service chiefs over the time that they have both been in office. I think the Navy and Marine Corps, as individual services, and the Department of the Navy as a whole, is really moving ahead because of this cooperation.

On the personnel side, it has been, I think, a year of real achievement. I feel quite good about a number of things we have done. The pay innovations, the large 4.8 percent pay raise, the rollback in REDUX, the revision to the pay table, the substantial support of Department of the Navy bonuses—all I think had very positive morale effects. We see it as well in our retention statistics.

I am very pleased that the three of us have managed to produce a fiscal year in which the Department of the Navy, both the Navy as a service and the Marine Corps service, met their recruiting goals—the only services to do that, and that we came in above end strength this last year, in striking contrast to some previous years. That remains very much a struggle for us in the year ahead, but it is very much our goal. We are, the three of us, very committed to it. And your support in that regard is very important.

We are also very conscious of the fact that it is not pay alone that keeps our people and makes a success of what it means to be a sailor and a marine. We have emphasized, between us, the idea of improving the conditions of work. The Chief of Naval Operations (CNO) has put a lot of emphasis on reducing the unnecessary inspections and burdens associated with the inter-deployment training cycle. The Commandant has put a fresh emphasis in the Marine Corps on the importance of family.

We are doing some, I think, quite innovative things. The Navy College Program, for example, gives college credits as a matter of course to people who come into the Navy in the course of their Navy training. The typical sailor will now get a road map as he or she enters boot camp of college credits that he can earn through Navy training. Typically he or she will earn 30 college credits in his first term. You need 60 for an A.A. degree, so you are halfway there simply by virtue of the kind of training we are giving. And those credits are recognized by major universities through the American Council on Education.

We are beginning to reshape the sense of what it means to be an enlisted person in the Navy and Marine Corps. We put a lot of

emphasis on smart work kinds of programs, equipping sailors and marines with the right tools, using civilian labor where we can, for example, to paint ships on both coasts, where previously we were burdening sailors.

We are automating where we can and saving manpower. A lot of proposals that we will talk about over the course of these hours save us a lot of money by reducing costs of ownership. They also go a fair way towards raising morale by letting people do what they came to the military to do—professional military jobs—and not second order kind of work.

On the technology and platform sides, we also have made a lot of progress. I am very pleased that you see in the budget before you a request for building eight ships. The sustaining rate is higher than that. Over time, we need to get to a build rate of about 8.6 per year. But eight ships for these first 4 years in the program represent a significant step forward in stabilizing the kind of program that we are pointing to.

I would add that we have emphasized between us the idea of investments in research and development so that we really modernize our surface fleet. The Navy program has in it over these next 5 years some $1.5 billion of research and development to modernize the carrier, and almost $4 billion of research and development funds to modernize our surface combatants, the DD–21 particularly. And some of this spills over as well into real benefits for our submarine fleet. For example, electric drive, which is something we can talk about later this afternoon if you would like to.

So, here again, I see a very significant improvement. Not all of it is just platform centered. The Navy-Marine Corps Intranet is something the three of us are very enthusiastic about, that may be useful to talk about. It represents an information technology investment that captures the phenomenal opportunity that this age gives us for both improved efficiency and also for much greater effectiveness in different ways of doing business.

However, this is hardly a record of self-satisfaction. We can point to real achievements in all kinds of areas, but in no sense do we reach Nirvana. In the personnel area we have reduced gap billets at sea from 18,000 to 9,000. That is a very real benefit. Our carrier battle groups are deploying now at fill rates of 93 and 95 percent versus the high 80's 2 years ago. But still, 9,000 gap billets at sea is 9,000 too many.

Improved recruiting in this last year is a very substantial benefit to us, but we need to do it again this year. And we need to do it steadily as we also need to continue with substantial pay raises year after year.

Our procurement rates are not quite yet where we want to get them—we need to increase them and make them more vibrant. And I would add that our infrastructure investments need to become more robust. All three of us feel that that is the area that we have had the least investment relative to the need, that we have done the least kind of corrective work on. And you see that reflected in some dimensions of the priority list you have seen from the CNO and the Commandant.

PREPARED STATEMENT

Having said that, Mr. Chairman, I will just conclude by saying that I do regard it as a year of great progress. And I think, really, everyone in the room has shared in that progress. And I think the challenge for us is, can we do as well in the year ahead?

Thank you.

[The statement follows:]

PREPARED STATEMENT OF HON. RICHARD DANZIG

I became Secretary of the Navy in November of 1998. I am both happy and unhappy with what we have accomplished over this period. Happy because I think we made evident progress towards three of our four main objectives. We improved the way we treat, develop and treasure our military personnel. We improved the way we work—both in training and in our combat operations. And we improved our investment strategies, buying more of what we need today and investing more in transformative information-age technologies that position us for the future.

Our satisfaction on these counts is tempered, however, by the substantial work that remains to be done in all three of these areas—we are still not yet where we should be—and by our inadequate progress in the fourth area, the improvement of our infrastructure.

Personnel.—We came, in 1999, face-to-face with the fact that our Sailors and Marines are working too hard, stretched too thin, and paid too little. The administration proposed a 4.4 percent pay raise, a rollback of Redux, a worthwhile revision in our pay tables, and numerous special pays. This committee not only gave us what we asked, but went further and very admirably secured a 4.8 percent pay raise (the largest in a generation), improved housing allowances, and better retirement arrangements. Together these steps conveyed a sense of concern and commitment to our military that is vital to our well being. All our military personnel are indebted to you. Personally, I thank you for your deep and deeply effective care for those who serve in our military.

Together, we also used 1999 to embrace the proposition that the well being of our personnel is not determined by pay and benefits alone. In my view, when adequate pay and benefits are achieved, the conditions of work do more to determine military morale and retention than any other variables (including, even, incremental changes in benefits). Though we will lose people if they are paid too little, when they are committed to us it is not because of the pay, but because of what they do.

Sailors and Marines have special opportunities to do important and exciting things: they represent America all around the world; they operate and maintain the most technically advanced and powerful equipment the world has ever known; they are empowered by shouldering immense responsibility at unusually young ages; the nation closely watches and strongly depends on their actions; they honor each other and are honored by their fellow-citizens. The most important thing we can do is to keep military work meaningful and honor it. For some, this may conjure visions of rhetoric and parades. For me and this committee, it meant in 1999, means in this year, and will mean, I think, throughout this century, that we need to master the everyday mechanics of supplying, maintaining, manning and operating the military—so that we support and make meaningful the work of our military personnel. That is the truest and most meaningful way in which we honor our personnel.

Spare parts, for example, have a mundane character, not the ring of rhetoric. But when we have too few airplane spares, our pilots have fewer flying hours for training, and our mechanics are doomed to "cannibalizing" parts (moving them from one plane to another and then back again). For this reason, as well as to sustain operational readiness, over the last two years, we increased our investment in aviation spare parts by more than a quarter of billion dollars.

In the same vein, I have put great stress on programs like "Smart Work" and "Smart Ship" that give sailors and Marines better tools, use civilians and automation where possible to alleviate military work loads, and redesign our ships to improve working and living spaces and reduce required manning and over-crowding. These are funded in the budget before you at almost $400 million. Equally fundamentally, both Marine and Navy recruiting met their goals in 1999 and we achieved end-strength above our targets in both services. We reduced gapped billets at sea from 18,000 to approximately than 9,200 today. Our battle groups are deploying with manning levels in the range of 93 percent, as compared with about 88 percent two years ago. EISENHOWER, for example, will depart Norfolk more fully staffed than any other carrier in the last three years at 96 percent manned.

We can all be proud of these achievements. But they are not enough. A year's fine pay raise must be reinforced by a series of pay raises significantly above inflation. The budget before you proposes that. Incremental improvements in housing allowances should be accelerated looking to a goal, wonderfully embraced by the Secretary of Defense, for the elimination of out of pocket housing costs within five years. Recruiting remains demanding and precarious—it will take exceptional effort to exceed desired end strength again this year.

9,200 gapped billets is still 9,200 too many. My goal is to bring that number close to zero over the next twelve months. Despite movement in the right direction, our personnel systems and our systems of shipboard life remain, in important respects, infected by the psychology of conscription. We need to dig deeper to maximize and protect the value of the truly skilled and high cost workforce that we employ. The budget before you does these things in ways that I hope we will discuss in the course of this hearing. But that we are not yet where we should be is underscored by the fact that our reenlistment rates, though improved, remain below our goals. In sum, our personnel situation has gotten better, but there is still a lot of work to do.

Training and Operations.—Our operations have been universally successful, as befits the most powerful Navy and Marine Corps in world history. For the first time in history, the Navy is being used to influence events in land-locked countries—our missiles descended on Bin Laden's camps in Afghanistan, our planes and missiles provided a significant portion of the fire power in the Kosovo campaign. Our unimpeded ability to operate from the sea made the Navy and Marine Corps the forces of choice for first night operations against Iraq during Desert Fox. The flexible and versatile nature of Naval forces was aptly demonstrated by the 26th MEU's ability to both lead allied troops into Kosovo and then turn and assist relief efforts after a devastating earthquake in Turkey. As a part of our effort to protect our workforce, the CNO initiated a successful effort to reduce a quarter of the inspection demands on Sailors between deployments. The Commandant is taking similar steps within the Marine Corps to create more time for families, for professional development and mentoring.

As a part of our effort to valuing our enlisted men and women, as traditionally we have valued our officers, we have reduced Navy boot camp and Marine first-term attrition and we have introduced a Navy College Program that is providing college credits for all Navy training. This will get a typical seaman half way to an AA degree during his first term in the Navy. We are using our broad band communications to facilitate shipboard "distance learning" and information age simulations to improve training. A thorough review of our pilot training program is cutting more than a year from that over-elaborate process.

There is no question in my mind about the operational readiness of the Navy and Marine Corps. Still, we must not run a marathon as though it were a sprint. Strong foundation investments are required to sustain our capabilities for these operations over the longer term. Navy and Marine EA–6Bs are indicative of this requirement—they were strained severely in Kosovo. The program before you reflects investments both to bring another squadron on-line and to bring more aircraft to higher readiness in existing squadrons. Similarly, it is evident that we need more submarines than were envisioned in the 1997 Quadrennial Review. The budget before you allocates $1.1 billion to refuel either four additional Los Angeles class submarines, or as a down payment to refuel four Ohio Class submarines and convert them to fire conventional Tomahawk missiles. I regard both possibilities as very attractive and cost-effective and look forward to discussing them with this committee.

Investment.—Obviously, I have touched on some important investments in what I have said earlier in this statement. Our investment in equipment is a primary method of improving things for our personnel. As our equipment ages, the sense of the importance of our work and our ability to do it, erodes; everything takes longer and too many things are done not to accomplish a valued mission, but instead to simply avoid losing ground. Investment in equipment is also, as with the EA–6Bs and submarines about which I have spoken, essential to maintaining our operating capabilities. The budget contributes to our operations by a vibrant buy of 42 F–18E/F aircraft, by procurement of 11 V–22s and by procuring eight ships per year in each of the first four years of the program and seven in the last.

Just as significantly, we have made a clear, and in my view crucial, investment in the future. Ship R&D budgets have been brought to $1.5 billion over the program years for redevelopment of our carriers and over $3.9 billion for our next generation surface combatant, DD–21. We are investing heavily in changes that will reduce manpower, reduce acoustic and radar signatures, improve damage control and increase fighting capability. Electric drive and integrated power systems, announced

for the DD–21 last month, are exemplary of this transformation in all these dimensions.

Concomitantly, the information age is opening wonderful opportunities for us. Our program for expanding communication and computer capabilities on ships, IT–21, yielded dramatic results during Kosovo operations. Not only will it expand, but also it will be paired this year with the Navy-Marine Corps Intranet for shore-based facilities. With an Enterprise Resource Plan next in the offing, we can weld our disparate communications, computing and data systems into a coherent whole. The result will be a Navy and Marine Corps that is substantially more effective as well as significantly more efficient.

As in the other areas I have mentioned, our progress is not perfect. To conserve funds, we eliminated T–45 aircraft procurement in fiscal year 2003. We are making only halting progress towards replacing our aging helicopters and support aircraft. In our ship-building, increased investment in R&D for DD–21 has led us to delay the introduction of that program by one year, from 2004 to 2005, enabling us both to free up money for R&D and to reap the benefit of our ambitious plans. The delay, however, must be reconciled with our need to build surface combatants both to sustain the fleet and to maintain our industrial base. Our building rate remains in 2001 as planned, but in the program presented to you, the DDG–51 buy is stretched and expanded to compensate for the one year DD–21 deferral. Moreover, though our ship building program is much stronger than it was two years ago, it still does not reach the required sustaining rate and the DD–21 deferral diminishes by two (to 39) the ships built during the program years (we deferred 3 DD–21s, but added 1 DDG–51 for a net diminution of 2 ships).

Infrastructure.—This is the area in which we have made the least progress. Our BRAC efforts have been invaluable, leading to savings we estimate at $2.6 billion per year. We are effectively managing to close bases and, as an added bonus, are often seeing civilian communities thrive with the land and facilities that we have turned over to them. We have, through our regionalization and strategic sourcing programs, introduced new methods of management that will conserve personnel and save money.

Still, this is the area of our budget in which we have the least adequate funding. Our BRAC efforts imperatively require the environmental remediation funds sought in this year's budget in order to remove costly bases from our books. We also very much require further authorization to undertake public/private ventures and, over the longer term, we will need to spend more in our military construction budgets. We can point to dramatic successes in refurbishing housing and workplaces in bases as far apart as Naples and Hawaii, but the backlog of maintenance and repair continues to grow throughout our establishment. Over the longer term continued deferral is not sustainable.

In sum, we have much to be proud of. The strength of our Navy and Marine Corps is improving. But I am equally struck by how much we still have to do. This committee is indispensable both to our progress to date and to our prospects. I thank you for the role you play.

Senator STEVENS. Thank you, Mr. Secretary.

Admiral Johnson.

Admiral JOHNSON. Thank you, Mr. Chairman. I certainly associate myself with all of the remarks of Secretary Danzig, and I will try not to repeat. But I would like to offer a couple of points.

The first is just to offer my own thanks for the work of this subcommittee and the committee and the staff in terms of what we realized in the fiscal year 2000 budget. It really is making a difference for our sailors and their families. We felt that it would. We are seeing it in real terms now. And we are very grateful to you for that.

The Fleet update, I could talk at length on. I will not, except to remind everyone that today, like every other day, half of our Navy is underway and a third of our Navy is forward deployed around the world. And if the metric is execution, then we are where we need to be out forward, because the mission execution, the planning and the morale out there is exactly as we would all want it to be, and they continue to make us proud.

I will say, on the non-deployed side of our lives, that we are also hard at work unburdening our sailors so that they can spend time with their families and also empowering their commanding officers and working seriously, as we have been for a couple of years, to better resource them at home so that we can then turn that into combat capability out forward.

One comment in the readiness area. And that has to do with our execution or implementation of the President's directives on the training range at Vieques. And that is only to say that Rear Admiral Kevin Green is now on watch in his post in Puerto Rico. He is already rebuilding the relationship that we know is so important to all of us. And while I certainly at this stage would not try to predict what the outcome of that very complex issue is, know please that we are committed in the United States Navy and Marine Corps and the Navy Department to doing everything we can to preserve this national training asset and to do so in a way which is especially supportive of the people of Vieques.

In the meantime, we continue—our clock never stops—we continue to train battle groups and amphibious ready groups. And in the case of the Atlantic forces, for now, that training will be in other places. Soon, again, we hope it will be back in Vieques. In either case, I would like for the record to state that General Jones and I will never, ever put our sailors or marines in harm's way without their being adequately trained and ready to execute their missions out forward.

The Secretary talked to recruiting. He talked some to retention. I am encouraged by some of the things we see in the recruiting area. I am very proud of our recruiting force, for making their numbers now 17 months in a row. In this environment, that is a heroic statement on their behalf. And I applaud their efforts.

I take small comfort in that, though, because we all still have not done anything to fill up the delayed entry pool. So we have got more work to do.

Retention is a mixed report. I can deliver some more on that later.

The number one priority for us in the short term is our people. The number one priority for us in the long term is ships and aircraft in sufficient numbers and capabilities so that we can ensure the operational primacy of the United States Navy throughout this century.

And finally, Mr. Chairman, as you point out, this is my last scheduled hearing before you. I would just like to express my sincere appreciation to you, to Senator Inouye, to the members of the committee and the committee staff. For the past 4 years, in both the personal and the professional sense, you have made a huge difference to this CNO and to this service that I so proudly serve. And I am grateful to you for that. And I stand by for the questions, sir.

Senator STEVENS. Thank you very much, Admiral.

General Jones.

OPENING REMARKS—READINESS OVERVIEW

General JONES. Mr. Chairman, Senator Inouye, I am very pleased to be with you today representing the 212,000 marines on

active duty and in the Reserve, and the almost 17,000 civilian marines that work with us side by side on a daily basis.

I would also like to thank you and the committee for your support, and sending a very strong message of support last year to the marines and their families, which has made a quality difference in their lives and has sent expressions of support to those people who are on the edge of deciding whether they are going to stay in uniform or leave our ranks. It has had a profound difference, and we thank you for that.

Our challenge, however, having had this good year, is to figure out ways to sustain it. Because my fear is that if we do not do this we are going to be meeting here year after year, talking about the challenges of modernization and readiness and how we rob from one account to pay for the improvements in another, and we will talk about retention and we will talk about recruiting problems, and we will not continue to emerge from the precarious position that we have been in for the last several years.

It seems to me also a fitting time that, as we close the page on the 20th century, to really reflect a little bit on some of the fundamental lessons that that century has taught us, in many cases, the hard way. I fundamentally think that it is a really good time to reflect on the evolution of our history and our Nation as it emerged from a somewhat reluctant, but yet full of potential, power into the position of global influence that we enjoy today and that I think our citizens expect us to continue to be able to provide.

Before any really good things happened in the latter half of the 20th century in particular, there were men and women in uniform who were on the ground making those things happen, through the hot wars, through the cold wars and the conflicts. But that umbrella of military power and national security commitment, which was funded and resourced, allowed the United States to emerge into its current position of global dominance.

And I think it is important to understand and to have an appreciation, and maybe even a discussion, with regard to what level of funding is required to maintain that position of dominance, which is in our national interest and in our global interest in the 21st century. For me, the national security color is self-evident. But it is directly linked to, I think, the aspirations that we have to maintain our global economy and our role within that economy.

It is important, I think, to sustain the exportation of our democratic models, which people seek to embrace. It is important to sustain the transformation and exportation of our culture. And as we go into the 21st century and we are the leader in technology, I think that element, that sustainment pillar of our national ethic if you will, is going to be also very, very important.

But the idea that the national security pillar somewhat stands alone I think is false, and I think it has to be sustained. In the past 60 years of history, 8 percent of our gross domestic product was invested in national security. The 3 percent that we choose to invest today pales somewhat in comparison.

We are a global power. We have global responsibilities, and we have positions of leadership that I think our American citizens embrace. And I think that we need to make sure that we properly invest in that account in order to make sure that we do not keep hav-

ing the same discussions year after year with regard to how we are going to sustain that element and that pillar that defines us as a country.

Within that context and within that environment, naval forces play a role that this committee understands perhaps better than anyone. The ability to project forces and presence overseas directly affects not only the peace and the stability but the shaping of the environment. It directly affects the benefits that accrue to our economy. The wonderful example that our soldiers, sailors, airmen, and marines in uniform project to the population the world over has direct payback in terms of who we are as a people and how we are defined in the eyes of the world.

We are able, through our mobility, to respond to crises and, in many cases, to defuse crises before they even start. Our scalability of forces allows us to impact immediately in a crisis area. And, finally, the credibility of our forces influences those who would wish us ill to modify their behaviors.

The Marine Corps is basically a three-tiered operation in terms of combat power. The first tier, which is well understood, is the marine expeditionary units, which are aboard our amphibious ships and which deploy cyclically and regularly with our sailor counterparts, our Navy counterparts.

The next tier is the marine expeditionary brigades, which we are now bringing back into being with identified commanding generals and identified capability. This is hinged to the maritime prepositioned ships. And when you marry them up with the force, they become the maritime prepositioned force. This is a robust, paid for capability that is resident within the warfighting capability of our armed forces, and will be increasingly understood and utilized by our warfighting Commanders-in-Chiefs (CINC's). And we are very much in the market of advertising that capability once again.

Consider the marine expeditionary unit as the lead element. It is the lead element of the brigade, which is the lead element of the larger force, which is the marine expeditionary force, which has a major theater war contingency capability. Naval forces are funded to operate, not just funded to be. And we invest in that capability up front.

RECRUITING AND RETENTION

Finally, your marines' readiness rests on four pillars. The first one is its people. And with regard to that pillar, I am pleased to report to you that our recruiting and retention efforts are proceeding along very satisfactorily, both in quality and quantity. I would also like to signal to you the tremendous potential of the Junior Reserve Officer Training Corps (ROTC) program. The Marine Corps has 210 high schools signed up for this program, with 60 in waiting.

This is a very cost-affordable program. We calculate that between 30 and 40 percent of the young men and women who join the high school Junior ROTC programs actually do wind up wearing the marine uniform. And I think the statistics for the rest of the services is in that category as well. There is an exciting possibility to expand those programs. And the idea of being able to teach values

to our young high school students that could motivate them towards service is very powerful and very exciting.

Finally, within your Marine Corps, we are returning 3,900 marines in fiscal year 2001 to the operational force through A–76 competition and our own internal reforms. That is the equivalent of over a regiment of marines that will return without asking you for any additional funding.

LEGACY SYSTEMS AND INFRASTRUCTURE

Our systems are very important. We use the term "legacy systems" to describe older systems. We are at a crossroads right now. The budget last year allowed us to really make some serious inroads into modernization. We hope to sustain that. We are still working very hard on maintaining the older systems that we have. It is in some respects a quality-of-life issue, because parts are hard to come by and we do need to move on and get these older systems out of our structure.

PREPARED STATEMENT

Infrastructure investments are important for quality of life, as is modernization. And, Senator, I know you have to go, and I would be happy to expand on the modernization perhaps when you return. Thank you, sir.

[The statement follows:]

DEPARTMENT OF THE NAVY 2000 POSTURE STATEMENT

This Posture Statement discusses the Department of the Navy's mission, the Naval Services' accomplishments during the past year, our direction for the future, and the priorities that must guide our decision-making.

Last year, the Navy and Marine Corps conducted intensive operations in support of U.S. national strategy to shape the international security environment, to respond to the full range of crises, and to prepare for future challenges. Naval forces contributed heavily to operations in Kosovo, continued high-intensity operations in support of Operation Southern Watch, and participated in numerous humanitarian operations, while continuing to provide routine forward presence and engagement worldwide. Significantly, despite heavy operational requirements, naval assets were drawn mostly from normally deployed rotational forces rather than surge deployments.

Even while heavily engaged in current operations, the Naval Services continue to lay the groundwork for the transition to the naval forces of the future. The Navy and the Marine Corps are closely examining the strategic, technological, operational, and organizational implications of the future security environment in preparation for the upcoming Quadrennial Defense Review. We are working systematically to take advantage of the latest advances in information technologies as they pertain to all aspects of our operations, assets and activities. Both services are significantly invested in organizations and processes dedicated to fostering innovation and successful transformation on an ongoing basis. All these efforts help drive the Department's modernization and recapitalization efforts.

While keeping a weather eye toward the future, we also address more immediate issues associated with current readiness. We are cautiously optimistic that the recent compensation improvements as well as various "Smart Work" and other quality-of-life measures initiated by the Services are having the desired impact on recruitment and retention problems. We see some improvement in our effort to reduce maintenance and spare parts backlogs. And we remain heavily committed to implementation of the Revolution in Business Affairs and exploration of various efficiencies throughout its many activities.

We invite you to read the discussion of these themes. You will see that ready Naval Services remain vital to the Nation's present and future security.

I. THE NAVY-MARINE CORPS TEAM TODAY

The Navy and Marine Corps provide the Nation with a continuous, adaptable, and active instrument of security policy with which to promote stability and project maritime power. Forward-deployed, combat-credible expeditionary naval forces are important to shaping the global security environment; helping assure access to regions of vital interest; and permitting timely and frequently the initial crisis response from the sea. The ability to reassure friends and allies, deter potential adversaries, and, when called upon, engage in combat at all levels of intensity makes the Navy-Marine Corps Team especially useful to the Nation in peace, crisis, and war.

The Value of Naval Forces

Inherently versatile naval forces can execute a broad range of missions and are relatively unconstrained by regional infrastructure requirements and restrictions by other nations. At one end of the spectrum, rotational naval forces are engaged daily to favorably influence overseas security environments. These same forces are thus immediately available for humanitarian assistance, disaster relief, or crisis response. Likewise, naval forces provide the most cost-effective and survivable component of our strategic nuclear deterrence triad of nuclear-powered ballistic missile submarines, manned bombers, and inter-continental missiles. At the other end of the spectrum, on-station Navy and Marine Corps forces can provide a timely and powerful response through the full range of strike and amphibious operations. They are central to the unimpeded flow and sustainment of follow-on forces in both small-scale contingencies and larger-scale conflict.

Operations in 1999

The flexible and scaleable nature of U.S. naval power as an instrument of national security policy was shown by the operations conducted during 1999. Five Aircraft Carrier Battle Groups (CVBGs) and five Marine Expeditionary Units (MEUs) embarked in Amphibious Ready Groups (ARGs) deployed during the year, manned by more than 55,000 Sailors and Marines. Similarly, 33,000 Marines were deployed or based forward in support of other operations.

Navy and Marine Corps units played key roles in the Kosovo operations. Sea-based strike aircraft from U.S.S. *Enterprise*, U.S.S. *Theodore Roosevelt*, and U.S.S. *Kearsarge* and land-based naval aircraft flew thousands of combat sorties as part of the air campaign, suffering zero losses and achieving remarkable levels of precision. Tomahawk Land Attack Missiles (TLAM) launched from surface ships and submarines struck some 45 percent of key command and control and politico-military infrastructure targets during the campaign. Also, TLAMs achieved a more than 80 percent success rate against assigned targets in all-weather conditions. The only standoff electronic warfare aircraft available to NATO forces, Navy and Marine Corps EA–6Bs accompanied all U.S. strikes—as well as those flown with allies—in over 1,600 missions. Land-based P–3Cs, carrier group-based S–3B aircraft, and SH–60B helicopters maintained a continuous anti-ship combat patrol in the Adriatic Sea throughout the campaign. Furthermore, land-based naval aircraft flew more than one-third of all reconnaissance missions despite constituting only 20 percent of the reconnaissance platforms in-theater.

Combat-ready Marines embarked aboard the *Nassau* and *Kearsarge* ARGs, supported by Navy helicopters flying from U.S.S. *Inchon*, provided prompt presence ashore in support of humanitarian efforts to aid Kosovar refugees. Notably, Marines participated in the construction of a refugee camp for 20,000 displaced Kosovar Albanians at Camp Hope, Albania. As part of the Kosovo Force (KFOR), Marines of the 26th MEU(SOC) (Special Operations Capable) were among the first U.S. ground troops to enter Kosovo. While operating in the eastern sector of Kosovo, Marines conducted such missions as clearing mines and maintaining security.

Immediately following hostilities in Kosovo, Navy Seabees from Naval Mobile Construction Battalion Three constructed living quarters and restored utility systems for U.S. forces involved in the peacekeeping mission at Camp Montieth and Camp Bondsteel. The Seabees were also involved with various civic action projects, such as rebuilding schools, as well as supporting Navy Medical Corps personnel who provided medical and dental care to Kosovar Albanians and Serbs.

In the Pacific, Marines from Special Purpose Marine Air-Ground Task Force 31 embarked aboard U.S.S. *Belleau Wood* and 11th MEU(SOC) embarked aboard U.S.S. *Peleliu* participated in Operation Stabilise, providing communications and heavy-lift helicopter support of the United Nations-sanctioned, multi-national peacekeeping mission in East Timor.

We maintained a continuous carrier presence in the Arabian Gulf throughout 1999. All six of the CVBGs that operated in the Gulf last year conducted strike operations in support of Operation Southern Watch. Surface combatants also continued

Maritime Interdiction Operations in support of United Nations' economic sanctions against Iraq. Forward-deployed naval forces based in Japan continue to provide visible overseas engagement and project U.S. influence in East Asia. And, for the second consecutive year, the carrier and other ships homeported in Yokosuka, Japan deployed on short notice to the Arabian Gulf.

Navy and Marine units contributed significantly to other humanitarian operations in 1999. In addition to their role in Kosovo, Marines from the *Kearsarge* ARG arrived quickly on-scene after Turkey's devastating earthquake and provided disaster relief and humanitarian assistance to the Turkish people. A key element of this support was the ability of naval forces to provide the assistance from the sea without placing an undue burden on Turkey's shattered infrastructure.

Navy and Marine Corps Reserves also were readily employed during 1999. During the Kosovo operation, Reservists provided more than one-third of the naval staff for the Joint Task Force headquarters, all of the Navy air maintenance and ground security augmentation, one-third of the Construction Battalion personnel, and flew EA–6B strike support missions. Reserve Civil Affairs Marines deployed continuously to Bosnia and Kosovo in support of both combat and humanitarian operations. Marine Corps Reservists also provided substantial humanitarian assistance in the Caribbean and Central America including relief efforts in the aftermath of hurricanes Georges and Mitch.

II. NAVAL FORCES IN THE 21ST CENTURY

The Changing Security Environment

Threats to Regional Stability

The events of the last decade demonstrate that we live in an uncertain time. While we are confident that no nation will match the U.S. on a global scale in the foreseeable future, some nations inevitably will seek to compete with U.S. influence on a regional level. Pursuing economic, political, and military policies designed to raise the cost of U.S. engagement, they may try to diminish the stature and cohesion of our regional partnerships. Such states—or non-state entities—are likely to invest in asymmetric military capabilities that they perceive can leverage their effect on our willingness or ability to remain engaged on behalf of friends and allies.

Our ability to dominate the world's oceans and, when required, project maritime power ashore, may discourage the adventurism of unfriendly regional powers and afford us the means to defeat them should that be necessary. Forward-deployed U.S. Naval forces promote stability and reassure allies, and offer a counterweight to the influence of unfriendly regional actors. Such forces contribute to a security framework that complements other instruments of national power to build regional stability.

Globalization's Impact

The sea has always been the principal path of international trade. The "Information Age" has given rise to another path—cyberspace—that is becoming equally indispensable. The globalization of markets, networks, and information inextricably links U.S. economic and security interests more than ever. As the flow of information, money, technology, trade, and people across borders increases, the ability to distinguish between domestic and foreign policy will become increasingly blurred. We can best preserve our well-being at home by being effectively involved in the world beyond our shores. Globalization offers the prospect of widespread economic and political benefits, but requires a stable environment to make this a sustainable reality.

Future Risks to Our Military Preeminence

The trend toward globalization may provide state and non-state actors conventional and unconventional means to advance agendas that are opposed to this stability. Access by potential adversaries to a variety of sophisticated technologies with military relevance may, over time, reduce the technological edge of U.S. platforms, weapons, and sensors, while making our actions more transparent. The growing availability of commercial off-the-shelf (COTS) technologies with direct military application highlights this trend. Even with a strong intelligence program, we may be confronted by a sudden realization that a potential adversary possesses a significant capability to interfere with our operations.

While U.S. naval forces will remain pre-eminent, challenges to that status are likely to increase and be fundamentally different in nature than in the past. U.S. forces increasingly may face enhanced threats posed by theater ballistic missiles as well as biological and chemical weapons. Our increased reliance on information systems in warfighting may also create a vulnerability to information warfare.

The warfighting concepts and capabilities of potential adversaries—especially anti-access strategies—are of special concern. Unfettered access to all domains of the battlespace will be a key operational requirement and will hinge on control of the seas and the airspace over it—the cardinal prerequisite to theater access and force sustainment. Dominance in areas such as anti-submarine warfare, neutralization of mines, and defense against air and missile threats will be required to ensure such access.

Warfighting in the Future

Projecting U.S. maritime power from the sea to influence events ashore directly and decisively is the essence of the Navy and Marine Corps Team's contribution to national security. The strategic and operational flexibility of naval forces provides the U.S. extraordinary access overseas. Sea-based, self-contained, and self-sustaining naval forces are relatively unconstrained by regional infrastructure requirements or restrictions. Further, naval forces can exploit the freedom of maneuver afforded by the seas to respond to contingencies and remain engaged in activities that support our interests around the world.

The Navy-Marine Corps vision, . . . *From the Sea*, steered us from the broad ocean areas into the littorals where most of the world's population resides and conflicts occur. *Forward. . . From . . . the Sea* broadened that shift in focus. The landward focus of those documents provides a bridge from strategic vision to programmatic priorities and operational concepts. The defining characteristics of naval forces suggest this vision will remain relevant in the future security environment. However, emerging threats and opportunities will require us to develop and assess new concepts of warfighting in the Information Age that may differ from those of the past.

Characteristics and Attributes

Naval forces have enduring characteristics and attributes that have evolved from constant exposure to the vastness, harshness, unpredictability, accessibility, and opportunity offered by the sea.

Three defining characteristics differentiate the Naval Services from our complementary sister Services and make us a uniquely powerful asset. First, we operate from the sea. Second, we are an expeditionary force—our ships, aircraft, Sailors and Marines are forward-deployed, and they exercise power far from American bases. Third, in an age of jointness, the Navy and the Marine Corps are linked more closely than any other two Services in their structures, training, deployments, operations, equipment, and staffing.

Four clusters of attributes derive from these defining characteristics:

Mobility and Adaptability.—Naval forces can operate anywhere on the oceans, free of diplomatic restraint. As such, they have an unmatched ability to operate forward continuously, react to contingencies with power and speed, and act as the enabling force for follow-on Army and Air Force power projected from the U.S.

Versatility of Power/Scalability.—Ships can be benevolent and welcome visitors, sending their Sailors and Marines ashore as ambassadors of U.S. interest and good will. Ships can also manifest our interest by re-positioning at high speed to areas of concern. The same ships can also deploy Marines to rescue our citizens or deter those who would harm them. And ships and submarines can be important platforms to gather intelligence. Ultimately, they can bring massive and precise firepower to bear and deploy Marine forces to deter and, if necessary, fight and win battles and campaigns.

Presence and Visibility.—Ships can be purposely conspicuous or exceptionally difficult to detect. In peacetime, we value visibility for the sense of security and stability our forces convey by signaling U.S. interest, readiness, and ability to act if a crisis brews. The same ships, stationed close in, on the horizon, just over it, or in unlocatable places and circumstances, can be used as needed in crisis or conflict. With the ability to cumulate forces, naval power can be adjusted or scaled at will, increasing or decreasing pressure as our civilian leadership chooses to raise or lower U.S. commitment, and engage or disengage much more easily than land-based forces.

Cooperative and Independent Capabilities.—Naval forces are important instruments of international cooperation. Navy ships conduct numerous exercises and interact with naval forces of allies, neutral nations, and even potential adversaries every year. The Marine Corps is a natural partner for many foreign land forces. At the same time, the Navy and Marine Corps are a powerful independent force, with little reliance on foreign bases or overflight rights to conduct strike or forcible entry operations around the world.

In short, the enduring attractiveness of naval power is the flexibility that stems from these inherent characteristics and attributes. Investments in the Navy and

Marine Corps are like money in the bank. We do not need to know precisely how and where we will use this resource in order to see its value—indeed our value is greater because we are useful virtually anywhere and anytime. Our expeditionary character, mobility, adaptability, variable visibility, and cooperative and independent capabilities combine with our immense firepower to make us an especially relevant and useful force.

New Opportunities

Historically, these advantages were developed over time and with a high cost in technology. Even then, communications between dispersed ships and land commanders were often sporadic. In years past, it was difficult for ships at sea to discern what was happening on and near land. Strike capabilities from the sea were limited by weapon bulkiness (as compared with the small size of ships) and small magazine capacity. Naval firepower and Marine combat forces could be projected onto and over the land only a limited distance.

Entering this new century, the technology, information, strike and telecommunications revolutions are rapidly undoing these bounds on naval power. For example:

—Communications capacity between ships, from ships landward, and from air- and space-based assets have increased by several orders of magnitude. Information processing capabilities have expanded concomitantly.

—Sensor and surveillance systems provide ship-based forces with information about and insights into the land environment that can equal that of land-based forces.

—The power, reach, and precision of naval strike assets exceed anything previously available in the history of warfare. For example, TLAMs, targeted within hours onboard ships and submarines, can fly hundreds of miles, hitting targets with precision measured in a few meters. Carrier strike aircraft deliver similarly precise ordnance far inland. When combined with the ability to insert Marine forces hundreds of miles from their ships without the need to first build up forces on a beachhead, our forces are able to maneuver and engage over great land areas, more precisely, and more quickly than any naval force in history.

—Sustainment capacity has grown proportionately. Improved sea-based logistics capabilities and larger, better-outfitted amphibious platforms will facilitate operations of indefinite length and allow land forces to become less dependent on vulnerable, fixed bases or stockpiles.

Investing for the Future

Unique among the Services, the Navy-Marine Corps Team gains much of its combat power by coordinating operations in six battlespace dimensions: on the sea, under the sea, on land, in the air, in space and in cyberspace. Our challenge is to invest in a balanced fashion, shifting the emphasis as particular opportunities present themselves and seek optimum synergy between the Navy and Marine Corps and among the different dimensions in which we operate. To this end, we must invest wisely:

—To have or assure access to, and maintain presence and maneuver within, areas where civilian leadership wants to assert U.S. interests. In seeking control of the battlespace, we will maintain and enhance mobility (shipbuilding capacity and a sustained build rate); counter anti-access strategies (mine warfare, anti-submarine warfare) and asymmetric strategies (Biological, Chemical, and Information Warfare); and maneuver on and over land (Advanced Amphibious Assault Vehicle (AAAV), MV–22).

—To know what is occurring, identify threats, and be prepared to act quickly on that information. By investing in Unmanned Aerial Vehicles/Unmanned Underwater Vehicles (UAVs/UUVs), submarine intelligence collection and communications systems, space systems, Information Technology 21st Century (IT21), nodal analysis, and our Cooperative Engagement Capability (CEC), we will improve our ability to have superior knowledge of the battlespace and turn this knowledge into the capability to act.

—To protect and sustain ourselves and, when required, others. This requires enhancing force protection (Navy Area Defense, Navy Theater-Wide); expanding sealift and combat logistics (Maritime Preposition Force Enhancement and Maritime Preposition Force Future programs); improving "reach back" capabilities (IT21, Navy-Marine Corps Intranet (NMCI)); and increasing use of robotics and automation.

These are only a few examples of the necessary investments for conducting warfare in the Information Age. We invite you to examine in greater detail the actual weapons and support equipment being procured by the Department of the Navy in

the Navy's Vision, Presence, Power and the Marine Corps' Concepts and Issues program guides.

Connecting Strategy and Capabilities

Transforming our Naval Services is a complex, ongoing process that requires priorities to be examined rigorously. The annual Navy Strategic Planning Guidance (NSPG) and its prioritized Long-Range Planning Objectives, provide the links between strategy and the CNO's Program Assessment Memorandum (CPAM) and the Integrated Warfare Architecture (IWARS) assessment process used as the Navy's program planning tool. The Marine Corps Master Plan provides the link between Operational Maneuver from the Sea, and the Marine Corps' doctrine, plans, policies, and programs. These Service documents and processes are developed in conjunction with the Secretary of Defense's Future Year Defense Plan and, internal to the Department of the Navy, the Secretary of the Navy's Planning Guidance (SPG).

In Chapter II, we described our efforts to apply new technology to warfighting in the Information Age. However, warfare is, at its core, a clash of wills, thus the human dimension—the ability to take aggressive and decisive action faster than our adversaries—is all-important. In Chapter III, we discuss the important investments we must make in our people to prevail in future conflict.

III. READINESS AND MODERNIZATION

Even as the Naval Services continue the transition to the capabilities needed for the future, today's Navy and Marine Corps must remain ready for missions and tasks that may arise at any time. Indispensable to our readiness posture are the men and women of the Navy and Marine Corps. We also know that many in corporate America characterize their search for quality employees—like the ones we seek—as being "in a battle for people." Consequently, the Naval Services must be prepared to compete strongly in this "battle." We must continue to put in place the resources to attract, train, and retain the people we need for the future. That said, we must also ensure that our Sailors and Marines have the ships, aircraft, and equipment necessary for the complex and demanding jobs that lie ahead.

Strategic Manpower

The recruiting, training, and retention of quality people are key to the Naval Services' continued success. Maintaining our talented and skilled workforce requires constant attention. During the 1990s, we reduced our force structure, postponed some modernization and recapitalization, and redirected our resources to maintain operational readiness. At the same time, the pace of operations and deployments continued unabated, and we began to see growing challenges in meeting the professional and personal needs of our Sailors and Marines. Clearly, a more equitable balancing of operational requirements with responsibilities to our people is required.

One of the inescapable lessons we have learned from recent operations is that victory and success in the Fleet and field often hinge on actions taken at the lowest levels. To prevail on the complex battlefields of the future, Sailors and Marines will require judgment, strength of character, and the ability to make sound, timely, independent decisions. We must, therefore, invest wisely in the areas that together define not only the Quality of Life, but the "Quality of Service" in the Navy and Marine Corps.

"Quality of Service" has several aspects. Some aspects are tangible, such as adequate compensation, a guaranteed retirement package, comprehensive health care, and other benefits traditionally associated with Quality of Life programs. Others, however, are intangible—and in some ways more important. Indeed, they are cardinal factors that make a career in the Naval Services attractive to talented people relative to other options they may have.

These intangibles—job satisfaction, professional growth, high quality training and education, and personal recognition—comprise crucial elements of the Quality of Service. Sailors and Marines must have personal and professional pride and satisfaction from what they do throughout their service to the Nation. They must sense that what they do is important and worth the personal sacrifices they make and the "opportunity costs" they incur. Thus, we must ensure that they continue to hone their professional skills and enhance the combat effectiveness of their units. They must be afforded continual opportunities for professional growth and a physical working environment commensurate with those offered by competing careers. This is central to their Quality of Service—and ultimately to the operational readiness and combat effectiveness of the Navy-Marine Corps Team.

Our recruiting efforts must extend to all segments of America's diverse population so that we not only get the people we need, but continue our connection to society at large. By making smarter and more effective use of our resources, especially tech-

nology, we will empower our people with rigorous and meaningful training and education, and help them increase their proficiency in the use of highly sophisticated weapons, sensors, and information systems. Regional experts must be cultivated: people who know the cultures of the world like they know their own. Finally, we must continue to act energetically to improve the Quality of Life of the entire Navy-Marine Corps Team—Sailors, Marines, retirees, civilians, and their families.

Pay Package Reform

The recent improvements in military compensation, including the "Pay Triad" (enhancements to basic pay, pay table reform, and reform of retirement benefits), and special and incentive pays, should have a positive effect on our ability to attract and retain high-quality individuals. Early feedback from the Fleet and operating forces on the financial initiatives passed in fiscal year 2000 seems positive.

Such improvements, however, should not be viewed as a one-time fix. Rather, they are part of an ongoing commitment to a healthy standard of living for the members and the families of a smaller, busier force. In addition to special incentive bonuses for targeted specialties, consistent support for competitive across-the-board compensation will be a key factor in addressing recruiting and retention challenges for the total force. Continuous pay table analysis and, as needed, pay increases will be important in retaining Sailors and Marines.

Reducing the At-Sea Billet Gap

The Navy has significantly reduced its unmanned at-sea billets. These unmanned billets created additional burdens for units, often forcing other Sailors to be assigned out of their specialties or to be called upon to do double duty. As a result of our 1999 initiatives, we reduced that number by 35 percent to 12,000. This has already produced good results in the Fleet. For example, the *John F Kennedy* battle group deployed in September 1999 with 95 percent of their billets filled. The remaining billet shortfall will decline further as we meet our recruiting goals, gain ground on retaining our top personnel, and better shape our personnel structure.

Recruiting Outlook—Challenges!

Navy.—The Navy's end-strength requirement for the next several years is steady, but any force structure increases above Quadrennial Defense Review (QDR) levels will require an appropriate increase in end-strength. In the wake of a 7,000 recruit shortfall in fiscal year 1998, the Navy met accession and end-strength requirements in fiscal year 1999. In fact, we exceeded our single-year needs in some of the Navy's highly technical ratings.

Several initiatives contributed to this success. We increased the recruiting force by more than 30 percent in less than a year; we expanded the number of recruiting stations to improve accessibility and visibility; and we introduced a new series of Navy advertising "spots." Additionally, we implemented several new or enhanced programs to improve our recruiting performance. These include:

—*Enhanced incentives*.—The Navy College Fund and the Marine Corps College Fund, together with the Montgomery GI Bill, help Sailors and Marines pay for college education. The Navy and Marine Corps also offer enlistment bonuses, paying cash awards to qualified recruits. Recruits in selected programs are eligible to receive both.

—*Targeted general detail recruits for "A" schools*.—To attract more recruits, we are guaranteeing advanced technical training after an initial 12–18 month sea tour as a general-detail Sailor. This increased time our first-term Sailors spend at sea enhances Fleet readiness, gives them valuable experience and motivation entering "A" school, and results in lower attrition from these schools.

Nonetheless, the recruiting environment continues to be daunting. Unemployment is at record low levels, college attendance is increasing, and the propensity to join the military is decreasing. Although the Navy met end-strength and accession requirements for fiscal year 1999, we were not able to improve our recruiting posture entering fiscal year 2000 as the numbers in the Delayed Entry Program, our recruiting reservoir, are at a record low. To overcome these developments, the Navy will maintain the increased level of recruiters and expand the recruiter support structure.

Marine Corps.—The Marine Corps has met or exceeded its accession goals since June 1995. The Marines, however, are undertaking several recruiting initiatives designed to ensure continued success. Working with their advertising agency, the Marine Corps has contracted with two leading generational scholars to better understand what motivates and appeals to "Millennials," the generation after "Generation X," and will use this insight to craft the Marine Corps' message to resonate with America's 21st century youth.

As demographics change and populations shift, the Marine Corps recruiting force will change along with it. This year, the Marine recruiting force initiated a nationwide restructuring effort, based on market research, advertising effectiveness, demographics, and the costs of relocating recruiters, to better align the distribution of its recruiters with target populations.

With increasing costs in the advertising industry, the Marine Corps is exploring new advertising venues to reach the youth of America. The Marine Corps' long-range plan and focused, consistent message has served recruiting well; future success will depend on continued hard work and robust funding levels.

Retaining Our Best People

Navy Enlisted Retention.—Overall enlisted first-term retention during 1999 was approximately 30 percent, about eight percent below our long-term, steady-state retention target. Second- and third-term rates were also below steady-state goals. Despite these lower retention rates, the Navy retained enough good Sailors, in conjunction with a successful recruiting year, to end fiscal year 1999 about 1,000 Sailors over end-strength. Short-term extensions continue to maintain a high "stayer" rate, especially among first-term Sailors. In fact, since fiscal year 1996, the Navy has experienced a steady increase in the percentage of Sailors opting for shorter (less than 24 months) extensions. Our objective is to convert these shorter-term extensions into long-term contracts. Improving the Quality of Service in the Navy and Marine Corps, including overall financial compensation, better advancement opportunities, and maintaining personnel tempo within established goals, is fundamental to our efforts.

Marine Corps Enlisted Retention.—Current enlisted retention is relatively stable. The Marine Corps is experiencing first-, second- and third-term reenlistment rates that are close to historical norms. In fiscal year 1999, 23 percent of our eligible first-term Marines re-enlisted into the career force. This represents 100 percent of our first-term reenlistment goal. Since 68 percent of our enlisted force is comprised of first-term Marines, in fiscal year 2000, we will need to retain 26 percent of our eligible first-term Marines. With the smallest enlisted career force in the Department of Defense, retaining high-quality, career Marines is key.

Navy Officer Retention.—During the past few years, reduction in the number of ships masked the adverse impact of reduced officer accessions and lower retention. As the Navy approaches a steady-state force, some 53,000 officers will be required. In addition to the "Pay Triad," the Fiscal Year 2000 Department of Defense Authorization Act included new bonuses specifically targeting unrestricted line officer retention. These included continuation pay for Surface Warfare and Special Warfare Officers. It also included enhancements to other special and incentive pays, such as a restructuring of Aviation Continuation Pay and legislative limit increases to Nuclear Officer Incentive Pay rates. While it is too soon to gauge the full effect of these initiatives, we are optimistic that these positive steps, combined with specific community programs discussed below, will help improve retention in several specialized areas.

Aviation Warfare: As widely reported, Naval Aviator retention decreased significantly in the last four years. Various initiatives, including the enhanced fiscal year 2000 aviation bonus program, are beginning to have a positive effect. While continuation of mid-level officers remains our greatest retention challenge, we have seen a significant increase in resignations of senior aviators—up seven percent in the last year for aviators with 14 to 18 years of service.

Surface Warfare: During the 1990s drawdown, the Surface Warfare Officer community had difficulty retaining enough junior officers to fill ship department head billets, reaching a low of 17 percent retention in fiscal year 1995 and improving only to 24 percent last year. We recommended and Congress enacted the Surface Warfare Officer Continuation Pay, which encourages officers to remain in the community through the department head milestone. As a result of this and other initiatives, Department Head School classes are full and the retention trend appears more favorable.

Submarine Community: Submarine officer accessions remain below requirements. While retention rates improved slightly (30 percent in fiscal year 1999 compared to 27 percent in fiscal year 1998) and remain adequate in the near-term, they must reach 38 percent by fiscal year 2001 to meet steady-state manning requirements for a notional force of 50 attack submarines. The current Nuclear Officer Incentive Pay (NOIP) program remains the surest and most cost-effective means of meeting manning requirements. The Fiscal Year 2000 Defense Authorization Act raised the limits of the NOIP program, providing the Secretary of the Navy a flexible means to meet future accession and retention challenges.

Special Warfare: Special Warfare Officer, or "SEAL," retention rebounded slightly from the downward trend of the past few years, reaching 70 percent at the end of fiscal year 1999. Although this rate falls short of the required steady-state level of 74 percent, it suggests that the tide is turning. The recently enacted special and incentive pays, which include an increase in Diving Duty Pay, repeal of the restriction on drawing more than one Hazardous Duty Incentive Pay, and establishment of Naval Special Warfare Officer Continuation Pay are key factors in improving SEAL retention.

Marine Corps Officer Retention.—Officer retention in the Marine Corps is stable, but we remain guarded about future trends. Although we attained our authorized officer end-strength for fiscal year 1999, the more than ten percent attrition rate was higher than the historical average of nearly nine percent. Higher than average loss rates may lead to an erosion of experience within the officer corps particularly in the mid-range, company-grade ranks. Many of our ground occupational specialties are already experiencing inventory imbalances, exacerbated by the higher than expected attrition rates. Our internal force management policies for assignments are sufficient, at present, to address these imbalances.

Fixed-wing aviators continue to be the most serious Marine officer retention concern. Overall, Marine Corps aviation officer inventory is at 90 percent of total requirements for fiscal year 2000, with our rotary-wing and naval flight officer billets manned at near 100 percent. However, retention of both fixed- and rotary-wing aviators with 12–16 years of service is much lower than desired. We believe the restructured Aviation Continuation Pay program will address our present shortages.

Civilian Workforce Management.—More than 27 percent of the Department's civilian workforce will be eligible for retirement in the next five years, including a large percentage of our highly technical employees. With challenges such as regionalization, downsizing, and competitive sourcing changing the way we do business, a viable, flexible, and multi-skilled civilian workforce will continue to be a critical part of our total force. Multiple, innovative recruitment strategies designed to attract and retain young college graduates as well as a highly skilled technical professional talent pool will be needed.

Smart Work/Smart Ships

As a matter of principle, we need to treat our people as valued professionals even as we seek to employ them in demanding jobs. The Smart Work and Smart Ship programs are two key initiatives that allocate the right resources to help our Sailors and Marines do their jobs smarter. In this way, we can enrich the Quality of Service in the Navy and Marine Corps while concurrently enhancing overall readiness.

Smart Work encompasses a host of initiatives that capture new technologies, seek better ways of doing business, and follow through on commitments we have made to our people. For example, Smart Manning entails improving personnel policies to achieve workload reduction through better use of manpower and enhanced training improvements. Substituting capital for labor means applying commercially available services for labor-intensive tasks such as painting. Sailor and Marine time is reserved for high value-added work and combat training—the sorts of things they joined the Naval Service to do. Acquiring off-the-shelf tools and ensuring safe, healthy, and efficient working conditions will save service members time and effort, and allow them the time to devote to their professional development. We will also invest in research and development to design labor-saving tools that are not commercially available.

In the Smart Ship area, the Navy is moving rapidly to apply the lessons we learned in U.S.S. *Yorktown* in 1997, and more recently in U.S.S. *Ticonderoga*, and the first Smart amphibious ship, U.S.S. *Rushmore*. Installation of seven core technologies—Integrated Bridge System, Integrated Condition Assessment System, Damage Control System, Machinery Control System, Fuel Control System, Fiber Optic LAN, and Wireless Internal Communication System—is planned for most of the Fleet. Innovative ideas such as new watchstanding regimes and expanded inport duty sections are already replacing old ways of doing business and are yielding tangible benefits. Given the program's success, the Navy recently chartered a Smart Ship Summit. This top-level approach will provide a mechanism to ensure efforts are coordinated across the Navy in the most cost efficient manner.

The Marine Corps is also looking for labor saving investments and processes to reduce the time Marines spend in activities not directly contributing to combat readiness. As an example, the Marine Corps recently identified nearly 1,200 positions as candidates for replacement with civilian or contractor personnel. Manpower savings realized from this and other initiatives will result in increased manning levels in our operating forces.

Inter-Deployment Training Cycle (IDTC) Workload Reduction

The imperative to "work smarter" is also being addressed by the Navy's Inter-Deployment Training Cycle (ITDC) Workload Reduction Initiative. Training and inspection requirements, many worthwhile, over the years became a burden on Sailors' time, generating a major Quality of Service issue for them and their families. This initiative has cut these requirements by 25 percent, thus helping to relieve the load on non-deployed crews. Commanding Officers have enhanced control and flexibility to maintain combat readiness. As such measures continue to come on line, Sailors will experience some relief, which, in turn, should contribute to higher morale and retention.

DoN Education Initiatives

The higher tempo and complexity of future operations will test our Sailors' and Marines' abilities to innovate, adapt, and apply their knowledge and experience to a variety of tasks in dynamic situations. Continuous learning is necessary for keeping our Sailors and Marines on the cutting edge, including an increased reliance on advanced distance learning systems. The Department will put career-long emphasis on each Service member's educational and training needs and accomplishments. Specific programs are described in Appendix A.

Similarly, in order to maintain our high level of performance and improve retention, we are committed to making high quality education programs available to our civilian workforce. Likewise, programs such as the Defense Leadership and Management Program, the Executive Leadership Development Program, the Department of the Navy's Brookings Institute course, and the Presidential Management Internship program will continue to provide valuable opportunities for the professional growth and enrichment of our civilian employees.

Quality of Life

An important element of our new approach to Quality of Service in the Navy and Marine Corps, Quality of Life (QoL) programs comprise numerous services that add to the well-being of our people and are important factors in both overall readiness and retention. QoL programs traditionally include compensation, safety and health programs, medical care, military housing, PERSTEMPO, and legal, chaplain, community, and family services. QoL elements provide support for our families and enable Sailors and Marines to concentrate on their prime responsibility—mission accomplishment. Specific programs are discussed in the Navy's Vision, Presence, Power and the Marine Corps' Concepts & Issues program guides.

Health care remains an integral part of our overall readiness. While TRICARE has been fully implemented, we have more to do before we truly deliver on our commitment to provide quality, accessible health services to the entire beneficiary population, including retirees. The Department of the Navy is working actively with the Department of Defense, the Joint Chiefs of Staff, and the other Services on ways to improve TRICARE and, while hard work remains, civilian and military leadership is committed to making the health care system responsive to its customers.

Readiness Posture

Deployed versus Non-Deployed Readiness

To some extent, deployed naval forces are able to maintain a high level of readiness at the expense of non-deployed forces. However, the allocation of resources to meet the requirements of deployed forces creates difficulties for non-deployed units, which subsequently must overcome a larger readiness hurdle as they begin to prepare for deployment. The Navy's cyclical readiness posture is represented by the "Readiness Bathtub," which illustrates how combat readiness varies with time. While the "Bathtub" chart focuses on air wing readiness, similar challenges confront the entire force.

The readiness of Marine operating forces rests on four pillars: Marines and their families, current systems, facilities, and modernization. All need attention and resources in order to maintain a Corps that will be ready and relevant on the battlefields of the future. Similar to the ongoing trend in the Navy, the high state of readiness maintained for our forward-deployed forces comes at the expense of organizations with a lower priority, such as the supporting establishment. The pace of modernization efforts and the level of investment in infrastructure also remain concerns, affecting both readiness and Quality of Life. Indeed, projections of future funding levels do not fully support all that we know should be done.

Nevertheless, the enhancements provided in the fiscal year 2000 budget have already begun to address some of our most pressing needs. With the help of Congress, we have applied considerable resources to ameliorating the problem, but it will take

time for the positive effects to be reflected throughout the Fleet and operating forces.

Training Range Availability

The use of live ordnance is a vital means of training our forces in combined-arms operations in preparation for deployment. The inability to train at the Vieques range has degraded the combat readiness of deploying Atlantic Fleet ships and air wings since the spring of 1999. The ability to conduct coordinated live fires from ships and strike aircraft is particularly crucial, given that four deploying battle groups over the past fifteen months engaged in combat operations shortly after arriving in theater. We are also concerned that if our friends overseas see that Americans are unwilling to support live fire ranges at home, they will be less inclined to share their ranges with us.

Force levels

The Navy and Marine Corps continue to meet their commitments primarily by drawing upon forward-deployed, "rotational" forces rather than requiring additional deployments of units that have just returned from, or are beginning to work up for deployment. We have been able to do this mainly by demanding more from our people and our equipment. But this cannot go on indefinitely. As we approach the next Quadrennial Defense Review (QDR), the Navy and Marine Corps will make the point that our force levels need to remain balanced with usage expected in the future security environment. For example, the Marine Corps' latest internal study suggests that an end-strength increase may be necessary to bring all units in the operating forces to a manning level of 90 percent. However, before formally requesting an increase, we are insuring that all personnel policies serve to employ our current Marine manpower in the most efficient manner.

Already, there is growing evidence that our forces are stretched. Carrier underway time during deployments has risen steadily from historical norms. The aircraft carrier homeported in Japan had unplanned deployments to the Arabian Gulf twice in the past two years to cover our commitment there. While the last QDR specified a 50 attack submarine force, the engagement plans of our regional Commanders-in-Chief (CinCs) and the 1999 Joint Chiefs of Staff Attack Submarine Study suggest considerably more are needed than the 56 boats we have today. Further, a recent surface combatant study indicates that more ships could be required than the current QDR force level. On the aviation side, the Kosovo campaign illustrated the extraordinary demand for certain high demand/low density assets like EA–6Bs. Furthermore, as a result of the high operational tempo of the 1990s, Navy and Marine Corps aircraft and helicopters are more quickly reaching the end of their service lives than projected just a few years ago and must be replaced.

The 1997 QDR stated that a fleet of slightly more than 300 ships was sufficient for near term requirements and was within an acceptable level of risk. Three years of high tempo operations, however, suggest that this amount should be reviewed in the next QDR. Many analyses point to a need for more ships than we currently have. Certainly the specific numbers and types of ships will—and should—be debated. While the capabilities of tomorrow's netted sensors and weapons will increase the potency of each ship and aircraft, numbers will always matter.

Mid-term Modernization

Although sustaining current operational readiness is a prime priority, maintaining equipment and infrastructure and modernizing our forces are growing concerns. The understandable call to pay for readiness first must be balanced with the imperatives to improve the equipment we have. Modernization enables our current forces to continue to be valuable warfighting assets in the years ahead while concurrently trying to mitigate escalating support costs of aging equipment. Also, as technological cycle times are now shorter than platform service life, it is fiscally prudent to modernize the force through timely upgrades.

Solid, proven platforms are the best candidates for modernization. We plan to modernize the CG–47 Aegis cruisers and several aircraft types (F–14, P–3C, EA–6B, E–2C, and AV–8B), and extend the service life of our fast attack nuclear-powered submarines. SH–60B/F helicopters will be upgraded to SH–60R models, while the CH–60 will replace several older helicopter types. Additionally, the Marine Corps is upgrading its HMMWV fleet of vehicles, modernizing its main battle tanks and Light Armored Vehicles, and upgrading its current MM88 tank retrievers to the Hercules (Improved Recovery Vehicle).

Infrastructure

Shore facilities are important, but only select facilities (bachelor quarters, utilities, and waterfront, airfield, and training facilities) can be maintained in conditions

of readiness that enable them to meet mission demands with minor difficulty. All other shore facilities are funded to lower readiness levels. Backlog of maintenance and repair of real property is currently over $2.5 billion and is not projected to stop rising until it reaches $2.8 billion in fiscal year 2004. The Navy plans to demolish 9.9 million square feet of excess or obsolete infrastructure by fiscal year 2002 to help reduce infrastructure operating costs.

Part of the problem, however, is that the Navy has excessive infrastructure. While the number of ships and Sailors has been reduced by 40 percent and 30 percent respectively since 1988, infrastructure decreased by only 17 percent. As a result of four Base Realignment and Closure (BRAC) rounds, we will spend more than $5.6 billion less on infrastructure through the year 2001 and $2.6 billion less per year thereafter. However, additional closings are the surest way to bring infrastructure needs and costs into balance.

Environmental Challenges

The Department continues its active program of environmental compliance and stewardship both afloat and ashore. We are pursuing research and development of technologies and innovative pollution prevention strategies to meet effectively our environmental requirements. This research has focused on marine mammal protection, contaminated site cleanup, and hull paints and coatings. Also, environmental planning is now an essential aspect of our acquisition efforts. Environmental considerations are explicitly taken into account when acquiring weapon systems and platforms and are reviewed periodically throughout each program's life cycle.

Long-term Recapitalization Challenges

We must recapitalize for three basic reasons. First, the risks to our future military preeminence described in Chapter II require prudent investment in new capabilities. Second, the aging of many of our ships, aircraft, and vehicles, coupled with the added wear and tear associated with use, mandates their systematic replacement. Third, the industrial base that supports our armed forces is still largely unique and, absent new programs, would likely not remain economically viable.

To some extent in recent years, however, we maintained our near- and mid-term readiness at the expense of investments in longer-term capabilities. Resolving this tension between current imperatives and long-term requirements has been, and will remain, a challenge. In fact, it is becoming apparent that what was a long-term issue is now attaining some urgency, as we seek additional funding to keep current and future shipbuilding plans on track.

Nonetheless, we are making substantial investments in programs that will be the core of our forces in the first decades of next century. The DD–21 destroyer, F/A–18 E/F Super Hornet, Joint Strike Fighter (JSF), CVN–77 and CVN(X) aircraft carriers, MV–22 Osprey, *Virginia*-class SSN, LHA Replacement, the *San Antonio*-class LPD–17, and the Advanced Amphibious Assault Vehicle (AAAV) are examples. Additionally, the Navy is studying the concept of converting of four *Ohio*-class SSBNs into cruise missile carrying submarines (SSGNs) with special operations capabilities. These programs are profiled in detail in the Navy's Vision, Presence, Power and the Marine Corps' Concepts and Issues program guides.

Lift Requirements

The Marine Corps amphibious lift requirement remains at 3.0 Marine Expeditionary Brigades (MEBs). The current plan is focused on the formation of 12 ARGs, which achieves the fiscally-constrained amphibious lift goal of 2.5 MEBs. The plan shapes the future amphibious force with the number and type of ships required for a flexible, crisis-response capability. Ultimately, the amphibious force will consist of 12 TARAWA- and WASP-class LHA/LHDs, 12 *San Antonio*-class LPD–17s, and 12 *Whidbey Island*- and *Harpers Ferry*-class LSD–41/49s, capable of forming 12 integral ARGs or operating independently in a "split-ARG/MEU(SOC)" configuration.

Strategic sealift assets include afloat prepositioned stocks maintained around the world as well as ships earmarked for rapid surge deployment of forces from the U.S. Prepositioning supports all four Services and the Defense Logistics Agency. For example, each of the three Maritime Prepositioning Squadrons, stationed in the Mediterranean Sea, Indian Ocean, and Eastern Pacific Ocean, carries unit equipment and supplies to support a brigade-sized Marine Air-Ground Task Force for 30 days of combat. Enhancing our capabilities as defined in Operational Maneuver From the Sea, we continue to pursue both our our Maritime Prepositioning Force Enhancement (MPF(E)) and Maritime Prepositioning Force of the Future (MPF(F)) programs. With the fielding in fiscal year 2000 of the first of three ships, the Maritime Prepositioning Force Enhancement program will add one ship to each MPF squadron, creating space for a Navy Fleet Hospital, Naval Mobile Construction Battalion equipment and an Expeditionary Airfield. MPF(F) will combine the capacity and en-

durance of sealift with the enhanced speed and flexibility of airlift to marry-up forces and equipment in a forward area. With onboard cargo handling systems compatible with existing MPF ships and commercial systems, we will increase the speed and efficiency in reinforcing our assault echelons ashore.

Surge sealift includes roll-on/roll-off ships, self-sustaining container ships, barge transport ships, crane ships, hospital ships, and other specialized craft that support contingency deployment of all Services. Nineteen Large Medium Speed Roll-on/Roll-off (LMSR) ships are being delivered through fiscal year 2002, adding approximately five million square feet of additional lift to current Army prepositioning and surge capacity, while a twentieth LMSR will provide additional Marine Corps lift as part of the MPF(E) program.

FORCE OF THE FUTURE

Addressing the challenges that confront the Department will require systematic innovation, the solving of difficult interoperability and integration problems, and the steady pursuit of promising scientific and technological initiatives. We are committed to allocating the human and fiscal resources to ensure that innovation, interoperability and integration, and scientific and technological goals are met in the most cost-effective manner possible. We are also intent on finding efficiencies in the way we operate and manage naval forces and their supporting organizations, which may permit us to free up additional resources for modernization and recapitalization.

Navy-Marine Corps Integration

The potential benefit from increased Navy and Marine Corps integration, from warfighting doctrine to procurement strategies, is compelling. As the two Naval Services integrate their complementary warfighting concepts more closely in support of a comprehensive forward-deployed naval expeditionary capability, a concomitant integration of force planning methodologies, resourcing, and innovation will be necessary.

Through greater integration, the Naval Services seek increased flexibility of their striking power, for example, by restructuring Navy-Marine Corps carrier air wings. These new wings and their supporting units will be tailored to provide a range of crisis-response options. Carrier air wing composition will continue to evolve as the Navy and Marine Corps phase in new multi-mission aircraft. Likewise, the Department is exploring a common aviation plan to streamline acquisition and procurement strategies, training, and other areas.

In the Information Technology world, the Department will replace its numerous independent local networks with a Navy/Marine Corps Intranet (NMCI) capable of more efficiently and less expensively supporting more than 400,000 Navy and Marine Corps users. The NMCI architecture will provide a state-of-the-art voice, video, and data network with end-to-end computing services for forces ashore. NMCI will be fully interoperable with both afloat and shore commands through the IT21 and the Tactical Data Network (TDN) initiatives. It will provide better "speed of action" and significantly improve security through implementation and enforcement of standardized information assurance practices. Although some immediate restructuring of our operating costs will be necessary to support this consolidated service plan, the benefits are impressive. The end result will be a Navy Department enterprise-wide global information infrastructure with a high capacity for effective management and sustainment of deployed forces around the world.

Innovation

The Navy and the Marine Corps have ongoing initiatives to translate such capstone concepts as Network-Centric Warfare (NCW) and Operational Maneuver from the Sea into reality. The Naval War College's Navy Warfare Development Command (NWDC) and the Marine Corps Combat Development Command (MCCDC) are tasked to refine these concepts and also develop future warfare ideas. NWDC's Maritime Battle Center (MBC) and the Marine Corps Warfighting Laboratory (MCWL) also explore candidate concepts, tactics, techniques, and procedures for the application of advanced technologies. Navy Fleet Battle Experiments (FBEs) and Marine Corps Advanced Warfighting Experiments (AWEs) test these new doctrines and ideas in the field, assess the utility of new technologies, explore new operational capabilities and organizational arrangements, and feed the empirical results back to the Development Commands.

Both the Navy and the Marine Corps strongly support joint experimentation initiatives. Indeed, given their long history of innovation, they actively support the Joint Experimentation Program at all levels, from concept development to experimentation analysis. In addition, the Navy and Marine Corps seek to be the

"testbeds" by which joint experimentation can leverage Service-developed integrated warfighting concepts. For instance, in April 1999, the Extending the Littoral Battlespace (ELB) Advanced Concept Technology Demonstration (ACTD) conducted the first of two demonstrations of a wireless network connecting ships at sea, aircraft, and ground forces (both small units and individual Marines). This test illustrated the exceptional potential that wireless network technology holds for increased information exchange among all forces in a Joint Task Force organization.

Interoperability

The Services are making significant investments in fielding only interoperable systems and migrating in-service, legacy systems into the "netted" world. For example, the IT21 initiative will provide a reliable and ubiquitous network to all afloat commanders for rapid data flow among sensors, weapons, and command and control nodes and is key to the reprioritization of Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C^4ISR) programs to execute the NCW concept. The Navy is developing a Common Command and Decision (CC&D) capability that implements tactical command and decision functions within a common open architecture. The ongoing Cooperative Engagement Capability program is also the key to the Navy's Single Integrated Air Picture (SIAP) concept that will maintain common, continuous and unambiguous track information on all airborne objects within a specified surveillance zone. Other key interoperability programs include the Global Command and Control System—Maritime (GCCS-M), and the MAGTF Software Baseline (MSBL).

Carriers and large-deck amphibious ships are also being fitted with identical or very similar command, control and communications (C^3) subsystems. Improving configuration management and software standardization will result in better sharing of data among CVBGs and ARGs, improving speed of information flow, and providing a common view of the battlespace. To make sure these advanced C^3 systems will work when and where it counts, interoperability testing begins long before a deployment, with a well-defined configuration management and a systems integration testing program for all deploying CVBGs and ARGs.

C^4ISR systems for joint, allied, and coalition forces must be analyzed and agreed upon to make interoperability a reality. Use of COTS technology, international standards, and "plug and play" architectures offer ways to avert technology gaps with allies and provide the most economical course for achieving required capability. In many cases, policy and procedures can be improved to take advantage of emerging technologies that offer interoperable solutions. Security Assistance and Foreign Military Sales (FMS), Information Exchange, and Disclosure and Access processes, carefully administered, are also ways to enhance allied interoperability.

Doctrinal interoperability issues may be even more complex than technological ones. One of the challenges facing the Naval Services in the next few years is thinking through the operational and organizational implications of employing netted systems and fully engaging in "Network-Centric Warfare." Certainly, naval forces have been operationally netted via tactical data links for decades. However, the extraordinary advances in information technology, particularly the networking of multiple systems, leveraged through efforts like IT21 and the NMCI, promise to increase the combat effectiveness of naval and joint forces far beyond what earlier data links enabled.

Reserve Integration

Some 89,000 Navy Reservists and 39,000 Marine Corps Reservists serve the Nation today, indistinguishable from their Active counterparts. The effective integration of Reserve elements with Active components will be indispensable as demand for military forces increases and the Active force stabilizes at a reduced level. For example, the Marine Corps Reserve contributes approximately one-fourth of the force structure and one-fifth of the trained manpower of the total Marine Corps force.

Recognizing the great potential in our Reserve communities, we are identifying scenarios and roles that could require short- or long-term activation of the Reserves. Many Reservists possess skills gained in the civilian workforce that can be called upon when required by our Active forces. Thus, we are introducing a mechanism to identify the skill areas for which there is no active Departmental occupation counterpart.

In addition to the value of their military specialty training and training for mobilization, Reservists provide an essential link to American society. In many regions of the country, Navy and Marine Corps Reservists are the only symbols of Department of the Navy. They are recognized within their communities for the sacrifices of military life and their service to America, and as such they provide welcome feed-

back from their communities to Navy and Marine Corps leaders. Our ability to leverage all of these strengths is important for future mission capability, but we must be sensitive to the legitimate needs of Reservists to pursue their civilian vocations.

Promising New Technologies

Transformation of our forces is underpinned by advances in science and technology. Such advances may significantly affect disparate areas, from warfighting tactics and techniques to propulsion plants to overall platform cost and design. Some of these include:

—*Unmanned Aerial Vehicles (UAVs) and Unmanned Underwater Vehicles (UUVs)*.—Technology, especially in the areas of sensors and processing, has moved forward at an amazing pace. Correspondingly, the demand for battlespace information has increased even more quickly. Future roles for UAVs and UUVs include reconnaissance and targeting, environmental data collection, and, ultimately, direct combat.

—*Integrated Power Systems (IPS)*.—Electric propulsion, envisioned for future surface and submarine platforms, will enable integrated powering of all propulsion, combat systems, and ship services, thus enhancing warship capability. IPS is expected to save resources and enhance operational effectiveness through decreased fuel usage, reduced manpower requirements for maintenance, increased crew ability to handle combat battle damage, and will give greater flexibility to ship designers to use the ship's volume more efficiently.

—*Electro-Magnetic Aircraft Launching System (EMALS)*.—Beginning with the first of the next-generation aircraft carrier, CVNX–1, EMALS will replace steam catapults that are currently used to launch carrier aircraft. EMALS will significantly reduce weight, catapult manning requirements, and life-cycle costs.

Revolution in Business Affairs

Even as we seek the transformation of the warfighting capability of the Navy and Marine Corps, we also must fundamentally improve the supporting business processes of the Department. Frequently referred to as the Revolution in Business Affairs (RBA), our goal is to deliver state-of-the-art capability from equally modern and creative acquisition and support organizations, particularly in the commercial sectors of the U.S.

Advanced Technologies

By using advanced technologies in our next generation aircraft carrier program, we anticipate total life cycle cost savings of about 30 percent for the second carrier of that class compared with today's NIMITZ-class carrier, which includes a 20 percent reduction in manpower (approximately 600 billets). Following an evolutionary approach that inserts advanced technologies into key areas of the carrier, including integrated combat suites, propulsion and electrical distribution systems, an electromagnetic aircraft launch system, and a completely redesigned interior arrangement, we will enhance combat capability while improving "livability" and reducing total ownership cost.

Similarly, DD–21 will be the first major U.S. surface combatant designed as a single, integrated system. This holistic approach, encompassing the ship, all shipboard systems, crew, associated shore infrastructure, and all joint and allied interfaces, has the potential to reduce manning as well as operating and support costs by up to 70 percent.

Commercial Logistics Support

Another important element of the RBA addresses the feasibility of commercial logistics support to military systems, which will replace a "business-as-usual" approach in which the Services themselves are the logistics support agencies. In this regard, the V–22 Osprey program awarded a highly innovative, fixed-price contract for commercial procurement and logistic support of its engine. The contract provides two base years and five option years of contractor logistics support for the engine through Allison Engine Company's revolutionary "Power by the Hour" program. The cost avoidance from this commercial support approach is estimated to be approximately $533 million over V–22 program lifetime and is related directly to improvements presently experienced on commercial engine variants.

Shifting Design Responsibilities

The Navy is shifting more design responsibilities to the shipbuilder and relying more on commercial tools, such as computer-aided designs. The design/build program being used in the *Virginia*-class SSN program resulted in a stable design at the start of lead ship construction and should preclude costly design changes during construction. This program includes the disciplined application of commercial speci-

fications and components, which we believe will also help to reduce design and acquisition costs while at the same time enable the Navy to stay on the leading edge in technologies and systems.

Cycle Time Reduction

Integrated Product and Process Development is a management tool that integrates all activities from product concept through production and field support. It uses multifunctional teams to optimize simultaneously the product and its manufacturing and sustainment processes to meet cost, performance, and schedule objectives. We will look to industry to team with combat system integrators to provide designs that will meet our requirements, provide the latest technology, and reduce cycle time as well as total ownership cost. This approach is being used in the LPD–17 and DD–21 programs.

Teaming

The first four *Virginia*-class SSNs are being built under an innovative teaming arrangement between General Dynamics Electric Boat Corporation (EB) and Newport News Shipbuilding (NNS). EB is the prime contractor responsible for the entire design/build process with NNS as the major subcontractor. Construction of the first four ships is shared by ship section: NNS builds the bow, stern, sail, and some forward sections of each submarine, while EB builds the hull sections, the engine room modules, and the command and control operating spaces. The two firms will then each assemble and deliver two submarines.

The Navy's DD–21 program uses a team-based acquisition approach that leverages competition and innovation. By requiring competition between teams of shipbuilders and system integrators in the initial concept phase of the program, we are assured of a better weapon system at the lowest future production and support costs. Allowing the teams to enjoy maximum design flexibility helps us to mitigate risks and future costs while potentially optimizing system capabilities.

Business Vision and Goals

During the past decade, America's commercial sector has reorganized, restructured, and adopted revolutionary new business practices to maintain its competitiveness in the global marketplace. While the Department of the Navy is not a business, it maintains a large and diverse business infrastructure to support its warfighting forces. Published in 1999, the Department's Business Vision and Goals provides guidelines for modernizing its business operations to match more closely those of the private sector. This vision statement seeks to support future initiatives across the Department while encouraging local innovation.

We already are improving our business practices through initiatives like Enterprise Resource Planning pilot projects, making costs more visible to decision-makers, and Electronic Business/Electronic Commerce which integrates business improvement efforts with enabling technologies. The Department-wide intranet will further streamline information flow. Additionally, capital investments in tools and materials, as demonstrated in the Smart Work program, will reduce labor burdens on our Sailors and Marines.

The vision statement is supported by four strategic goals that provide an overall framework for the organizational and cultural changes needed to make our business side as effective as our warfighting side. These goals are:

—*Foster continued conceptual, technological, and operational superiority*.—Develop business programs to complement warfighting. Leverage leap-ahead technologies that offer a warfighting edge into the 21st century and align acquisition processes to take advantage of global market forces driving information and technology.

—*Recruit, engage, and retain the best people—military and civilian*.—Create an environment that fosters sense of purpose, innovation accomplishment, and personal development. Make laborsaving investments that enhance capabilities and improve working conditions.

—*Implement decision support systems that deliver recognizable value for every dollar spent*.—Give decision-makers the capability to rapidly access data, knowledge, and expertise to enhance their understanding of complex situations.

—*Create a business environment focused on teamwork and outcomes*.—Organize with a focus on outcomes versus activity. Adopt the best business practices for providing services and products to our customers.

The Navy and the Marine Corps show remarkable strength and adaptability in executing missions in the national interest. Our business vision and goals seek to channel this same energy and flexibility into building a modern, efficient support structure that supports individual initiatives and corporate action simultaneously.

SUMMARY

This Posture Statement delivers two messages. First, today the Naval Services are actively and effectively supporting the Nation's national security strategy. Our operations in 1999 illustrate the scope and scale of Navy and Marine Corps action worldwide—and we have ample reason to believe the coming years will be just as demanding. Nevertheless, we face readiness and modernization challenges. With the help of the Administration and Congress, we are making progress in meeting these challenges.

Second, the security environment is changing in the face of new political, economic, and technological developments. In response, the Naval Services are transforming how we operate under future conditions. While the defining characteristics and attributes of naval forces will endure in the Information Age, emerging threats and opportunities will require new investments and capabilities if we are to realize our full potential.

In closing, we hope we have engendered the strong conviction that the Naval Services will continue to provide vital, indeed indispensable value to the Nation's security. The balancing of present needs and future imperatives will always be a complex endeavor. With your help, we will continue to successfully meet the Nation's commitments by investing wisely in future force structure and capability.

APPENDIX A.—DON EDUCATION PROGRAMS

Officer Programs

These programs and initiatives provide opportunities for career-oriented performers to receive funded graduate and professional military education (PME). They are largely directed at active-duty unrestricted line officers (URL) in order to align the URL with staff corps and restricted line officer communities which are highly successful at including education opportunities in their career paths. The Navy Washington DC Intern Program, Naval War College (NWC) Seminar Program, the Marine Afloat College Education Program, Tuition Assistance, new degree programs at the Naval Postgraduate School (NPS), and Distributed Learning (DL)/Advanced Distributed Learning (ADL) programs provide officers with the advanced education required to serve in the naval forces of the future.

Foreign Area Officer (FAO) Program

Close and continuous military-diplomatic interaction with foreign government defense and military establishments is essential to develop and maintain the capability to engage in constructive, mutually supportive, bilateral and multilateral military activities and relationships across the range of operations. The military and diplomatic offices at U.S. Embassies and diplomatic posts must be staffed with commissioned officers with a broad range of skills and experiences. The officers must also be versed in politico-military affairs; familiar with the political, cultural, sociological, economic and geographical factors of the countries and regions in which they are stationed; and proficient in the predominant language(s) of the populations of their resident countries and regions. As well, the Department of the Navy requires officers with similar capabilities to serve in their organizations.

Enlisted Programs

The Navy College Program simplifies and enhances the opportunity for every Sailor to earn a college degree during their career. In the past, young people often joined the Service to get money to go to college after their service. Now, they will have a greater opportunity to go to college while serving their country. Enhanced partnerships between the Navy and accredited universities and colleges will optimize the granting of college credit to Sailors for training and experience gained within their career fields, in addition to credits earned through traditional education programs. This program is geared toward the realities of life at sea, and allows Sailors to pursue a college degree anytime, anywhere.

The Marine Corps addresses the educational needs of Marines and the Marine Corps family through a tailored Lifelong Learning (LLL) concept. LLL establishes an integrated, one-stop program for course enrollment, access to research tools and the internet, basic skills enhancement, and nonresident courses that is available to Marines on an "anytime, anywhere" basis. Marines may access the Marine Corps Satellite Education Network (MCSEN), which facilitates degree completion regardless of duty station. LLL addresses a wide range of educational interests, ranging from vocational to academic. Offerings encompass high school completion, the Military Academic Skills Program (MASP), Apprenticeship Program, Tuition Assistance, and Sailor-Marine American Council on Education Registry Transcript (SMART).

These programs are greatly enhanced by the merger of Marine Corps Libraries with Voluntary Education as part of Marine Corps Community Services (MCCS).

Civilian Programs

In order to maintain our high level of performance, we are committed to providing civilian employees with the best education programs possible to meet their needs in the new work environment. To this end, we are developing strategies to improve the efficiency and availability of training opportunities for our civilian workforce. Involvement in programs like the Defense Leadership and Management Program, the Executive Leadership Development Program, and the Presidential Management Internship Program display our commitment to developing leaders. One of the Department's most significant challenges for our senior executives is keeping pace with the startling tempo of technological change. Constant and rapid updating, and continual learning, is essential. We have designed a corporate plan for the development of our Departmental executives. The employment of this plan will provide the Department with a skilled civilian workforce, while laying a solid foundation of success for the future.

Senator STEVENS. Thank you very much, General.

We will just stand in recess until we come back.

[A brief recess was taken.]

Senator STEVENS. Thank you for your patience.

General Jones, you were not quite finished when we had to depart. They vitiated the last vote, so we did not have to stay for three votes.

MARINE CORPS MODERNIZATION

General JONES. Thank you, sir.

The last pillar I was going to discuss was modernization and our efforts with regard to Joint Strike Fighter, the acquisition of the V–22, the most important ground modernization program, the AAAV, are all proceeding apace and we are enthusiastic about the service life that they will give us and also the 21st century capability that this will do in terms of our power projection capability.

I would also like to underscore and express my appreciation to the Secretary and the CNO for their unwavering support in the amphibious lift profile, and specifically the LHD–8 and the LPD–17 programs, which we are profoundly grateful for. And I finally close by talking about the capability of a base in Florida, called Blount Island, which is the home base of our maritime prepositioned ships that we currently lease. That lease will expire in 2004.

It is a national asset. It is for sale. And I believe that it would be very prudent to discuss ways in which we could acquire ownership of that base either this year or in fiscal year 2004, whatever the timeframe is. The owner has expressed an interest in selling it, and selling it to the Government. That, coupled with our Army prepositioned ship base in Charleston, gives us an important national capability for power projection. And I would commend that to you, sir, for consideration.

Senator STEVENS. Where is that base in Florida?

General JONES. It is near Jacksonville, sir. It is called Blount Island. And it is the original home port of maritime prepositioned shipping. But it is a leased facility, and I just wanted to signal to you that we are coming to the end of the lease. And the owner indicates that he wants to sell it.

PREPARED STATEMENT

Senator STEVENS. Have your people prepare a paper on that for the committee, would you please?

General JONES. I gladly will, sir. Thank you.

[The information follows:]

BLOUNT ISLAND, FLORIDA, STRATEGIC NATIONAL DEFENSE ASSET

The significance of Blount Island (BI) to the National Military Strategy.—Blount Island is a vital national strategic asset, through its role in support of the Marine Corps' Maritime Prepositioning Force (MPF) program and mobilization in crises. Since 1986, the MPF Maintenance Cycle for prepositioned equipment and supplies has been conducted at BI. BI is part of the Strategic Enabler entitled "Strategic Mobility", and is an asset which is critical to the worldwide application of U.S. military power and our military strategy, under the strategic concepts outlined in the National Military Strategy of Forward Presence and Crisis Response. Under these concepts, the MPF program provides rapid and efficient strategic deployment options through strategic siting around the globe for the geographic and combatant CINCs. This enables MPF to be especially responsive to regional crises and disaster relief.

Use of Blount Island was acquired through lease, based on the results of an extensive siting study in 1985. Of sixty different locations considered, all but BI were ruled out based on various considerations such as water depth, ammunition explosive arc, overhead clearance, acreage, cost, and climate. Since the Marine Corps began operations at BI in 1986, alternative sites to the BI location have been investigated. The Marine Corps has identified and considered more than 100 alternative site locations on DOD facilities and private property to provide suitable facilities to accomplish the MPF program mission. No other existing facility can provide the same capability and economic efficiencies.

Lease costs for BI are over $11 million annually. The lease expires in 2004, subject to negotiable option periods, which could extend the lease through the year 2010. Lease costs are expected to rise significantly.

Negotiations for the lease option will begin in February 2003. If negotiations for the lease renewal fail, any efforts to obtain a new fixed term lease requires that the total present value of the lease life-cycle costs would be "scored" or applied in the first year of the Total Obligational Authority (TOA), e.g., a 6-year firm term lease would be scored at $68.7 million (6 yrs @ $13 million/yr with a 3.75 percent discount). Through fiscal year 2004, leasing will have cost the Marine Corps $154.7 million.

Continuing to lease is risky, costly, contrary to DOD policy, and opposed by OMB. Cyclical lease renegotiations create cost uncertainty. Lease renewal for fiscal year 2005-fiscal year 2010 becomes more problematic if the rent rate exceeds our Congressional rent cap of $12.3 million on annual lease payments. Assuming long-term leasing is a non-starter, we could establish a year's lease with multiple annual renewals. However, this alternative is not a sound business choice, because it is inherently uncertain, has higher costs, shorter lease term, owner opposition, and continuing encroachment threats.

Failure to acquire real property interests to control civil encroachment could seriously impede the Marine Corps' ability to support the National Military Strategy and ultimately jeopardize the nation's defense capabilities.

Acquisition is currently planned in two phases. The first phase, the highest priority, is programmed in fiscal year 2002 at $35 million and would acquire approximately 362 acres outside the leased area, consisting of fee and easements to ensure no additional incompatible development occurs within the Explosives Safety Quantity Distance (ESQD) ammunition arc. The second phase at $119 million is currently unfunded but would acquire the Blount Island leased area, consisting of 1,089 acres. Adequate funds to purchase Blount Island must be obtained soon because lease renewal negotiations must start by February 2003.

Conclusion.—Acquisition is the Nation's best course of action and the most cost-effective means to secure long-term protection of this vital strategic asset.

BLOUNT ISLAND ACQUISITION BRIEF TO THE JACKSONVILLE, FLORIDA CHAMBER OF COMMERCE, MARCH 1, 2000

BACKGROUND

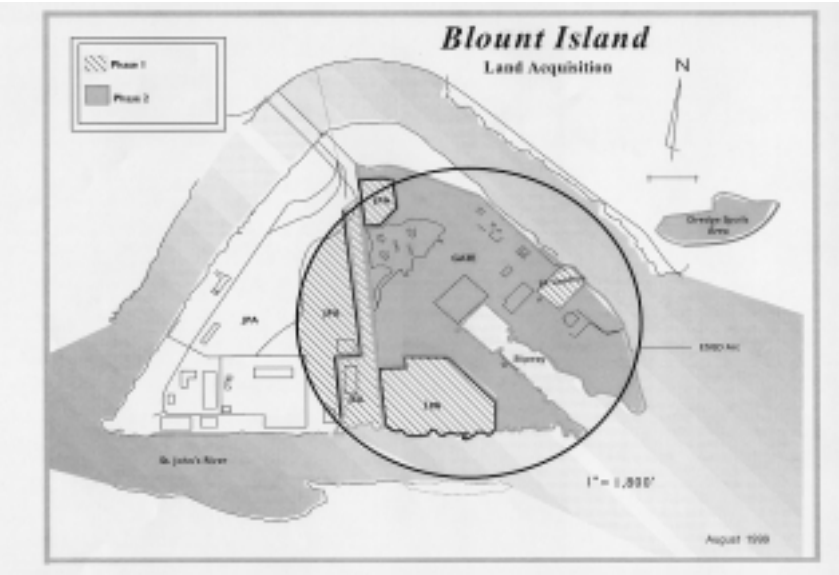
- MPF evolved as a strategic mobility initiative from Near Term Prepositioned Ships (NTPS)
  - NTPS was on line by July 1981
  - All 3 MPF squadrons were operational by end of 1986.
- Blount Island Lease signed in May 1986
  - Maintenance Cycle Operations site
  - Essential to MPF
  - Lease costs now are about $11m per year and will go up
- Cost to Purchase:
  - 1988: about $30m
  - Today: about $150m
  - Tomorrow: even more

Blount Island 1975

MILCON Acquisition Status

- **$5m appropriated by Congress for FY '00**
  - **"…supports actions…to acquire Blount Is. Cmd complex property…and property impacted by the ...safety...arc…" How to use still under study...**
- **Phase I (Safety Arc related):**
  - **$35m programmed in FY 02**

- **Phase II:**
  - **$119m proposed in FY 03**
  - **Approx. Pending reappraisal/negotiation**
  - **Includes significant overhead costs**



Initiatives Currently Underway

- We are currently pursuing planning studies (survey, environmental assessment, and appraisal update) to support the FY 02 and FY 03 MilCon projects

- USMC/DON reps will be giving information briefs to local entities sometime during Mar/Apr '00
  - Letters, information brief and briefing schedule are under development

CMC Testimony to the HASC on 10 Feb '00

- "The Blount Island facility... is truly a national asset that must be purchased to ensure its availability..."
- "...Exceptional value to the Marine Corps, ... strategic significance.
- "...Our long term national strategy should be to purchase this key facility outright."
- "Independent studies have confirmed the importance of maintaining complementary Army and Marine Corps prepositioning maintenance sites and have highlighted the strategic value of Blount Island..."

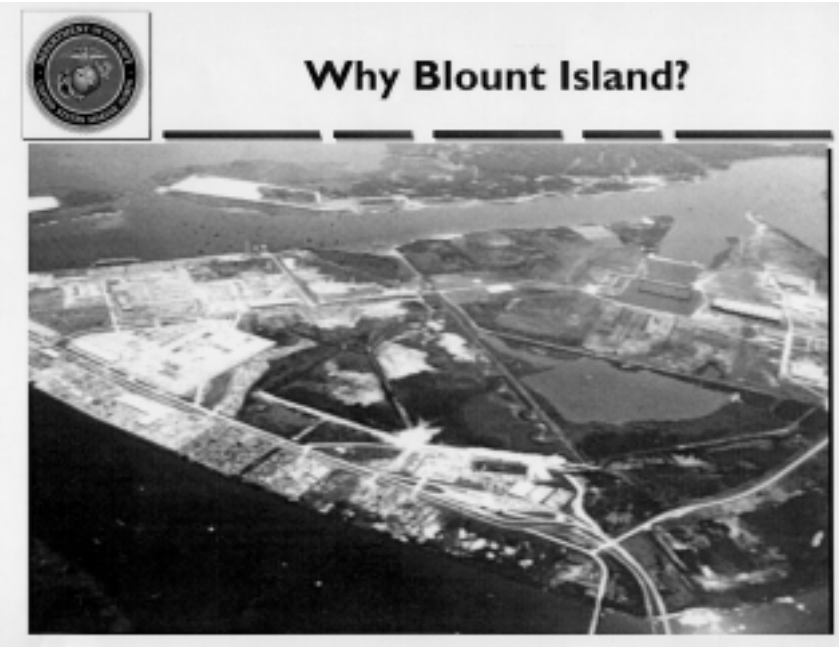
ACMC Statement to the HAC on 16 Feb '00

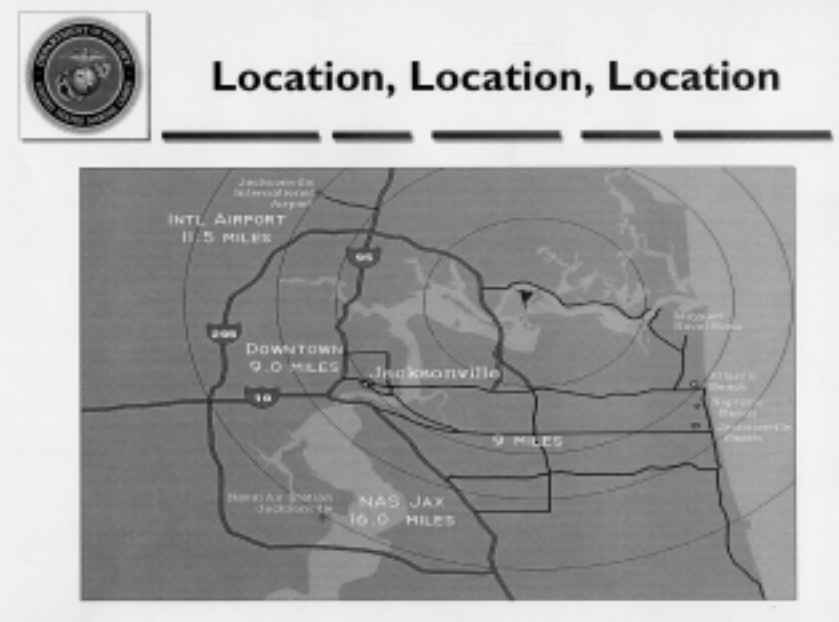
- "This facility is truly a national asset that must be secured for long-term use."
- "...Wartime capability to support massive logistics sustainment from the Continental United States (CONUS) makes the facility strategically significant."
- "...We need the funds to secure the necessary easements to prevent further encroachment against the facility."
- "Our long-term strategy should be to purchase this key facility outright."

BICmd vs Charleston

- The Joint Staff has endorsed two prepo sites: Blount Island AND Charleston
  - LtGen Cusick (Joint Staff Director for Logistics) ltr
  - "...concur that...separate sites is in the best interests of our National Defense."
  - "...purchasing...very attractive..."
  - "...fully explore buy vs. lease options..."
- Numerous studies have shown there is NO other alternative site for BICmd.
  - 1996 DOD IG: USMC process reliable and consistent
  - 1998 GAO Audit : Army and Air Force Problems
    - Marine Corps continues with high marks
- The other Services unlikely to oppose acquisition.
- CMC has decided to buy Blount Island

The decision is not if, but "when and how"


Why Blount Island?


Location, Location, Location
INTL AIRPORT
11.5 MILES
95
295
DOWNTOWN
9.0 MILES
Jacksonville
10
9 MILES
NAS JAX
16.0 MILES

Blount Island Today

DS/DS Throughput

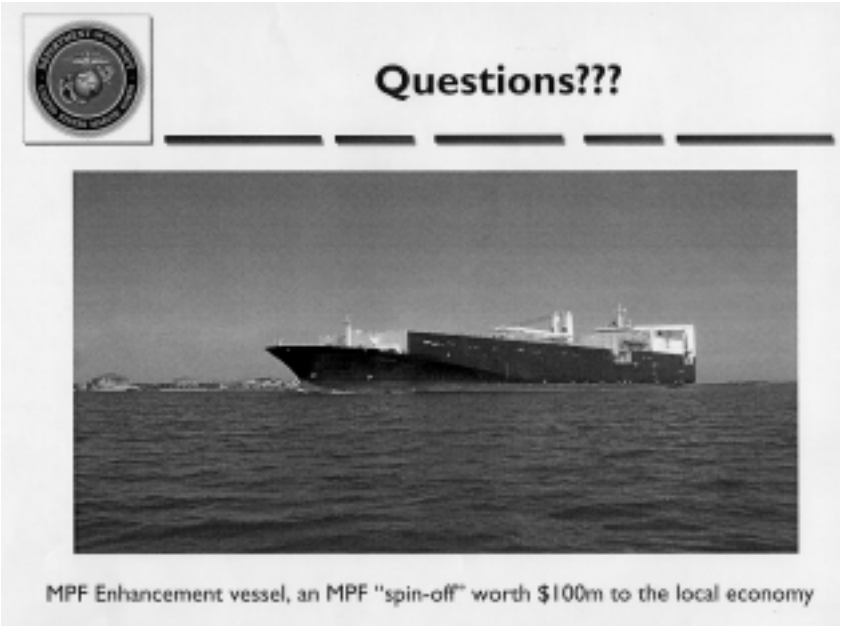
PORT	NUMBER OF SHIPS	TOTAL STONS	MAJOR UNITS/LOADS
Jacksonville, Fl	59	220,653	101st ABN DIV, 1st COSCOM II MEF
Houston, Tx	40	213,648	1st INF DIV, 13th COSCOM 1st CAV DIV, III CORPS
Sunny Point MOT, N.C.	38	375,892	4th MEB, Ammunition
Bayonne, N.J.	33	157,394	1st COSCOM
Wilmington, N.C.	22	132,501	II MEF, XVIII ABN CORPS, 1st COSCOM
Oakland MOT, CA	19	42,380	1st COSCOM

Follow the Money

- **CINC Mobility Enhancement Funds (Rail Loop)**
  - **Blount Is received $1.5m from CINCTRANS**
  - **$1.5m in matching funds from JPA**
  - **$300k in site planning studies in '99**
  - **$500k via the City of Jacksonville from the state**
- **MPF Maintenance Contractor**
  - **Allied Signal/Honeywell**
  - **10 yr contract just awarded**
  - **Almost one-half billion dollars over the life of the contract (USMC, USN, Gov't of Norway)**

The MPF Maintenance Cycle

- **Concept (worth repeating)**
  - All Equipment Offloaded and Maintained at Blount Island.
  - 30 Month Rotation Cycle for Entire MPF
  - All 13 Ships, 1 Ship At a Time
  - Offload to Backload: 60 Days Per Ship
  - **30-40 work days for equip/supplies**
  - Ammo shipped for rework
  - 36 months with MPF(E) starting MMC-7
- **Critical for MPF Readiness**
- **Continued operations at BICmd are essential to our strategy to support**



NATIONAL STRATEGIC ASSET, BLOUNT ISLAND, FL

THE CASE FOR DOD ACQUISITION

SECTION I—THE MARITIME PREPOSITIONING FORCE (MPF)

The MPF:

—Supports National Military Strategy

—Continues to be a Naval force power projection capability, major theater force enabler and/or multiplier, proven in global contingency operations

—Delivers sustainable combat power to the CINCs

—Provides core capability into the 21st century

—Will evolve with operational concepts such as Operational Maneuver From The Sea (OMFTS) and MPF (Future).

A vital underlying element of the MPF is the world class maintenance facility located at Blount Island, Jacksonville, Florida. In 1985, numerous sites were reviewed when Blount Island was selected as the site for our prepositioning maintenance operations. Several subsequent studies have expanded the number of facilities looked at and have continued to validate the long-term viability of Blount Island.

Strategic Requirement

The facility at Blount Island is the premier forward presence prepositioning maintenance facility in the world. Over 100 sites have been examined since the inception of the MPF program in various internal and external studies. Blount Island has been repeatedly validated as the best and most cost effective facility to conduct maintenance cycle operations.

The Port of Jacksonville's additional throughput capabilities were clearly demonstrated during Operation Desert Shield/Storm when 59 ships and over 220,000 tons of unit equipment and sustainment cargo were shipped to Southwest Asia. Only the military ammunition port at Sunny Point, NC handled more tonnage than Jacksonville Port.

—Blount Island was recognized as a national strategic asset during Desert Shield/Desert Storm. With the exception of ammunition, Jacksonville Port was the top throughput port in the country.

—Blount Island has the ability to surge and berth up to seven ships simultaneously.

—CINCTRANS, recognizing the strategic importance of Blount Island, has committed Mobility Enhancement Funds to complete the rail loop at Blount Island, making it even more effective for throughput and mobilization.
—Recent CINC Integrated Priority Lists support continued permanent operations at Blount Island.
—The Joint Warfare Integrated Capabilities Assessment (JWICA) has validated the strategic significance of Blount Island.
—Continued operations at Blount Island support the National Security Strategy, Naval Forward Presence, the current Maritime Prepositioning Force Concept, Forward . . . From the Sea, and evolving Operational Maneuver From The Sea and Maritime Prepositioning Force Future concepts.
—Blount Island Command is also designated a Required Operational Capability (ROC) 28 regeneration facility in the Marine Corps Capabilities Plan.

Operational Requirement

The MPF concept has earned a place as an essential element of the National Security Strategy. MPF provides rapid deployment of personnel and equipment of Marines and Sailors, by air to link up with prepositioned equipment and supplies embarked aboard Maritime Prepositioning Ships (MPS), which are forward positioned for rapid response to potential crisis and conflicts.
—MPF provides flexible options for rapid deployment and employment of forces across the spectrum of conventional operations.
—Maritime Prepositioning Forces are naval power projection assets that significantly support the employment of Naval Expeditionary Forces.
—The three MPS squadrons provide the Nation a unique, operationally ready, geo-strategically prepositioned capability.
—The MPF concept remains a relevant and proven capability which provides cost-effective crisis response capability, improving responsiveness to contingencies, and operational flexibility for combat, disaster relief, and humanitarian assistance operations.
—Blount Island Command's mission focuses on attainment, maintenance and sustainment of all requirements in support of the MPS. MPF Maintenance Cycle operations conducted at Blount Island are vital to maintaining the readiness and continued capability of the MPF program.

Blount Island remains vital to maintaining and sustaining the operational capability of the MPF, is the best site available, and offers the following capabilities:
—Dedicated 1,000 foot pier and capability to berth seven ships simultaneously in crisis
—Adjacent staging area (33 acres) for complete ship downloads/back loads, 262 acres exclusive use
—Excellent road/rail network
—Major airport only 15 minutes away
—Close proximity to Marine Corps Logistics Base, Albany
—Trained and dedicated local workforce in place

Acquisition of Blount Island for the Department of Defense

The acquisition will generate long-term savings and secures a facility that is vital to the Nation, Naval Forward Presence, the Maritime Prepositioning Force concept, and the future of the Marine Corps. Acquisition is currently planned in two phases.
—Phase I would acquire approximately 362 acres external to the currently leased property to prevent additional incompatible development from occurring within the current explosive safety quantity distance (ESQD) arc.
—Phase II would acquire approximately 1,089 acres of the current Blount Island leased property.

Permanent acquisition of the Blount Island facility will ensure the continued viability of forward presence in the National Military Strategy

No other facility can provide the nation the capability to perform the maintenance cycle operations as efficiently and effectively as the facilities and personnel at Blount Island without cost prohibitive investments and disruptive transfer of functions to another (undetermined and likely inadequate) site. Without securing Blount Island through acquisition, a key component of the National Military Strategy is at risk.

SECTION II—THE CASE FOR SEPARATE ARMY AND USMC PREPOSITIONING SITES

The paper addresses the vulnerabilities of moving to Naval Weapons Station, Charleston vice the Department of Defense permanently acquiring the world-class

prepositioning maintenance and mobilization site at Blount Island, Jacksonville, Florida.

The August, 1998 Joint Staff J–4 directed Institute for Defense Analysis (IDA) study, "Cost and Operational Effectiveness Analysis (COEA) on Collocating the Army and Marine Corps Afloat Prepositioning Maintenance Sites at Charleston, South Carolina and Blount Island, Florida", examined collocation issues in depth, and validated with the Combatant Commanders-in-Chief (CINCs) the strategic necessity to maintain two separate sites.

The study concluded that collocation:

—Increases vulnerability of prepositioning maintenance cycle operations to terrorism and major storm damage.
—Decreases throughput capability and strategic flexibility via the loss of additional slip ways at Blount Island.
—Results in the likely loss of a major mobilization site if Blount Island Command (BICmd) is closed through commercial development.
—Disruption of organizations during transition.
—Increases work stoppage vulnerability.
—Loss of excess capacity for possible future expansion of prepositioning forces.
—Could result in creation of a joint prepositioning command and recommended against it because:
  —Joint command would add another command layer.
  —Conflicting requirements were envisioned.

In February 1999 the USMC site survey to update our own inhouse assessment of NWS Charleston re-validated the IDA study relocation concerns and determined relocation would be even more costly now (over $200 million). No positive reasons for collocating were identified. Results are summarized as follows:

—With the exception of one excess building, only raw land is now available to support USMC relocation to NWS Charleston.
—Over $200 million for development of new facilities, infrastructure, hard stands and pier expansion would be required for stand-alone Marine Corps operations at three on-base sites: the pier/marshalling area, maintenance area, and lighterage maintenance.
  —This does not include an estimated $70 million in relocation costs.
—Collocation would also include scheduling conflicts.
  —The Army Afloat Prepositioning Force (APF) at end state will have 19 Large Medium Speed Roll-on/roll-off Ships (LMSRs) and the Maritime Prepositioning Force (MPF) will have 16 ships. Assuming the APF will also move to a 36-month maintenance cycle, this equates to one ship per month for 36 months.
—Sharing current Army facilities and infrastructure (as opposed to constructing usable facilities for the MPF program) is not a wise option for the Nation's defense, based on the envisioned scheduling conflicts and limited staging areas at both the Army maintenance site and near the pier. There would be no excess capacity in crisis.
  —APF and MPF operate under very different operational and maintenance concepts.
  —There is inadequate infrastructure for sharing the current facilities (Army still doing work outside, insufficient hard stands, etc.).
  —Surge and reconstitution conflicts.
—Higher maintenance cycle costs.
  —Proposed MPF site is 5 miles from pier.
  —Road network to the pier is two lane, winding road through swampland.
  —Second destination transportation costs will be higher.
—There will be a loss of skilled workforce at Blount Island.
  —We can anticipate disruption to maintenance operations at BICmd as USMC presence at the facility draws down.
  —Many contractor and government employees will not relocate.
  —Specialized maintenance skills are required in many commodities.
—Bridge clearance. Both the Cooper River and Mark Clark bridges at Charleston are clearance hazards for the MPF AMSEA vessels to transit the Cooper River to NWS Charleston. The AMSEA vessels would require major ship modifications of approximately $5.25 million total.

Other Issues

$37.7 million in facility improvement costs invested by the DOD in the Blount Island facility will now be lost.

Tenant costs at Charleston will be higher than current out-sourced facility maintenance costs.

DOD will lose use of ROC 28 reconstitution and regeneration facility.

SECTION III—SHORT SYNOPSIS OF ALTERNATIVE MPF MAINTENANCE SITE STUDIES

Alternative siting for the MPF Maintenance Cycle invariably resurfaces whenever the issue of addressing continued use, procurement and acquisition of Blount Island Command is discussed. Initiating a new study is viewed by some as a panacea to the complications of acquiring BICmd. However, reviewing the body of historical work since 1985, four major surveys have been completed on potential MPF maintenance sites, and a study of current use of Charleston and BICmd for maintenance operations has recently been completed.

These detailed studies have examined numerous commercial and government owned sites to perform MPF maintenance. All studies have concluded that Blount Island is not only the best, but the only viable place to accomplish the maintenance mission. Given the continued growth of civilian infrastructure in and around existing U.S. ports (both commercial and military), the likelihood that a new study will reveal a location at a reasonable price (under $200 million) which can support MPF maintenance operations is very remote. The studies are synopsized below:

The USMC survey of 1985 recommending Blount Island, Jacksonville, FL considered 60 locations. All but five were eliminated for various limiting factors such as water depth, overhead clearance, acreage, available facilities (cost), and ammunition safety. The five remaining ports were physically surveyed.

All except Blount Island were eliminated due to the aforementioned limitations or other factors such as annual weather patterns.

The Center for Naval Analysis (CNA)

In 1992 CNA evaluated the purchase of Blount Island verses moving to an alternative site. CNA reviewed the 1985 USMC study and also made use of a 50 port, Department of Transportation study of ammunition capable, commercial ports. All commercial sites were eliminated (for the same factors as above) with the exception of Blount Island. CNA physically surveyed ten ports: Blount Island, FL; Port Hueneme, CA; NWS Indian Island, WA; NWS Yorktown, VA; NWS Seal Beach, CA; Craney Island, Norfolk, VA; NWS Charleston, SC; NWS Earle, NJ; NWS Concord, CA; Military Ocean Terminal, Sunny Pt, NC (MOTSU).

Six options were presented by CNA based upon physical capability and ranked by cost as follows: NWS Charleston, SC; Purchase of Blount Island, FL; Continue Lease of Blount Island, FL; NWS Yorktown, VA; MOTSU; NWS Indian Island, WA.

MOTSU and Indian Island, although listed, were determined to be cost prohibitive, due to upgrades and operating costs required at those sites being many times greater than the first three options. NWS Yorktown, subsequent to this study, now has a bridge restricting overhead clearance of the five AMSEA class ships. Even though Charleston also restricts the AMSEA ships, CNA placed it on the top of the cost rankings. In order for AMSEA ships to enter Charleston major modifications are required to the mast and superstructure.

In its ranking CNA "cost penalized" Blount Island for lack of troop support facilities (BEQ, mess, gym, etc.), even though there are less than 70 uniformed personnel assigned to Blount Island Command. The fact that there are two major naval stations (Mayport and NAS Jacksonville) in close proximity is one of the main reasons the Blount Island location was chosen in the first place.

CNA Conclusion

Buy or lease Blount Island.

Logistics Management Institute (LMI)

In 1993, the LMI conducted a survey for the Army to locate a site for Army afloat prepositioning maintenance. LMI reviewed previous surveys and physically surveyed the following locations: Port Hadlock, WA; NAS Yorktown, VA; MOTSU; Ft. Eustis, VA; Blount Island; Military Ocean Terminal Bayonne, NJ (MOTBY); NAS Earle, NJ; Wilmington, NC; NAS Charleston, SC; Four sites in the San Francisco Bay area.

LMI found that only Charleston and Blount Island were suitable as prepositioning ship maintenance sites. LMI recommended Charleston because Army prepositioning vessels are not restricted by overhead clearance and the Army estimated their ships would carry 25 percent more ammunition than do USMC ships. This second item caused the potential explosive safety arc of Army ships to exceed the limits imposed on Blount Island. In reality, the Army ships now actually carry significantly less ammunition than MPF vessels.

LMI Conclusion

For the Marine Corps . . . use Blount Island.

PREPARED STATEMENT OF GEN. JAMES L. JONES

OUR ROLE: A READY AND RELEVANT FORCE

Mr. Chairman, Senator Inouye, and distinguished members of the Committee, I greatly appreciate this opportunity to report to you on the state of your Marine Corps and its important contributions to the nation.

Let me first offer my sincere thanks to the Committee, the Congress, and the Administration for your help. You sent a clear signal on national defense with your vigorous support for our fiscal year 2000 budget. The resources you provided substantially reduced our modernization backlog and allowed us to reverse the decline in our infrastructure. We have turned an important corner, and we now need your help in sustaining and improving upon our progress. Marines and their families are grateful for your assistance. Among other things, it provided for the largest pay raise in 20 years, strengthened the retirement system, and overhauled pay tables.

Pay and allowance increases are of great importance, but they alone do not suffice to attract young Americans to our ranks, or to retain them in sufficient numbers. Instead, it is the intangible qualities of military service that prompt Marines to join and remain a part of our uniquely demanding profession. These qualities include dedication to country and Corps, great career satisfaction for both a Marine and his or her spouse, and recognition and appreciation from our citizenry of the great value of such a commitment.

Today, over 20,000 Marines are either forward-deployed with the Amphibious Ready Groups of the numbered fleets or forward-based in Japan. Other Marines of the Operating Forces are training at their bases and stations in the United States, in order to remain prepared for immediate deployment. Still others—to include both uniformed Marines and our 15,000 "Civilian Marines"—serve in our supporting establishment, where their efforts to recruit, train, retain, administer, and supply today's Marine "Total Force" directly contribute to the readiness of our Operating Forces and provide the infrastructure that sustains our Marine families.

This past year, our Marines participated in a wide range of missions. The most prominent of these were the operations in the Balkans, Iraq, and East Timor, and the humanitarian relief efforts in Turkey, Central America, and South America. Our Marine Expeditionary Units (Special Operations Capable) conducted continuous forward presence operations, including participation in exercises and engagement operations, along with their partnered Amphibious Ready Groups. Some Marines conducted training deployments to South America, Africa, and the equatorial Pacific region, and still others participated in counter-narcotics operations in support of Southern Command.

In the United States, Marines performed many important missions. Following a series of hurricanes that struck the Atlantic seaboard, our units conducted relief operations in conjunction with local authorities. Our Chemical-Biological Incident Response Force (CBIRF), a unique military organization and a recognized national asset, remains prepared to assist state and federal agencies in responding to the possible use of weapons of mass destruction on American soil. In fact, we have proposed relocating CBIRF in the upcoming months, in order to increase its responsiveness to the national capital region.

The Marine Corps Reserve continues to make an extraordinary contribution, both at home and abroad. As part of our Total Force, Reserve Marines augment and reinforce the regular component, performing a variety of missions. Recently, for example, they provided civil affairs expertise in the Balkans. Reserve Marines and units participated in a variety of exercises, while others trained in locales as distant and varied as Norway, Romania, Egypt, Japan, Korea, Thailand, and Australia. In the U.S., they train to maintain readiness for mobilization, and conduct community service projects in their hometowns, thereby strengthening the link between the military and our society. We are reviewing options for greater reserve integration with active units, to include participation in scheduled overseas deployments. The Marine Corps Reserve is in the midst of the last of its Quadrennial Defense Review-driven structural adjustments, and it should soon stabilize at 39,000 Marines.

Our Marine Corps Junior Reserve Officers' Training Corps (MCJROTC) Program is yet another way in which we connect to our society. In our high schools in the United States and in Department of Defense schools overseas, we currently have 178 MCJROTC units, with a combined enrollment of 25,127 Cadets. Through this program, retired Marines provide instruction in the fundamentals of leadership and

the core values that form the heart of our service culture. School administrators, parents, and communities celebrate the success of our MCJROTC units in instilling within young Americans the virtues of responsible citizenship. As an added bonus, approximately one-third of our graduating MCJROTC Cadets enter military service, to include commissioning programs in colleges and service academies. The Congress has authorized us to expand to 210 units, beginning next year, and we are enthusiastically pursuing that goal.

Your Marine Corps, in partnership with the United States Navy, is prepared to execute its mission as a naval expeditionary force in readiness. With your continued support, we will remain ready for the challenges of today, while preparing to address those of the future.

OUR LEGACY: VANGUARD OF THE NEW AMERICAN CENTURY

As the history of the 20th century reflects, the growth of our nation's influence throughout the world was preceded by Americans in uniform. During two World Wars and during the long struggle of the Cold War, the U.S. military stood as a bulwark against global and regional aggression, defending our interests and those of our allies, and facilitating the expansion of our economy, culture, and democratic values. The benefits of this undertaking accrued not only to our own citizens, but also to the people of many distant lands whose lives were transformed through exposure to America and Americans. Historically, this constituted a rare phenomenon: the extension of a nation's influence through ideas, rather than conquest, and for noble, rather than self-serving, purposes. Our military element of national power—and our willingness and ability to use it effectively, when threatened—provided the security environment that made possible the miracle of the "American century."

With a legacy of contribution in the 20th century, and the knowledge that an active American presence around the world is both a vital component of our continued prosperity and of remaining a positive global influence in the 21st century, the influence of a strong American military is beyond dispute. What remains a point of debate is the proper level of investment in the "maintenance and development" of this capability.

An examination of our defense spending as a percentage of Gross Domestic Product (GDP) over the last half of the 20th century is informative. Following the U.S. rise to superpower status during World War II, our investment in defense, nonetheless, reached a low point in 1948, when it was estimated to be 3.6 percent of our GDP. Spending levels rose during the Korean conflict and remained at 5.0 percent or higher through most of the Cold War. Since 1991, however, the defense share of the budget has steadily decreased. Our average level of investment over the past 60 years, as a percentage of GDP, was 8.8 percent. Today's U.S. global military capability and responsibility is sustained at a cost of about 3 percent of our GDP.

When comparing U.S. defense expenditures to that of other nations, it is clear that the U.S. spends as much on its military as many other leading nations combined, a comparison that makes our annual defense spending appear to be disproportionate. Reality is more complex. As the only nation with global interests, responsibilities, and capabilities, our defense requirements—the underpinnings of our status as a superpower—are correspondingly greater than those of nations whose interests are regional in scope. Interestingly, however, some of these other nations closely match our own commitment to defense. For example, the United Kingdom spends about 2.9 percent of its GDP on defense, France spends about 2.8 percent, Turkey and Greece each spend over 4 percent, and some Persian Gulf countries—like Saudi Arabia, Kuwait, and Oman—spend about 12 percent. Thus, while none share our global responsibilities, several invest in defense a share of their national treasure that is approximately equal to, or greater than, ours. The difference is that only we have global responsibilities. The military component of those responsibilities is of vital importance.

A number of factors underscore our requirement for adequate defense investment. First, it is essential that we recapitalize and modernize to maintain our current military strength. Over the next two decades, the cost of sustaining our older equipment will increase steadily. For example, many systems are rapidly nearing the end of their service lives. To simply maintain the status quo, we will soon face the need to replace ever-growing quantities of our materiel. However, prudence dictates that we modernize our military capability to maintain our current advantage over potential adversaries who will also invest in technologically advanced systems, or those who will attempt to confront us with asymmetrical challenges. While technology is costly, we must devote sufficient resources to extend our present military advantage into the future.

Further, the cost of human resources is growing steadily. We spend increasing amounts to recruit and retain an all-volunteer force in a burgeoning economy marked by record-low unemployment. Training costs also continue to increase, as equipment becomes more sophisticated, and potential combat environments become more complex.

A multiplicity of threats to our national security continue to require that we invest consistently and responsibly in the military pillar of national power. In many regions throughout the globe, virulent nationalism, long repressed during the half century of the Cold War, has re-awakened. Religious strife and regional radical fundamentalism overlay an already fractured political geography, giving rise to opportunists who have no compunction against orchestrating mass violence to preserve or expand their power. Similarly, the competition for the world's scarce resources is becoming increasingly intense as the gap between rich and poor nations continues to widen. The possibility of major interstate conflict remains a great concern, and major theater war scenarios in the Arabian Gulf or in Northeast Asia still fill the lion's share of defense planners' time and energy. Terrorism has occupied a prominent place in the history of inter- and intra-state conflict throughout recorded history. Today, the enormously destructive weapons at the disposal of the terrorist elevate our concerns to a much higher plane. Most ominous, perhaps, the proliferation of weapons of mass destruction raises the specter of a growing threat to our homeland.

Clearly, if the U.S. is to maintain the global influence that has proven so beneficial for Americans and for the world, we must maintain the pillar of superpower status that sets and sustains the conditions for that influence to grow and to prosper: a capable and powerful military. Over the past decade, efforts to balance the budget and to reduce the federal deficit have resulted in increasing budgetary pressure on defense investment. These constraints have forced the military services to make difficult choices in prioritizing resources between force structure, near-term readiness, and modernization. An ever-increasing operational tempo during this period has complicated the prioritization effort. However, economic forecasts of a continuing budget surplus suggest that resources for increased discretionary spending will be available over the coming years. The armed services require sustained, steady support and growth; periodic "spikes" in resource allocation are not efficient over the long term. The question that you must consider—indeed, the question that our nation should debate—is this: What is the proper level of investment in defense, as a percentage of our Gross Domestic Product, that will enable the nation to maintain its superpower status in the 21st century?

OUR CULTURE: THE QUALITIES OF A NAVAL EXPEDITIONARY FORCE

The Naval Services are well positioned to confront the national security challenges of the new century. Naval forces can help to defuse a crisis quickly by taking up position offshore or by conducting long-range precision strikes, when required. They can seize critical ports and airfields as part of an assault by a joint task force, or they can deliver critical supplies and services in order to assist with humanitarian or natural disasters. Because all of this can be done from the sea, with or without any host nation support, naval forces will continue to offer multiple options for shaping the national security environment.

In his posture statement, the Secretary of the Navy highlights three characteristics that define the uniqueness of the Naval Services. First, we operate from the sea. Second, we are an expeditionary force: our ships, aircraft, sailors, and Marines are forward deployed. Third, the Navy and Marine Corps are inherently joint at the operational and tactical levels in their structure, training, deployments, operations, equipment, and staffing.

From these characteristics, we can derive six attributes that capture the extraordinary value of naval forces to our geographic Commanders in Chief:

Presence.—Whether on a visit to the port of an ally or stationed off a hostile shore, naval forces provide a visible indication of U.S. military power and the commitment to employ it in defense of our interests. There is no substitute for presence if one hopes to shape the outcome of events. The trendy notion of so-called "virtual presence," in point of fact, amounts to "actual absence." Forward presence is an understandable and unmistakable marker of American interest in a region. It provides the means for the "on-scene shaping" that is both the primary military mechanism for our strategy of engagement, as well as a tool for the creation and maintenance of stability. The physical presence of a credible and capable force deters aggression and encourages conflict resolution at levels short of war. It also advances American ideals, and presents a bright example of the positive aspects of military engagement

in a democracy. It inspires emulation by example. Take it away, and you create a vacuum into which opponents may enter.

Versatility and Scalablity of Power.—Naval forces operate across the full spectrum of conflict from peacekeeping to major theater war. They can transition quickly from the normal mix of forces in a given theater to a much more powerful force. This can be accomplished without deploying a large command and control system or creating land-based infrastructure. A forward-deployed Marine Expeditionary Unit (Special Operations Capable) can serve as the lead element of a larger and more capable Marine Expeditionary Brigade. Similarly, a brigade can pave the way for the deployment of an even more powerful Marine Expeditionary Force.

Flexibility.—Naval forces possess latent combat power, the application of which can range from maritime interdiction through amphibious assault and strike operations, or operations as a part of a large joint or combined force. They can be fully engaged in an operation one day and withdrawn the next, quickly reconstituting their combat capability for follow-on missions. Further, they can conduct operations unilaterally, as part of a joint force, or in concert with allies.

Credibility.—Naval forces are particularly well suited to the roles of compelling, deterring, and responding to hostile actions. There is ample historical precedent of the performance of these roles, a factor that potential foes around the world must always consider.

Sustainability.—Naval forces are uniquely able to conduct long-term combat or contingency operations without the establishment of large, fixed bases on foreign soil and are free from excessive reliance upon extensive contractor support. Logistics support is part and parcel of the normal structure that is forward-deployed for peacetime operations.

Affordability.—Naval forces are funded to operate, not simply funded to be. This is a defining quality of our expeditionary culture.

While the Naval Services are expeditionary by nature and in culture, interest in such capabilities is growing in the Department of Defense and the military services. Indeed, with the extensive reduction of our overseas presence during the past decade, it is today necessary for each of our services to be able to deploy rapidly and to operate in austere environments. There has been much discussion of new, emerging expeditionary requirements and capabilities. In the Naval Services, however, an expeditionary force is much more than the narrowly defined entity described in the Department of Defense dictionary as "an armed force organized to accomplish a specific objective in a foreign country." We believe that an appropriate definition of a naval expeditionary force is:

> A flexible and agile force operating from the sea and organized to accomplish a broad range of military objectives in a foreign country or region. This force must be able to deploy rapidly, enter the objective area through forcible means, sustain itself for an extended period of time, withdraw quickly, and reconstitute rapidly to execute follow-on missions.

Service culture directly impacts upon the expeditionary character of a force. The Navy and Marine Corps have developed and sustained an expeditionary mindset and culture for more than two centuries of service. An expeditionary culture requires institutional flexibility and mandates continual preparedness for deployment on short notice. In the case of the Marine Corps, with 68 percent of our enlisted Marines on their first tour of duty, we have flexible ties to fixed geographic bases. Readiness for short-notice deployments is one of the principal articles of faith subscribed to by Marines assigned to our Operating Forces. Thus, Marines understand well the requirement to maintain their personal and family readiness. Despite recent concerns with regard to operational tempo, we find that our Marines who are assigned to regularly deploying squadrons and battalions are also the most likely to reenlist. Young men and women join our ranks expecting to be deployed. They want to respond to the nation's global challenges, and we do not disappoint them.

OUR FOCUS: THE OPERATING FORCES

The readiness of the Operating Forces is our highest priority. It rests upon four pillars: (1) Marines and their families, (2) "legacy" systems, (3) infrastructure, and (4) modernization. Our challenge is to maintain the individual strength of each, while achieving a proper balance in our application of resources among the four.

People will continue to be the most important pillar of our readiness. We continually develop and sustain preparedness for immediate deployment. This requires attention to the physical readiness of Marines and their equipment, as well as "family readiness." We accomplish the former through physical means, primarily, rigorous training. The latter is the product of instilling in our Marines unquestionable con-

fidence that their families are adequately supported in terms of pay, health care, housing, and schools—especially during deployments.

The second pillar of readiness—legacy systems—requires continued attention to the maintenance of materiel fielded in the period spanning the last four decades of the 20th century. Much of this equipment is currently beyond its intended service life, resulting in a continually growing maintenance requirement. Still, it is this equipment with which we conduct operations today. It is essential that we support it properly, until it can be replaced.

Our third readiness pillar—infrastructure—is likewise of critical importance to the accomplishment of our mission. Our bases and stations are the launching points for deploying units of the Operating Forces, and they are home to our Marine families. We must ensure that they provide adequate ranges and training facilities, are environmentally sound, and promote the overall health and well being of our Marines, our civilians, and our families.

Finally, our fourth pillar—modernization—will ensure ready and capable Marine Air Ground Task Forces well into the future. We must procure key warfighting systems in a timely manner, and in the proper quantities. As our legacy systems approach the end of their useful lives, they become of increasingly marginal tactical use, and require modernization.

Marine forces are joint, combined, and fully interoperable across the spectrum of potential conflict. With existing resources, we are breathing new life into our capabilities. Such measures include:

Marine Expeditionary Units (Special Operations Capable) (approximately 2,200 Marines and Sailors, self-sustaining for 15 days)

—Validated mission profiles as "light weight warfighting capability"

—Prepared to incorporate MV–22 Osprey

—Acquired new light weight Interim Fast Attack Vehicle

Marine Expeditionary Brigades (up to 17,000 Marines and Sailors, self-sustaining for 30 days)

—Embedded brigade command element in each Marine Expeditionary Force

—Validated mission profiles as "medium weight warfighting capability"

—Initiated development of standards of performance

—Re-established brigade link with Maritime Prepositioning Ships Squadrons

Marine Expeditionary Forces (approximately 50,000 Marines and Sailors, self-sustaining for 60 days)

—Validated mission profile as "heavy weight warfighting capability"

—Completed requirements to augment organic fire support capability

—Increased reconnaissance capability

Our responsibility to the nation is to be successful in warfighting, and the single best expression of that task is found in our service doctrine. Our capstone warfighting concept for the future—Operational Maneuver From The Sea (OMFTS)—reflects our best understanding of the 21st century warfighting environment and how we can succeed in that environment. It is the foundation upon which we will build our doctrine of the future. Marines understand that OMFTS depends upon the Navy's complete support. To that end, during January, the Chief of Naval Operations and I co-hosted a Navy-Marine Corps Warfighting Conference at Quantico, Virginia. This exchange of ideas among the senior leaders of our two services will serve us well as we shape the naval warfighting capability of the 21st century.

Navy-Marine Corps teamwork is the strength of the Naval Services. Allow me to cite some examples. First, as you know, a variety of manufacturing, training, and maintenance deficiencies converged on us last summer, resulting in a Corps-wide grounding and complete reassessment of the state of the AV–8B Harrier fleet. By April of this year, we will have returned the great majority of these aircraft to service. We could not have made such great progress in such a short period of time without the support of the Chief of Naval Operations and the Navy. Additionally, despite the constraint of available shipbuilding funds, the Navy has strongly supported the continued modernization of the amphibious force, at the cost of other projects. This clear commitment to the readiness of the overall naval force is an enduring characteristic of the Navy-Marine Corps team, and it bodes well for the future.

In addition to our strong partnership with the Navy, the Marine Corps is a significant force provider and a major participant in joint operations. Our contribution to the nation's combat power is, proportionally, at an historical high. Marine units constitute about 20 percent of the U.S. military's active ground maneuver battalions, 20 percent of the active fighter/attack squadrons, 17 percent of the attack helicopters, and nearly one third of the ground combat service support in the active forces. When the United States commits significant forces to any military oper-

ation—combat or otherwise—Marines will be there * * * for about six percent of the defense budget.

OUR DIRECTION: NEW CAPABILITIES FOR A NEW CENTURY

We have a well-ordered plan to manage the transition of today's Marine Corps to a 21st century sea-based force. With the continued strong support of the Congress, Marine Air-Ground Task Forces, by the end of this decade, will offer a greater range of flexible and potent military capabilities to U.S. leadership. We have begun to build the doctrinal and educational foundation of the future Marine Corps. We are in need of your support to complete the task.

Recruiting the Force

While we have met or exceeded our recruiting goals for the past 55 months, we do not take this success for granted. With 68 percent of Marines on their first enlistment, we are always the "youngest" of the four services. Although it is not widely known, we must annually recruit more young men and women into our enlisted ranks than does the Air Force. This year, our goal is to recruit 39,343 Marines for the Total Force, while next year this figure will rise to just over 41,000.

Given those factors, we are concerned about the diminishing numbers of young Americans available for military service and their demonstrated low propensity to enlist. Competition from a strong economy exacerbates this trend, as does the higher percentage of youths who are able to attend college with the financial assistance of non-military related programs. The extent of the recruiting challenge can be quantified by recruiting costs. Today, the Marine Corps spends over $6,000 to complete a single enlistment contract—a "bargain basement" amount—and that figure is rising continually.

The unpredictable demands of modern conflict and the increasingly complicated technology we employ require that the Marine Corps seek out young men and women of character who are physically fit and intellectually prepared. The surest source of such high-caliber recruits is from among the ranks of the graduates of America's high schools and colleges. Accordingly, our recruiting program relies on our ability to reach the largest possible range of qualified young Americans. Unfortunately, our recruiters are not only experiencing a decline in access to school directory information, but in many cases, schools are denying them permission to conduct campus visits. Some school districts allow their individual administrators to establish and enforce restrictive policies. While these take many forms, it is the denial of directory information that is most damaging to our recruiting efforts. If this trend continues, it will not only have a negative impact on Marine Corps recruiting, but it will also threaten the viability of the All-Volunteer Force. Those who restrict the access of recruiters to their schools would probably be the first to object to a return of the draft. I believe that all services would benefit from assistance in getting our nation's high schools and community colleges to support military recruitment efforts. Therefore, I ask for your support in ensuring that school systems benefiting from federal funding reciprocate with access and directory information for our military recruiters.

Retaining the Force

The Marine Corps is very mindful of retention issues. As one might expect, retaining Marines who are trained in some technical skills presents a great challenge. Although officer retention appears to be experiencing a modest increase over last year, we remain watchful with regard to the retention of our fixed-wing aviators.

Over the past several years, we have discharged about 8,000 first-term Marines per year prior to the end of their first enlistment. In fiscal year 1999, we achieved a 22 percent reduction in such early attrition, and it appears that this positive trend is carrying over this year. If we can sustain this effort, we can ease accession requirements for our recruiters. This is a task that has the attention of Marine leaders of all grades. While only a few can be "recruiters," we are all "retainers."

Recent quality of life enhancements have done a great deal to assist us in meeting our retention goals and we thank you for your support. The "compensation triad" of pay raises, Pay Table Reform, and REDUX elimination is having a positive impact in the Operating Forces. We must continue to invest in this area. Secretary Cohen's recent initiative to further improve Basic Allowance for Housing rates to cover 100 percent of the normal costs of housing by 2005 is exactly the kind of message we need in our retention efforts.

On the list of needed improvements that influence retention, military health care ranks very high. Military families are faced with frequent moves as a condition of the profession. When faced with limited health care availability, poorly informed support staff personnel, and the out-of-pocket expense of today's TRICARE system,

frustration is palpable. The retired military community feels this problem, as well, and their best efforts to settle near large military medical facilities are no guarantee of reliable access to health care. To them, adequate health care is part of a commitment made by the nation for their past service. We have a moral obligation to support our retired and disabled veterans. They, more than any other group in the 20th century, shaped our nation for the bright future we envision. In this time of unprecedented economic surplus, it seems to be both reasonable and fair to suggest that we should seize the moment to take care of them.

Staffing the Force

We are reviewing our practices in order to try to narrow the gap between our Operating Force structure and the manpower available to fill that structure. Through privatization or consolidation of functions, we can redistribute manpower to meet our most pressing needs. To date, we have identified almost 2,100 Marines who, beginning in fiscal 2001, will be returning to billets the Operating Forces. We are actively reviewing more billets for similar consideration. Still, we might not be able to narrow the structure-to-staffing gap sufficiently, and as we review our force structure, we might yet determine a need for more Marines.

Your support in fiscal year 2000 for an increase in the end strength of the Corps by 370 Marines will make possible a significant improvement in the breadth and depth of our support for the Department of State, through the Marine Security Guard program. When this increase comes to fruition, we will be able to better protect our overseas diplomatic posts. While there is more work to be done in this area, the additional manpower allocation is an important step in the right direction.

Among its many great reforms, the Goldwater-Nichols Act of 1986 took aim at the size of service headquarters staffs. Legislation in 1991 directed a four percent reduction per year from fiscal year 1991 through fiscal year 1995. The Marine Corps complied with that legislation and follow-on legislation, and as a result we will have achieved a 27 percent reduction in our headquarters staff by 2001. We pride ourselves on being as "lean" as possible in this area, and we continually seek opportunities to transfer force structure from our Supporting Establishment to our Operating Forces. I do not, however, endorse further reductions in our service headquarters staff as mandated by Congress in 2000. The legislated reduction—15 percent between fiscal year 2000 and fiscal year 2002—will greatly limit the ability of our headquarters to fulfill its Title 10 and operational responsibilities. I respectfully request Congressional review of this mandate, and I ask the Congress to craft legislation that more fully considers the impact of reductions on each service and department.

Amphibious and Naval Surface Fire Support for the Force

The five Tarawa-class Amphibious Assault Ships (LHAs) are scheduled for retirement over the next 15 years and we need to closely examine options for their replacement. An LHD–8 transition ship and follow-on LHA replacement ships will better serve and meet Marine Corps requirements. The LDP–17 program represents a new generation of amphibious ships. In 2008, when the last LPD–17 class ship is scheduled to join the fleet, the amphibious force will consist of 36 ships or 12 three-ship Amphibious Ready Groups (ARGs).

We support the achievement of a 3.0 MEB amphibious lift capability. Current plans will bring the United States up to a fiscally constrained 2.5 MEB-lift capability by fiscal year 2008. Dedicated amphibious forces have proven their worth in peace as a deterrent, and in war as a combat force multiplier. Such forces represent an invaluable and irreplaceable capacity to represent sovereign U.S. interests, whether operating independently or as part of a Naval Expeditionary Force. The forcible entry capability of modern amphibious forces simply cannot be replicated.

The recent funding of the acquisition and conversion of the USNS *Soderman* to become part of the Maritime Prepositioning Force will offer Commanders in Chief a substantial increase in capability. The *Soderman*, along with its two predecessors in the Maritime Prepositioning Force Enhancement program, brings a unique set of naval construction and expeditionary airfield options to remote theaters of operation. The next generation of maritime prepositioning ships will further extend our ability to project and sustain U.S. military power in the world's littorals.

A credible naval surface fire support (NSFS) program is a critical component of forcible entry from the sea. Under current plans, the Navy will begin construction in fiscal year 2005 of the DD 21-class ships, each to be equipped with two 155-millimeter naval guns. Additionally, the Navy has committed, in the interim, to installing the 5 inch/62 caliber naval gun on 27 new DDG 51-class destroyers and retrofitting 22 CG 47-class cruisers with the same system. Firing the Extended Range Gun Munition (ERGM), this gun will measurably improve our near-term NSFS ca-

pability. We have been at considerable risk in naval surface fire support since the retirement of the Iowa-class battleships. This situation will continue until the DD 21-class destroyers join the fleet in strength. This program must be accorded a high priority of effort.

Sustaining the Force

We must undertake the wisest possible course to conserve our real property and, when necessary, to acquire any additional property that is mission critical. The Blount Island facility in Jacksonville, Florida is truly a national asset that must be purchased to ensure its availability over the long term. Its peacetime mission of support to the Maritime Prepositioning Force has been of exceptional value to the Marine Corps, while its wartime capability to support massive logistics sustainment from the continental U.S. gives it strategic significance. In 2004, our lease of this facility will expire. In the near term, we request $35 million to secure the necessary easements in order to prevent further encroachment against the facility, but our long term national strategy should be to purchase this key facility outright. Independent studies—including one completed in 1997 for the J–4 Directorate of the Joint Staff—have confirmed the importance of maintaining complementary Army and Marine Corps prepositioning maintenance sites and have highlighted the strategic value of Blount Island's throughput and follow-on sustainment capabilities.

Command and Control for the Force

We have entered an era of increasing reliance on high-end intelligence, surveillance, and reconnaissance systems and their associated communications suites. With new technologies introduced on a daily basis, our systems can quickly become obsolete. Our warfighting Commanders in Chief desire to field forces with the highest capabilities in this regard, but they will come at a significant cost.

Two recent situations illustrate this trend. First, during combat operations in Kosovo in the spring of 1999, the Marine Corps planned to deploy two F/A–18 Hornet squadrons to Hungary to help fulfill the NATO operational plan. Unfortunately, these Hornet squadrons operated the early "A" model of the aircraft, and had not yet been upgraded with the technology provided by the Engineering Change Proposal 583, which would have enabled our F/A–18As to operate more effectively with the NATO air command and control system in theater. As a result, the Marine Corps was forced to substitute two F/A–18D squadrons in place of the two F/A–18A squadrons, and this in turn caused a great deal of extra wear on these already frequently-deployed aircraft and their personnel.

The Kosovo operation further highlighted our dependence on satellites in modern warfare. The conflict there, involving an American force that was approximately 7 percent the size of our Desert Storm force, required an astounding 184 percent increase in military satellite communication bandwidth over that of Operation Desert Storm. The benefits of our command and control systems to our warfighters are tremendous, but we are experiencing difficulty in keeping up with growing requirements for fast, secure, and reliable bandwidth. The complexity of these systems and their networks adds to the challenges. Your continued support of highly capable ground, sea, and space-based command and control systems is critical to our success in modern warfare.

Training the Force

The need for the preservation of key training bases and ranges is a major issue involving the rights and responsibilities of our citizenry. Our citizens who live outside the gates of military training facilities generally gain immediate economic benefit from the military's presence. There is no guarantee of such benefit at every facility, however, because some—most notably, those at which live-fire training is conducted—were chosen specifically because of their relative isolation from large population centers. Economics can only be an ancillary part of the relationship. In the main, we rely upon the patriotism of our citizenry to support the training needs of our nation's military.

Our bases are an integral part of community life across the country and overseas. Here at home, they enjoy broad community support. In a profession that can be rootless at times, bases often provide our strongest connection to the society we are sworn to defend. For servicemen and women without families of their own, their involvement in local school, church, and charitable activities are important qualities of their lives.

As befits the actions of good neighbors, we will continue to do everything within our ability to address the legitimate concerns of local communities regarding noise, environmental, and other issues. We must, however, retain our ability to conduct core training in an efficient and effective manner, and we must conserve our precious maneuver areas against encroachment. Our record of stewardship dem-

onstrates that Marines are responsible resource custodians, and strong supporters of the environment. We must work with civilian leaders to achieve a reasonable balance between our training requirements and our conservation efforts. At stake in this issue are mission accomplishment and the very survival of our servicemen and women in combat, both of which our nation demands.

Modernizing the Force

The Marine Corps' continued success through this century will rest upon our modernization effort. Even if every other concern regarding the preparedness of the Operating Forces is rectified, within a few years, we will be at risk of sending our men and women into combat with outmoded equipment. For this reason, we place great importance on modernization, and we have developed a plan to achieve our goals. It calls for upgrades and replacements for a number of aging legacy systems.

The Advanced Assault Amphibious Vehicle (AAAV) is our highest-priority ground modernization program. It will provide extraordinary mobility, high water and land speed, increased firepower, and improved protection to assaulting Marines, thereby enhancing our already robust forcible entry capability, and extending the flexibility of our forces.

A recent internal review of our ground-based fire support systems suggests that our post-Cold War reductions in artillery left us with serious deficiencies in that area. Our ultimate objective is to develop an appropriate mix of cannon and rocket artillery systems, in order to improve our ability to provide timely, accurate, and effective fire support for Marines. Our envisioned family of weapons is a triad of systems: the lightweight 155-millimeter howitzer (LW 155), a very lightweight cannon, and a mobile rocket system. Together, these weapons will provide our forces close and continuous fire support in any environment, across the spectrum of conflict.

The Medium Tactical Vehicle Replacement (MTVR) will form the backbone of our ground transportation, providing greater capacity, mobility, and reliability to our forces. Paired with the second-generation High Mobility, Multipurpose Wheeled Vehicle (HMMWV), the MTVR will fulfill the great majority of transportation requirements for many years.

Aircraft modernization is critical to our overall effort. The MV–22 Osprey program has been a great success by any measure, with 30 aircraft in existence or under construction and 16 requested in the fiscal year 2001 budget. After a model development and testing program, the Osprey is being delivered at the budgeted cost, within specifications, and with a high degree of customer confidence. Production is currently slated to increase to 28 aircraft per year in 2003, but we believe that a goal of 36 per year is more efficient in the long run because of the increasing cost of maintaining the CH–46E and CH–53D aircraft during the long transition period.

Our aircraft now in development—the Joint Strike Fighter, the AH–1Z, UH–1Y—will join the Osprey to form a Marine aviation combat element of impressive power, capability, and flexibility. The Joint Strike Fighter represents the future of Marine fixed-wing aviation. Its design is so promising that we decided to await the advanced technology it offers. The plan to build 3,500 of these aircraft will make it the workhorse of the joint fighter fleet, and it will serve well into the future at an affordable unit cost. As the first truly joint aircraft, it deserves your enthusiastic support.

The AH–1Z and UH–1Y programs will provide significantly improved performance and reliability for our attack and utility helicopter fleets. By rebuilding existing aircraft, we will deliver to the Operating Forces helicopters that are virtually new, but at a very low cost.

Given our success with the MV–22, the development of a four engine, or "quad" tilt-rotor (QTR) aircraft is of particular interest to the Marine Corps as a component of a future aviation fleet. The QTR might also have great potential in filling the Joint Common Lift (JCL) requirement in the future.

The future offers remarkable promise and progress to those who can turn vision into reality. Our modernization plan is sound, and the initial steps are already underway. However, due to our projected funding levels, I remain concerned about the pace of our modernization efforts. The additional resources that are required to finish the task will undoubtedly be viewed as a wise investment by our children and grandchildren, many years from now.

OUR FUTURE: PAST IS PROLOGUE

The generation that fought and won the Second World War—as Tom Brokaw argues, our country's "Greatest Generation"—committed the resources necessary to secure our liberty, and as a result, this generation has left us a tremendous inheritance. We begin the new century with the benefit of an economy that has brought

relative wealth to an unprecedented portion of our society and an understanding of the best manner in which to extend that wealth to many more persons both at home and abroad. More important, we have gained the benefit of the hard-earned wisdom of that generation about the role of the United States in the world. Some of those great Americans earned that wisdom through experience and later applied it during long and distinguished careers in the United States Congress. Our continued efforts to build on those twin benefits are our best insurance that the 21st century will be the second "American Century."

I am deeply encouraged by our nation's prospects for the future. Our citizens appreciate the benefits of our pre-eminent position in the world and are willing and able to sustain that position for future generations. Our young people are bright, talented, and will, if given the opportunity, measure up to the challenges of tomorrow. Your United States Marine Corps stands ready to respond to the nation's needs today, and we will continue to work closely with the Congress and the American people to preserve our readiness and relevance in the future, as we "make Marines, win battles, and return responsible citizens to the nation."

General JONES. And, sir, thank you very much.

Senator STEVENS. We thank you very much. We are sorry about the interruptions. We are still waiting for the budget process, of course, right now. And I expect we will be waiting for a while. But we want to go ahead with these propositions and explore some of the matters that you gentlemen have spoken about.

Do you have an opening statement at all, Senator Inouye?

Senator INOUYE. No, thank you, Mr. Chairman.

Senator STEVENS. I do not have an opening statement. Do you have an opening statement, Senator?

Senator HUTCHISON. I will also wait, too. I have a few questions. Thank you.

Senator STEVENS. Thank you.

Let me start off then. We will have a 5-minute round and just keep going. There will be others coming that will want to ask questions.

Mr. Secretary, last year you testified, and I want to quote. You said: "I think maybe ballistic missile defense does pose an opportunity in terms of national missile defense, but it is an opportunity that is technologically further out and more demanding."

Now, we do not see much that has changed since that time, except we do have the statements that were made by Admiral Johnson and we understand that. But let me ask you, has the Navy, to your satisfaction now, completed the flight test of the kill vehicle or an intercept test? Would you make the same statement today that you made last year?

Mr. DANZIG. Well, I think, Mr. Chairman, we have come along in our testing in a satisfactory and good way. The promise from Navy ballistic missile defense is maturing. We still have more testing and development to do. That will include significant tests over the course of this next summer and in the time ahead.

Realistically, I think the point remains, though, as the CNO has also made it, that Navy ballistic missile defense offers good prospects and offers the potential of being a complement to land-based systems. It can be an increment to this Nation's national missile defense systems. We ought to be preserving that option and that opportunity and not trampling upon it in the near term.

Senator STEVENS. Thank you. Senator Inouye and I have visited the sites and have tried to keep up with that program.

Admiral Johnson, in view of your statements, could you tell us why the Navy decided not to include missile defense capability in the DD–21 design?

Admiral JOHNSON. Well, sir, as we stand right now, I would suggest that it is not precluded from that. But our clear focus of effort priority is to embed it in the Aegis fleet that we have. And indeed, that is what we are doing with the theater shots that the Secretary alluded to a moment ago. So between the area system and the DDG–51's and the theater system in the Aegis cruisers, we believe there may be an evolution then to DD–21, but we are not there yet.

We have called it the first variant. The DD–21 is part of a family of surface combatants, wherein the first member of that family that we will see is the land attack destroyer, which is DD–21, to be followed down range by a cruiser variant of that same family. So, I say it does not preclude it, it is just not in the short term.

Senator STEVENS. Do you have the funds now to proceed with the Aegis class? Is a lack of funding holding up anything the Navy wants to do in national missile defense?

Admiral JOHNSON. Right now, sir, we have the money we need to do the theater tests which we spoke of a moment ago. That is clearly priority one. In my unfunded requirements list, you will see some requests that I would apply to either risk mitigation on the theater side or additional missiles on the area side.

So the short answer is it could use enhancement. But the clear priority which we have in the theater track for this year and next year is funded. And that is job one for us.

Senator STEVENS. Will you quantify for the record, please, what funds it would take for the second portion there?

Admiral JOHNSON. Yes, sir.

[The information follows:]

In the unfunded requirements list the Navy is requesting additional resources for the procurement of missiles for Navy Area, and we are supportive of the Director BMDO Budget Enhancement List (BEL) which identifies items for both Navy Area and Navy Theater Wide.

CNO Unfunded Requirements List

Navy Area, Defense Wide Procurement ($42.6 million request)

Procures an additional 17 SM–2 Block IVA missiles in fiscal year 2001 for delivery in fiscal year 2003 to equip initial ship.

Director BMDO Budget Enhancement List (BEL) includes:

Navy Area, Defense Wide Procurement ($28 million request)

Procures an additional 9 SM–2 Block IVA missiles.

Navy Area, RDT&E ($75 million request)

Additional Risk Reduction activities for entry into Engineering Manufacturing & Development (EMD) stage.

Navy Theater Wide, RDT&E ($160 million request)

Acceleration of NTW Block I deployment to increments of Block 1A Contingency Capability to fiscal year 2005, Single Mission Capability which meets Block 1 Threat Set (2 ships and 50 missiles) to fiscal year 2007 and full Multi-Mission Capability (4 ships and 80 missiles) in fiscal year 2008.

—Development of tactical AEGIS computer program modifications.

—Acceleration of AN/SPY-1 Radar signal processor upgrades.

—Acceleration of SM–3 Kinetic Warhead (KW) Infrared (IR) discrimination algorithm development.

Procurement of additional SM–3 test missiles for Threat Representative Testing (TRT).

Acceleration of SM–3 efficient production modifications.

Acceleration of Advanced Radar Development.
—Develop Prototype NTW Block II Radar Array.
Acceleration of NTW End-to-End Test Bed Development.
Initial funding for Japan Co-Development Phase II (Potential Demonstration and Validation phase).

OPERATIONAL READINESS

Senator STEVENS. General Jones, we have a situation now in readiness that Marine Corps funding is down, I understand, from the 2000 levels, and the Navy-Marine Corps non-deployed readiness declines. The real question is whether we have the training to deploy now or we are having training for war. Do you have the funds now to handle your assignments as far as deploying the battalion landing teams and marine expedition units? Really what I am saying is, how quickly could you deploy now the expeditionary brigade, the full bore of what your readiness calls for?

General JONES. Mr. Chairman, the good news is that as the service chief of a rotational force, we are organized to deploy full-up forces on a regular basis. And across the three levels of our warfighting capabilities, the marine expeditionary unit (MEU), the brigade and the force, we do have the readiness capability and the training to sustain that deployment. The MEU (Special Operations Capable (SOC)) go out on a regular basis for 6-month deployments aboard Navy ships. They were used very successfully in the early days of the Kosovo operation. They performed magnificently. They backloaded and floated around to Turkey and assisted in a major humanitarian operation, all in the space of 2½ months.

So our rotations are very good. The problem is that as we have drawn down the force over the years, the cyclic rate of utilization of equipment and men is of course a cause for concern in terms of replenishment, replenishment of the spirit and replenishment of the tools. And of those two, the cyclic rate of utilization of equipment is the one that causes us most concern. But we are meeting those tests.

Senator STEVENS. You said you have concern about the deployability of new units.

General JONES. I think that the readiness levels of the units and the money that has been provided allows us to sustain that operation. We could always use more, but I cannot report to you that we are deploying units that are marginally trained or we do not have the money to train them. We are doing okay at the force levels that we have.

Senator STEVENS. Secretary Danzig, I just have one more question here. The LPD–17, the lead ship in the class, is 10 months behind, I am informed, $185 million, or 30 percent, over budget. Is the report that I have been given true? And if so, what are the impacts on the second and third ships of this class?

Mr. DANZIG. The report you have been given is largely accurate. A combination of the innovations in design tools and in the application of those tools simultaneously to actually designing the LPD–17 has pushed the ship over the planned budget. In addition, we have requested changes in the design of the LPD–17. One of them I highly value is to reduce the manpower associated with that ship, from some 350 sailors, and therefore reduce the total ownership

costs associated with that ship. But it has produced the effects you described in the first ship.

The second and third ships will show some effects, but much more moderate. The second and third ships produced should be delayed on the order of 4 and 3 months. And the perturbations in the system should be diminished. The first ship design produced at Bath should not experience the delays as a result of this.

I think the increase in cost and the delays are the up-front part of the program. Taking the program as a whole, these 12 ships in this class to be produced over the course of this next decade, we are looking at a $9 billion to $10 billion program, with something on the order of a $400 million or 4 percent cost increase.

Senator STEVENS. Senator Inouye.

Senator INOUYE. Thank you.

Admiral Johnson, next year you will have 55 attack submarines. A recent staff study indicated that you should have maybe up to about 68 or 70. Most of your colleagues suggest that the higher number is a proper one. What does this budget do to your attack submarine fleet?

Admiral JOHNSON. Thank you, Senator Inouye.

In this budget, we are buying another Virginia-class, number three in the class. And it streams out at one submarine a year through the year 2005. We also are refueling in this budget an attack submarine SSN–688, with a stream in the coming years to refuel six others.

We also are preserving the option in this budget, by some $31 million investment, to not decommission four of the seven remaining SSN–688's that could be refueled. We are maintaining the option to refuel them in this budget.

We also have the option in this budget to deal with the SSBN to SSGN conversion, or some combination thereof. So my point is we take seriously the joint continuous strike (JCS) study. We accept the range of 55 to 68, as you discussed. And right now, the short term from a requirements standpoint, we want to keep our options open, not to go below that 55 number, and we believe that what we have invested in this budget in new program and options for refuelings will keep us there, sir.

Senator INOUYE. If the cost of refueling was comparable to converting Tridents to cruise missile submarines, which option would you prefer?

Admiral JOHNSON. If it were comparable?

Senator INOUYE. Yes.

Admiral JOHNSON. If the subject is SSN's, I would prefer to refuel the 688's. But it is not quite that simple, and there are other trades. That is what we are looking at in the context of the deliberations for fiscal year 2002.

We have three things at play here, as I said. One is the 688 refuels. One is the SSGN conversions. And one is the new buys of Virginia-class submarines. What we are looking at now, all of us, is the smartest way ahead, given those three phases, if you will, to the submarine force structure issue. But my own personal sense is we do not want to let go of an asset right now to take us down below 55. Because, if we do, we will have a dickens of a time getting back up there.

And as you know, in the long run, out past where we are looking now in terms of budget years and program objective memorandums (POM's) and future years defense programs (FYDP's), we must increase the build rate on the Virginia-class submarines, as well, to stand a reasonable force structure out in the 2015 to 2020 timeframe.

Senator INOUYE. If you kept up with the present plan with the options you have, in 20 years, how large will your attack submarine fleet be?

Admiral JOHNSON. I am going to waffle the answer, and I do not mean to do that purposely, but I hope to make a point here. It depends on how many Virginia-class submarines we come to in a sustained build rate after the year 2005. That really is going to determine that answer, sir. But in no case, with the options we have on the table now, would we take ourselves down to the 50, which was the number in the quadrennial defense review (QDR) last. It will keep us at that baseline of 55 minimum.

Senator INOUYE. One of the major concerns, General, among the folks would be chemical/biological terrorist attacks. Recently, a couple of explosions were felt in Georgetown, and they all got excited. They thought it might have been a terrorist attack. From where you stand, because of the experience the Marines have had, do you believe that our forces—active, Reserve, National Guard—are prepared to counter any chemical or biological attacks on the United States?

CHEMICAL AND BIOLOGICAL INCIDENT RESPONSE FORCE

General JONES. We have an emerging capability, but we are not certainly where we ought to be. Secretary Cohen has been very deeply involved in talking with the Chief of Staff of the Army and making sure that the National Guard and Reserve are attempting to reorient themselves in terms of their thinking on those issues.

From the standpoint of the Marine Corps, my predecessor, General Krulak, had the vision to create a very special unit, which is a national asset called the Chemical and Biological Incident Response Force. He based it at Camp Lejeune, North Carolina. We have recently gone through the necessary approvals to transfer that unit closer to the National Capital region. It will be effective for worldwide deployment and used within the continental United States in August of this year.

It is a very capable unit. It is a model that we must emulate and replicate elsewhere in the Nation. But I think the interagency service, the service chiefs, are coming to grips with this problem. But I do not think we are where we want to be.

Senator INOUYE. What is the mission of this special force that you have?

General JONES. It can rapidly deploy. It was first deployed in support of the Olympics in Atlanta. And it was located right near the site where we had an explosion, or potential explosion. And its capability is to deploy and to diagnose the agent that is being used, if it is chemical or biological. And it provides, at least in the first instance, emergency assistance to the afflicted area and provides treatment. It is a roughly 350-man organization. It is air

deployable. And I think it is a good model for what we need in the future, but we need more of them.

Senator INOUYE. We have had a lot of discussions about the Joint Strike Fighter. How important is it to you and what is the status now?

JOINT STRIKE FIGHTER

General JONES. The Joint Strike Fighter, sir, is very important to the Marine Corps. I would say, more importantly, it is important to the Navy, and also the Air Force as well. It is a revolutionary capability in terms of the technology that it will bring to the capability of the United States. For the Marine Corps, because we have chosen to skip a generation, that means we are going to stay with the F–18's for much longer, betting that the Joint Strike Fighter will in fact come on line at the right time and in the right amounts and with the capability that we want to have then.

I am very excited about the program. I am very closely observing the competitors who are developing the capability. And along with the CNO and the Secretary of the Navy, we think it is going to be a good program, and we hope that the costs will not escalate as they typically do in other programs. And right now we are quietly optimistic that it will be delivered on time and at the advertised price.

Senator INOUYE. Mr. Chairman, I notice the red light is on. I am sorry.

Senator STEVENS. That is all right. We were enjoying your conversation.

Senator Hutchison.

Senator HUTCHISON. I liked your conversation, too.

Did you finish your line of questioning, Senator Inouye? I am happy for you to finish.

Senator INOUYE. I will wait. I have a few more questions.

V–22

Senator HUTCHISON. While we are with General Jones, I am just going to ask you about the V–22 and if you believe that the funding is sufficient, that the procurement rate is sufficient for you to have the V–22's that you need at the time that you are going to need them?

General JONES. Thank you, Senator.

We are excited about the acquisition of the V–22. As you know, in fiscal year 2001, we have funding for 16. We really think that in the unfunded priority list, adding 2 more makes a lot of sense to get to our out-year acquisition strategy of 36 a year as opposed to 30, which we think is more cost effective and gives us the capability sooner rather than later.

We are scheduled right now to deploy the first operational squadron with our MUSOC's in fiscal year 2003. That will be an exciting moment for all of us who have been involved in the V–22 program since its inception.

Senator HUTCHISON. So your preferred rate is 36?

General JONES. At the end state, that would be what we would recommend. And in order to get there, we have 16 in this year's budget, and if we could get to 18, it would be helpful.

Senator HUTCHISON. This year. Thank you.

Secretary Danzig, last year was the year that the Navy announced that it was going to lower its recruitment standard to a general equivalency diploma (GED) from a high school diploma. I was concerned about it in our hearing last year, and I wanted to ask you if you have in fact enough experience with that? Approximately how many people have entered the Navy with that lower standard? And do you have enough experience to see if it is successful and if it is the standard today?

Mr. DANZIG. Senator, I appreciate your interest in this issue. It is a significant focus for us as well.

First of all, 9 out of 10 of the people who come into the Navy now have high school degrees, not GED degrees. We require that at least 90 percent of the people coming into the Navy have those high school degrees. The change that you are describing was our decision last year that instead of taking 5 percent that had only GED degrees, we would take 10 percent in that category, 1 out of every 10 of the recruits who come in.

We made that decision because we concluded that we could screen people who did not have high school degrees but had other qualifications and make sure that these were exceptionally able people. We did not view it, and I still do not view it, as in any way a lowering of standards. We demanded that people in that category of not having had the high school diploma have higher than average scores on our tests, have employment histories, have character references. And on balance, my judgment was, taking some more of these exceptionally qualified people, as measured by test scores and character references and job experience and who were older than the norm, was a good thing to do rather than to try and get, at the margin, the last increment of people who had high school diplomas.

In terms of our experience, I would say there is one obvious positive attribute and one negative one. The positive attribute is that we have recruited these people very successfully. We have met our recruiting goals. And in fact, they have, in boot camp, had lower attrition than was historically the norm for non-high school graduates. And I think it is because of the screening that we have described.

On the other hand, they have had higher attrition than high school diploma graduates in boot camp. And I count that both ways. On the one hand, it suggests to me we are screening out people we should be screening out in boot camp. And on the other hand, I would prefer lower attrition.

We are going to develop some formal data on this, and I would be happy to share it with you. But those are my impressions of this at the moment. I think it is well worth continuing. I think it is a step in the right direction. But the results have not been dramatic one way or the other.

Senator HUTCHISON. So the standard is 10 percent?

Mr. DANZIG. Correct.

Senator HUTCHISON. And are you over 5 percent in fact in the last two recruiting years? Have you gone beyond the 5 percent?

Mr. DANZIG. In fiscal year 1999, we recruited, as we planned to, 90 percent high school graduates. Ten percent of what we are call-

ing these proven performers, people who had the above average scores, did not have the high school diploma. We are continuing on that track in this year. That amounts to about a total of 6,000 out of the 57,000 that we recruit for all of our enlisted people this year.

Senator HUTCHISON. I would be interested in continuing progress reports on this.

Mr. DANZIG. Good.

Senator HUTCHISON. Because I am concerned about it still. But I certainly am open to what the results are.

Mr. DANZIG. Thank you, Senator. Senator, I would suggest also you might like to meet some of these people. And perhaps we could arrange that.

Senator HUTCHISON. Thank you.

Mr. DANZIG. Thank you.

Senator HUTCHISON. Admiral, your budget has some very good points in the increase areas, especially I am pleased that you are obviously increasing in the military personnel to accommodate the higher salaries that have been passed. And that is certainly what we intended. Family housing has increased. And having visited the bases, I know that that is the absolute probably first priority to increase. But in return for that, I assume research and development (R&D) and military construction (MILCON) are decreased in your budget. And I would like to know what are the short-term effects of that decrease and the long-term effects and what are we losing?

Admiral JOHNSON. The R&D piece of it is generally—I guess the way I would characterize it is we are making huge R&D investments tied to the programs that are taking us forward with recapitalization. I think the Secretary mentioned earlier the DD–21 program. But, nonetheless, we have added $1.7 billion to that program alone in R&D because we are truly trying to be revolutionary. So there are lots of different pockets of R&D investment.

Senator HUTCHISON. Are you saying that is in your procurement area?

Admiral JOHNSON. That is correct, yes, ma'am.

So we are making huge R&D investments for the revolutionary systems.

Senator HUTCHISON. In other accounts?

Admiral JOHNSON. Indeed. CVNX is one, Joint Strike Fighter is another one. The DD–21, the New Attack Submarine, virtually every program, V–22, all of them have significant R&D streams attached to them, mostly on the front end, to really leap us forward. So we feel, overall, very good about that. It is going to give us a lot.

The MILCON is one that we continue to work with. We prioritize it. We are not there yet. I accept that. We ask for help every year. We will continue to do so.

Senator HUTCHISON. Thank you.

I see my time is up, Mr. Chairman.

Senator STEVENS. Mr. Secretary, I heard the comments of Senator Hutchison on the GED program. We had a hearing on the Challenge Program for the National Guard. When they are finished with that program, they get a GED.

Senator Hutchison, I would urge you to take a look at that, because we found that the Citadel was willing to take graduates from

the Challenge Program, but the military was not. And I think I am the one that raised the question of why is this the case. If they have come through programs where they have been rehabilitated, these disadvantaged kids, many of them kids from broken homes that have changed high schools and just do not adjust and do get into one or more of these federally sponsored programs, some of them sponsored by other entities that are out there trying to help these kids, you wonder why the military should be unwilling to take them if we are trying to urge the colleges to take them.

Senator, I would urge you to talk to some of these people. And I would be glad to get you the hearing record of the hearing we had here about those young people and how marvelous they can turn out if they have been given an opportunity. But to put a stigma on the GED, after they have come through a rehabilitation program, I think is very unwise. And I would hope that you would continue to take as many as you can take, provided that they have come through and demonstrated that they have cleaned themselves up.

I do not want to get too political about it, but I do not know of any reason why, if someone smokes a marijuana cigarette once cannot go in the military, we can elect a President that has. And it is time that we stopped this business of discriminating against these kids when the political system does not discriminate against anybody.

Mr. DANZIG. And if I could just add, Senator, I think the high school diploma is a very relevant credential. It is our best single predictor of "stick-to-itiveness" in the military. But it should not be the be-all and end-all. When we have extraordinary applicants for the military who have the kinds of characteristics in terms of test scores and proven character, "stick-to-itiveness" in the National Guard program or whatever, we ought to take account of that. We ought not lock ourselves so much into a category that we rigidly say, well, we are turning you away because we have taken x percent and cannot take x plus y percent.

Senator HUTCHISON. Mr. Chairman, if I could just respond to what both of you have said. I have visited with some of the products of the Challenge Programs, and I absolutely agree that these kids are incredible. But I do think that we need to continue to monitor exactly what the standards are. I think your added assessment factors are very sound. I just think we should monitor it and make sure we are doing the right thing.

Mr. DANZIG. I completely agree.

Senator STEVENS. I would agree. But my mind goes back to the time I served with a Cabinet officer that quit high school after the sophomore year and became one of the largest publishers in the United States and a distinguished member of the Department of Defense Secretariat and the Secretary of the Interior for quite some many years. I do not put all of the stigma to not having a high school diploma that other people do. I have known a lot of people in my life who had other things they had to do, because of family and otherwise, who have turned out to be just excellent, excellent administrators and officers.

Mr. DANZIG. And senior chiefs and master chiefs in the Navy.

Senator STEVENS. That is right. And a few pilots I have known.

Following on Senator Inouye's questions, Secretary Danzig, we have been wondering why we cannot go to a multi-year procurement for the Virginia-class submarines so that we could achieve a stable production and lower unit cost. Why has that not been recommended by the Secretariat?

Mr. DANZIG. I think that is a plausibly right position to be in. I would like to get a little more experience with the teaming arrangement that we have constructed in the Virginia-class submarine, between General Dynamics and Newport News and, if we can, discuss that topic further with you and come back to you with further analysis of it.

Senator STEVENS. Well, I think it should be tied to the industrial base concept. We have worked that out here. I think we are prepared to continue with a handoff between those two yards, or at least between two of the three yards. But, as a practical matter, it does seem to me that we are missing the multi-year savings that are there if we do not go into this project properly. We would prefer ending up with more rather than fewer submarines at the end of the program for the same cost. I do not know why we cannot proceed to adjust as quickly as possible the multi-year procurement.

Mr. DANZIG. I think the thrust of that is right, Mr. Chairman. I agree. The kinds of savings we have seen from the F–18 at the more than 7-percent level, and from the DDG–51's, where we have been buying them multi-year—and we have requested multi-year authorization further from you in this budget—suggests that things like this may work for the Virginia-class submarines. Recognize that the numbers are smaller—we are buying one a year—and that the teaming between the two companies creates additional complexities.

But if we could get savings at the significant percentage levels that we see associated with other programs, we certainly ought to be looking very closely at that. And I will take this as encouragement.

Senator STEVENS. I do not see how we can avoid getting the savings. When you get multi-year procurement on the subcontracting level, those people just cannot afford to come in and out of this business on a one-ship basis.

Mr. DANZIG. Right.

Senator STEVENS. And it is the stability factor of procurement that gives you the savings, in my judgment. It has worked in the C–17. It has worked in many other programs. And this committee has defended multi-year contracting. I assume it will continue to do so, and I would hope that we could work with you on it.

Can I shift to recruiting, though?

Mr. DANZIG. Certainly.

Senator STEVENS. Last year we were very disturbed when we heard the reports about recruiting. Tell us where we are now in recruiting and retention, reenlistment in the Navy and in the Marines.

Mr. DANZIG. Well, both the CNO and the Commandant I think will want to comment. Let me just say briefly, in terms of overview, that I view Marine Corps recruiting as the very model of what we want. We are now into our fifth year of month-by-month achievement of goals. As the CNO commented in his opening statement,

the health of the delayed entry pool is very important. And the Marine Corps is achieving, I think, substantial increments in the delayed entry pool (DEP) to bring it to the kinds of levels that we want. I feel quite good about that.

At the same time, Navy recruiting has grown healthier. We have increased the number of recruiters in the field, from 3,500 to 5,000. We have increased the advertising budget, and the number of recruiting stations. Above all, we have gotten smarter about how we recruit. We have done things like look to former service members who are interested in returning to the Navy. This year, I think we will recruit as many as 3,000 such former service members—a very substantial change in the way we recruit.

We are focusing more on community colleges, recognizing that some 70 percent of high school graduates we are interested in are going on to community colleges. That requires a change in the way we recruit. It is challenging for us to meet the Navy goal of 57,000 this year. It means we are recruiting more than 1,000 high school graduates every week. That is an extraordinary thing to go out and do. But, so far this year, we have been making that goal, and I think we have a good prospect of getting there. It is not a certainty, but I think Navy recruiting is steadily improving.

Perhaps Admiral Johnson or, if it is all right with you, Mr. Chairman, the Commandant might like to add to that.

Senator STEVENS. Yes, sir, Admiral?

Admiral JOHNSON. Just to add a couple of things. The Secretary's remarks characterize the active force exactly as it is. I would just further comment that we still—in terms of the challenge that he talked about—on the Reserve side we are struggling right now and are below the number. Back to this delayed entry pool, filling up that surge tank allows us the flexibility, as you level yourself through the year, to ensure you have got the right skill mixes and loads in all of your classrooms. Without that pool filled, it jeopardizes all of what I just described.

Historically, you want to start the fiscal year with your DEP, your delayed entry pool, at about the 43 to 44 percentile. Right now we are in the high 20 percent. So that is a serious challenge that we have to continue to deal with.

The Secretary mentioned the things about just to hold our nose at the water line on the active side, 1,500 more recruiters on the street, double the advertising budget, open 179 more recruiting stations, et cetera, et cetera. So that just gives you some idea of the magnitude of the environment challenge we are dealing with out there.

I can speak to retention as well, sir. Just to say briefly that, on the enlisted side, the critical skills, tied to the 2000 budget, I would tell you there is good news and we are awaiting some good news. On the enlisted side, we really are seeing upturns in first- and second-term retention at 2 to 4 percent. That is not much, but it is sure better than the way we were trending before.

In addition to that, we are seeing in the selective reenlistment bonus program execution this year, we are 26 percent ahead of what we had forecast. That translates to highly skilled technicians that we are able to ship over and keep on the team. That is really good news. So that is a positive trend, tied directly, we believe, to

the goodness of the 2000 budget and some of the non-money things, but mostly the pay and special pays and bonuses.

On the officer side, there are some parts that we are getting good feedback and others where we are still challenged. The best report I can give you I think is in the surface warfare officer side. We are filling department head seats right now. Classrooms, over the last 3 years, we have averaged half full classrooms. We had to increase the tour length for department heads, from a nominal 36 up to 55 months. We have been able to roll that back now. That is certifiable good news.

On the aviation side, however, I would tell you that we are still, I think, extremely challenged. The bonus is having some impact, but it is certainly not what we were hoping for yet. It is early enough in the year, where we have got some time. But one data point that would be of interest to you, sir, is that whereas last year we had 120 aviator resignations in the fiscal year—I think that is the number—this year we are not halfway through the fiscal year and we are already three ahead of that and climbing. So we still have some challenges.

Senator STEVENS. General Jones, we will get back to you when my turn comes again.

Senator Inouye.

Senator INOUYE. Thank you.

Mr. Secretary, as a result of base closures and budget cuts on military health facilities, many of the over–65 retirees have been forced into Medicare. And Medicare does not provide the benefits that these men and women have become accustomed to while they were on active duty. So the letters I receive, they use the words, "I have been betrayed."

Many of them are suggesting they would like to be enrolled in the Federal Employees Health Benefits Program (FEHBP). Do you have any views on that?

Mr. DANZIG. I am very sympathetic to those requests. I think that would represent a substantial improvement in health care benefits that veterans would receive. And that would help us in a number of ways, both in terms of the moral commitments that exist as well as in terms of the atmosphere that exists even with respect to the kinds of issues we were just talking about with Senator Stevens, about recruitment and the like. If veterans have good feelings about their military service, they are our best recruiters. If they do not, they are our strongest disincentivizers for people to enlist.

The obvious questions are: What is the cost? And how is that carried? And who is paying it?

This also applies to some other important things we could do, as, for example, prescription drugs for over-65 military retirees. My sense is that we are all trying to work our way through that situation. The bill that Senator Warner has submitted, with many cosponsors, is indicative of efforts in that regard.

We are going to need to see, from the Office of the Secretary of Defense and from some others, some indication of the costs and the accounting, who would pay those costs associated with these good steps. But as a matter of principle, it strikes me as a desirable thing to do if we can figure out a way to fund it.

Senator INOUYE. We have been told that the pharmaceutical coverage would be about $500 million per year.

Mr. DANZIG. Yes.

Senator INOUYE. What would be the full Federal Employees Health Benefits Program costs?

Mr. DANZIG. I think we need to look to the Office of the Secretary of Defense to cost that for us, because obviously it is not simply a Navy matter. But I am sure that they will provide data like that to you directly, Senator. I do not have that number.

Senator INOUYE. Do you concur that we should have them enrolled in the FEHBP?

Admiral JOHNSON. As you know, Senator Inouye, we have FEHBP pilots ongoing right now, as we have in other areas, with TRICARE Senior Prime, et cetera. Let me just say that the Joint Chiefs have been very much invested this year in this whole business of health care, as we were in the pay and retirement issues last year. And just to echo what the Secretary said in my own words, from the Joint Chiefs perspective and as a service chief, to me, it is irrefutable that we have a commitment to obviously our active duty folks, but also our retirees, including the over-65 retirees. We have to find a way.

And so in all of this construct and the various programs that are being dealt with this year to take us there or to take us partway there, I think the imperative in this year's budget must be a clear, unambiguous signal to all of the people I just described, including the over-65 retirees, that we are honoring their commitment. It may take us a while to get there, but we are honoring that commitment.

Senator INOUYE. Will this budget send that signal?

Admiral JOHNSON. I believe that it will, sir.

Senator INOUYE. Do you have any thoughts, General Jones?

General JONES. Sir, I concur with the Secretary and the CNO emphatically.

Senator INOUYE. Mr. Secretary, I have another question. It is on the Aegis SPY-1 radar. Most of the surface combatants use that now. But the new DD–21 will be using the multi-function radar. When we begin to build a DD–21, what is going to happen to the SPY-1 radars?

Mr. DANZIG. Well, the multi-function radar is now subject to considerable research and development, it is an important part of the investment that DD–21 would give us. It does not render the SPY-1 radar irrelevant or outmoded for many platforms that use it. And precisely where we will go with regard to this is something that we need to focus on and develop as we understand better the research and development rewards that come from the development of the systems for the DD–21.

One of the things I would hope we could accomplish over the time ahead is the development of a radar road map that would give us good developed answers to these questions. And the CNO may want to comment further now. But for myself, I do not feel as though we yet—I yet, at any rate—have enough information to give you a detailed sense of what that road map should look like.

CNO?

Admiral JOHNSON. I would only comment that you are right on with the road map. We are hard at work in developing such a road map. And we believe that will answer many of these questions. It will have to evolve, though. And I think as we get smarter on this first member of the SC–21 family, called the DD–21, that will help us shape the road map. But Aegis is an integral part, as the Secretary says, of our surface combatant force and will be for many, many, many, many years. So shaping that road map is our daily work right now.

Senator INOUYE. Phasing out the SPY-1 program would have an effect upon the industrial base, will it not?

Admiral JOHNSON. Conceivably it could, yes, sir, depending on what came behind it or around it. But I will tell you, in the context of what we are doing at my house, at work every day, phasing out the SPY-1 radar is not something we give much energy to. In fact, we give no energy to it. We are looking to enhance it and make it even more effective.

Mr. DANZIG. I feel, Senator, that it is a little analogous to when we walk or we run. We have one foot on the ground in one place and we lift up one and move forward to another place. We need both legs. We stand on a system that exists at the present moment. It certainly, over the long term, would have industrial base implications if we cease to produce the SPY-1 radar. But I think those are long-term questions we have not come to yet.

Senator INOUYE. I listened with great interest to your discussion on the GED students. My only concern is it was 5 percent and now it is 10. I was here in the seventies when it was increased. Does that not concern you?

Mr. DANZIG. Yes, it does, Senator. I was here also in the seventies. I was in the Office of the Secretary of Defense (OSD), in the Office of Manpower, and I came to Congress and testified that I thought the standards were being lowered excessively. The ASVAB grading system had been mis-normed, and a number of us spent a lot of time saying we need to tighten this up. So I care very much about this.

I would note, very importantly though, from my end, the levels we are talking about, in moving between either 90 percent of high school diplomas, as the Army has, or 95 percent as the Marine Corps has, are both extraordinarily high levels. Historically, we have never been near those levels. The seventies and the like are levels in the 70 percentile of high school graduates kind of ranks, not in between 90 and 95. We are way up there.

And when the idea of taking 2,500 more people in without high school diplomas was raised, my reaction was I am only interested in this if we do this in a way that in fact gives us some benefits in terms of the people who are coming in, that we are getting more of the kinds of people the chairman was talking about, that we are getting more people with high scores, that we are getting people who are, as we have labeled them, proven performers.

And the proof of the pudding is in their records. And this is why Senator Hutchison is quite right: we really need to look at their performance in boot camp and in the field. But, so far, the evidence in boot camp is that our attrition has improved over the normal at-

trition associated with non-high school graduates. So there is a positive indicator there.

I do not want to gild the lily. It is not as good as it is for high school graduates. But I am very comfortable that the Navy is in the right place, at 90 percent. And I am not proposing that we take 80 percent. You are not seeing that from us.

Senator INOUYE. Thank you, Mr. Chairman.

Senator STEVENS. Senator Hutchison.

Senator HUTCHISON. I pass.

Senator STEVENS. Senator Inouye, did you have more questions?

FUTENMA AIR BASE, OKINAWA

Senator INOUYE. General, if I may ask you, in 1998, Okinawa elected a new Governor. And there is no question that many of us felt that the predecessor was not too friendly. Can you tell us where we are relocating marines from the Futenma Air Base to other locations? Is he cooperating with you?

General JONES. Sir, the Governor of the prefecture of Okinawa and General Earl Hailston, who is the senior marine on island, have been working very skillfully and very successfully together to bring about what I consider to be an unprecedented state of harmony on that island, between our forces who reside there and the local population.

The progression and development of the island since the end of World War II is such that the majority of the population is now in the southern part of the island, and that is where most of the development has taken place. And as a result, there are attendant pressures on our bases and stations.

It has been the stated intent of the prefecture that the one base in particular, the Futenma Air Base, should be relocated to the north. We have been working closely with Governor Inamine. I have recently returned from Okinawa, and I can attest to the good situation that is there. It is, frankly, from a quality-of-life standpoint, one of our most modern facilities of any base. We have high reenlistment rates, high extension rates, great satisfaction expressed by families who live there on Okinawa, and a great people-to-people program. I am extraordinarily proud of the work that our sailors, airmen and marines on the island do in so many wonderful ways to bridge that gap between our two cultures and our nations.

Our policy has been to be good neighbors and to make sure that our requirements are well understood by both the prefecture and the government. And they understand that. And at such time as they are ready to move forward with serious proposals that would meet our requirements for a presence in that very important part of the world, we will participate fully. But we must wait until the political situation is such that they desire to move forward.

So there is a tripartite discussion between the Government of Japan, the prefecture and ourselves. But I can tell you that in the 33 years I have been in uniform, I have never seen a better relationship on the island.

Senator INOUYE. Thank you.

One more question. Mr. Secretary, 20 years ago we began our debate on a 600-ship Navy. And today it is about 300. Are we going to be able to maintain that 300?

Mr. DANZIG. Yes. My feeling is that it is important to do that. There is a report that has been requested by the Senate Armed Services Committee of our long-term shipbuilding plans and what would be required to maintain that number. My hope is that that report will reach this body within the next few weeks.

One of the things that it will show is that to maintain that 300-ship Navy, when you take into account different classes of ships, one needs to build at a rate of about 8⅔ ships a year. One of the important things to do over the long term, in my view, is to get to that rate, on average. We have a little leeway at present because so many of our ships were built in the early 1980's and tend to have service lives of 30 years or longer. So the need to replace the bulk of our fleet really begins to be felt especially intensely 30 years after the early 1980's. In other words, after 2010.

But we need, in my view, to get ourselves into a better position to deal with that hump in those years. And I think that the basis for that kind of plan is indicated in the materials we will be sending forward to you.

Senator INOUYE. Thank you very much.

Thank you, Mr. Chairman.

Senator STEVENS. Thank you.

Senator Hutchison.

Senator HUTCHISON. Mr. Chairman, I do have one more question. Back on the housing issue, I just wanted to follow up with Admiral Johnson. I have visited, both in Ingelside and Kingsville, the privatization efforts that are being made.

Admiral JOHNSON. Yes, ma'am.

Senator HUTCHISON. And I wanted to ask you if you have had enough experience to believe that that is going to be good for the Navy and if it is going to be used in other places?

Admiral JOHNSON. The short answer, Senator, is yes. We went to school heavily on what you saw, and I have seen, down in south Texas and up in Everett, Washington. We learned a lot from those first two ventures, public/private ventures. We have retooled that into sort of what I call phase two. And in fact, right now, we have five more public/private ventures that are being worked, two in this year, 2000, and three more hopefully in 2001. Two of those in Texas, one in New Orleans and one escapes me right now. But, anyway, yes, we are very much interested in that. We like it a lot.

Senator HUTCHISON. Are they staying up with wear and tear and maintenance?

Admiral JOHNSON. Yes. Again, this was part of the lessons learned on the first ones and how you set the maintenance schedules and incentivize it. So we learned a lot. It also has to do with out-of-pocket expense. And as you know, Secretary Cohen has put forward a great initiative on the base allowance for housing (BAH) this year. So we are doing a lot in that to make it better for our members and their families. But the public/private venture piece I think is a fundamental part of our future and we like it.

Do you want to add anything to that, Mr. Secretary?

Mr. DANZIG. That sounds fine to me. Thank you.

Senator HUTCHISON. Thank you.

Thank you, Mr. Chairman.

Senator STEVENS. Thank you very much.

RECRUITING

General, let us go back to you, in terms of the questions I asked, basically about recruiting and retention. Could you tell me how you are doing?

General JONES. Yes, sir. As a point that may be of interest to the committee, is that 68 percent of all marines are on their first 4 years of enlistment. In other words, 50 percent of all marines are first-termers all the time. Which means that our career force is roughly 32 percent of our force. This translates to a requirement to recruit about 35,000 marines every year. Equal to that of the Air Force, for example—actually, more than that of the Air Force.

As the Secretary mentioned, for the past 5 years, we have successfully recruited first-term marines both in the quality and the quantity that we require. I was a captain in the 1970's, and I well remember those days, and I would recognize the signals if we ever got back to those days. And I would be the first one to say we are in trouble.

Happily, we are not at that point. We are doing very well. I have already talked in my earlier testimony about the potential of the Junior ROTC program, which I think is extraordinary given the relatively modest amount of money it takes to fund one of those.

I would tell you that our recruiters are still facing impediments in access to some of our school systems. Over 40 of them around the Nation have, by policy, restricted access to our recruiters. And I think that is something that we should be concerned with and I think we should remove those impediments.

Senator STEVENS. High schools or colleges?

General JONES. High schools.

And this causes problems. It sends a bad signal. It makes the recruiters have to work much harder. And I think that that should not be a policy.

Senator HUTCHISON. What is their stated reason for that?

General JONES. It varies. Some are very overt, that they do not see any value to service in uniform. And by, as a matter of policy, a superintendent of an entire system can deny physical access to the schools or lists whereby our recruiters can contact them and explain the advantages of serving in uniform.

Sometimes it is both. Sometimes it is one or the other. But it is troubling enough to mention it.

Senator STEVENS. Well, we will put a little rider on that education allowance this year and see if they can understand where their money is coming from. And besides that, the massive amount of educational opportunities for young people today is in the military.

General JONES. Absolutely.

Senator STEVENS. We went to Bosnia, we went to Kosovo. Those guys are going to school 4 hours a day.

General JONES. Absolutely. And we have such wonderful programs and opportunities for our young people to come in and not only get educated, but get ready to transition back to the civilian sector and be productive citizens for the rest of their lives and make a tremendous contribution across all walks of life. I know I speak for my fellow service chiefs when I say that we would be

happy to work with you to eradicate that restriction. And that will make life easier for Navy recruiters, Army recruiters, Air Force recruiters, and Marine recruiters.

With regard to retention, Mr. Chairman, there too the Marine Corps is having a success story. I would just say, though, that the booming economy does present attractions. And so there are niches of highly technological fields where we feel the pull of that attraction to the industry.

We are working hard to make sure that the quality-of-life standards that our people in uniform expect for their families, the safe and secure environment of the base, the stable, good educational system and job satisfaction, and spousal contentment with the service life are some of the intangibles that we work hard to try to correct so that the serviceman or woman will stay with us. And we hope to be successful. But we do feel that tug. But, overall, as I sit here today, your Marine Corps, manpower-wise, is in good shape.

[The information follows:]

MARCH 3, 2000.

The Honorable TED STEVENS,
Chairman, Subcommittee on Defense, Committee on Appropriations, United States Senate, Washington, DC.

DEAR MR. CHAIRMAN: At yesterday's fiscal year 2001 Navy and Marine Corps Budget Hearing, I spoke about the JROTC program, its great popularity with students, and the positive impact the program has had in the overall recruiting goals of the United States Marine Corps. During my testimony, I also indicated that there are schools throughout the United States that have an official policy of not allowing military recruiters access to school campuses and/or prohibiting the release of student directory information. There are 40 such school districts identified throughout the Nation.

As a follow-up, I am providing you a list of those school districts. Let me again express my appreciation for allowing me the opportunity to respond to your questions and testify before the Subcommittee on Defense. I look forward to continuing our close relationship and if I can be of assistance, please do not hesitate to contact me.

Semper Fidelis,

JAMES L. JONES,
General, U.S. Marine Corps, Commandant of the Marine Corps.

The following school districts have been identified as having an official policy that prohibits the release of student directory information or of allowing military recruiters access to school campuses:

First Marine Corps District

New York: Rochester City School District
Massachusetts:
  Cambridge School District
  Wakefield School District
New Hampshire: Exeter Regional Cooperative School District
Connecticut: State-wide, prohibits access and lists from Vo-Tech schools

Fourth Marine Corps District

Virginia:
  Stafford County School District
  Fairfax County School District
  Loudoun County School District
Maryland:
  Prince George's County School District
  Carroll County School District
  Anne Arundel County School District
Kentucky:
  Shelby County School District
  Boone County School District

Pennsylvania:
Salisbury Township School District
Northwestern Lehigh School District
Pennridge School District
Mechanicsburg Area School District
Susquenita School District
West Perry School District
Central Dauphin School District
Derry Township School District
Governor Mifflin School District
Muhlenberg School District
Wallenpaupack School District
Upper Moreland Township School District
Centennial School District
Southern York County School District
East Lycoming School District

Sixth Marine Corps District

Alabama:
Dekalb County School District
Marshall County School District
Florida:
Miami-Dade County School District
Citrus County School District
North Carolina:
Wayne School District
Craven County School District
Watauga School District
Caldwell School District
Tennessee:
Hickman County School District
Bedford County School District

Ninth Marine Corps District

Missouri: Bowling Green School District

Twelfth Marine Corps District

Oregon: Portland Public School District California
Palo Alto: Unified School District

Mr. DANZIG. Mr. Chairman, if I could just add one word on the recruiters. General Jones touched on their well-being. I think there is a terrific opportunity to provide more support for recruiters, to give them better training, computerized capability to keep track of their work, more support in terms of use of cars and telephones, and civilian administrators in stations. Put it all together, and I think there is an opportunity that is both good for recruiters and good for recruitment.

We are exploring this very actively in both services. You may have a chance to get ahead of us if that area interests you. And I think it might yield very rich rewards.

Admiral JOHNSON. In that context, Mr. Chairman, in the unfunded priority list we have requested about $8.1 million in support of the active recruiters and about $2 million in support of the Reserves to exactly identify those things the Secretary just mentioned.

Senator STEVENS. That was going to be my next question, about that Commandant's unfunded list of $1.4 billion.

Admiral JOHNSON. Yes, sir.

Senator STEVENS. We added last year some money. We added a substantial amount in this committee, $163.7 million. Most of it survived the conference. But we do not see much movement on

your side, Mr. Secretary, of trying to up that attack on the unfunded list. Why is that?

Mr. DANZIG. I am sorry, Mr. Chairman, upping the attack on the unfunded list?

Senator STEVENS. Trying to reduce that amount.

Mr. DANZIG. Well, I think the unfunded list represents, in both the Navy and the Marine Corps instances, a representation of, in large measure, things that we have in our program but have not been able to buy in the fiscal year 2001 because of the same fiscal constraints that you experience. And I think it is an expression of our intent, on the one hand, to get there over these coming years, but, on the other hand, of the exceptional reward, if money is available, of bringing some of those things forward and doing them right now.

You will be the best judge, of course, of whether money is available, but that is the way I read those lists.

Senator STEVENS. I wish I was the last judge on how much money was available.

Mr. DANZIG. So do I, actually, Mr. Chairman.

Senator STEVENS. I am afraid that is not the case.

I have just a couple more questions, Admiral. I know I am sort of ending with you as you end your last official visit. Although I think we will see you before the year is out, Admiral. But I hope it will not be too burdensome.

I have just come back from Alaska, where I found a strange thing. We are having a fight currently with some of the people over the 60-year mandatory retirement age on commercial pilots. The country is short of pilots across the board. About 40 percent of our pilots are 55 years old. We do not have many roads. We do not use many boats in the wintertime. Pilots are our main, main industry. If we do not have pilots, we are dead.

And as I talked to the Coast Guard out in San Francisco and down in Key West in the last 2 weeks, they have got problems. It just seems to me we are not wide awake about using the Federal system to train pilots like we used to. I find, for instance, we are not training any pilots in college ROTC for the Navy, the Army or the Air Force. We are training other officers in ROTC, and they go right in.

And if you have people coming out of ROTC who want to go into pilot training, they have to go through subsequent education. There is a holdup. Why cannot we restore the program for Navy, Air Force and Army ROTC training for pilot schools in conjunction with going to college?

Admiral JOHNSON. Yes, sir, I think that is something that we ought to look at. We do have some flying programs that are available. They are very spotty. We have some at the Academy. But I think that may be an area that would be a worthwhile investment, and we will be happy to take a harder look at that.

Senator STEVENS. Would you take on talking to your chiefs?

Admiral JOHNSON. I would be happy to do that.

Senator STEVENS. You are the senior one and you are leaving, but I do think there is a spinoff there for the civilian economy. Not all of them end up going into the military, but they all end up as pilots if they complete their course. And we have to find some way

to turn out more pilots. And I would like to be involved in that. I think that the whole committee would. If we can find some way to initiate a real forceful incentive to taking pilot training while you are going to college, both men and women, I think many would welcome that.

Admiral JOHNSON. Let me take that. And we will give you an accurate lay of the land and we will represent it service by service, and then we will give you some recommended pathways forward and see what we can come up with. That is a great suggestion.

Senator STEVENS. I would really like to be involved in that.

Admiral JOHNSON. Yes, sir.

Senator STEVENS. And you can train them in Hawaii in the summertime and we will take them in the wintertime, or vice-versa if you insist on it.

We still have some problem about, as you mentioned, Mr. Secretary, the ships going to sea 90 percent manned. That is still not up to what it should be, in my judgment. What can we do about these seagoing billets? Did you have that question while I was gone?

Mr. DANZIG. No. I appreciate the question. I think there are several areas that can help. I note that we are getting close to where we should be. The U.S.S. *Eisenhower*, for example, deployed this last week. It has a ship's complement of about 3,000. It was 100 people short. The battle groups we most recently have deployed have been in the 93 to 95 percent range of fill.

Still, we have asked you for authorization in this year's program for career sea pay that will give us the capability to increase that. That is a very useful asset for a Secretary of the Navy and a Chief of Naval Operations to have available, because it gives us, if we find that we are having trouble with our sea pay fills, the ability to encourage people to go back to sea.

Another arena of activity that is very valuable to us are the kinds of bonuses that give incentives, particularly for our officers to return to sea. And we see a healthy bonus program in that regard.

Finally, the kind of support we have talked about for recruiting and for retention, in general, builds up our end strength capability. For example, we have asked for authorization for the ability to give basic allowance for housing to single sailors who are on board ships while they are in port. That would give us an additional retention incentive for people down through the rank of E–4 to stay in the Navy and feel that while they are in port they were not disadvantaged by being condemned to shipboard life; they could move out into civilian housing. That is a tool that would be very useful.

So there are a number of these kinds of tools that, if you can give us some opportunity here, I think we can get those fill rates up even better.

Senator STEVENS. It is my understanding, Admiral Johnson, that was one on your list to fulfill as well.

Admiral JOHNSON. Yes, sir.

Senator STEVENS. And somewhere along the line we did not get it. I am not going to point fingers, but what would it cost us to start it? If we put it in this supplemental and we started that item on your unfunded requirements list, what would it cost us to com-

plete it if it started up this year and then carried forward into 2001? You had 119 for the 2001 figure, but for the half year.

Admiral JOHNSON. Yes, sir, 118.7 is what I have got here on my list.

Senator STEVENS. How long does it take you to crank that up?

Admiral JOHNSON. Not long at all.

Senator STEVENS. If we made the money available by the end of May you could crank it into this year?

Admiral JOHNSON. Yes, sir, for sure we could. And the Secretary makes a key point. This is a distribution tool, actually, more than it is a retention tool. One kind of takes you to the other. But when you are talking about at-sea manning, this is powerful medicine.

Senator STEVENS. If we have our way, we will take part of the surplus that is available. We had to move some money into the next year, with the pay movement and things like that just to make sure that we did not invade social security. We are now told that there was money there that could have funded that and the budget recognized that too. We will move that backward. But there is some money here in this current year that we can make available to defense, I think, a portion of it.

I wish you and the Commandant would take a look at your unfunded list and prioritize it a little bit. What would be your high priority, low dollar amounts? We are not going to have a lot of money but we will have money enough to meet some of those priorities on your list.

Admiral JOHNSON. I will be happy to provide you with that.

[The information follows:]

My highest priorities as reflected in my Unfunded Requirements List of 9 February 2000 are in the areas of personnel and readiness. We are meeting our near-term obligations but not funding these priorities will place the Navy's long-term readiness at risk. These personnel and readiness priorities are as follows:

[In millions]

Personnel End Strength and Recruiting Incentives	$77.0
Readiness APN–6 Spares	174.0
Readiness AOE Ship Depot Maintenance	40.0
Readiness Ship Depot Maintenance	142.3
Readiness Real Property Maintenance	136.6
Personnel Career Sea Pay	118.7
Readiness LHA Midlife	32.0
Readiness Training Ordnance	26.0
Readiness Laser Guided Bombs and Bomb Kits	20.0

Any funding that can be appropriated to address these unfunded areas would be of great benefit to Navy preparedness.

Senator STEVENS. Would you prioritize the first 8 or 10? I certainly would like to know.

Admiral JOHNSON. You bet.

Senator STEVENS. We look forward to working with you.

Admiral JOHNSON. Yes, sir. Thank you, sir.

Senator STEVENS. Thank you again, Admiral Johnson, for your work with us and for your courtesy to us as we have traveled through your command. I think this has been a most important time for the Navy, with its deployments to the Persian Gulf and so many other things. As I said, I am just back from visiting the Coast Guard. I wish there was some way the Navy and the uniformed services could help the Coast Guard more on that interdic-

tion concept, using some training missions to augment some of their equipment that are available to meet that.

There is a surge now off the west coast as opposed to the Caribbean. I am sure you have been briefed, as we have. But I do think that your watch has been a very important one for the Navy, and we commend you for the job you have done and for your willingness to stand up and speak up for your people. It has been a very, very good time, I think, for the Navy and we wish you well when this tour is over.

Admiral JOHNSON. Thank you, Mr. Chairman.

Senator STEVENS. Nice to have you back, Mr. Secretary.

Mr. DANZIG. Thank you.

Senator STEVENS. And we will weather the coming years with you, Jerry. We look forward very much to being with you in the years ahead.

General JONES. Thank you, Mr. Chairman.

Senator STEVENS. As long as we survive, we look forward to it. Thank you very much.

ADDITIONAL COMMITTEE QUESTIONS

There are some questions others had asked us to give to you, as is the usual routine. We would appreciate it if you would give those to us in writing.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED TO SECRETARY RICHARD DANZIG

QUESTIONS SUBMITTED BY SENATOR THAD COCHRAN

LHD–8

Secretary Danzig, I am advised that the Navy recently submitted a request to Defense Comptroller Lynn for release of funds previously appropriated for LHD–8. $45 million was provided in fiscal year 1999 for Advanced Procurement items and another $375 million was provided in last year's bill—along with language that would allow the Navy to contract for the construction of this important ship on an incremental basis.

Question. Do you have any information on when the Comptroller may release those funds?

Answer. The Department of the Navy has requested the release of funds from OSD. Currently, I understand the request is being staffed within OSD but I do not have a specific timetable as to when these funds may be released.

Question. What are the Navy's plans for contracting for the ship, once the funds are released?

Answer. Upon release of the funds, the Navy plans to award a sole source contract, after appropriate review, for the detailed design and definition of long lead procurement. The contract is expected to be a cost-plus award fee with a limitation of cost clause. We would then move forward with construction upon appropriation of the required funding.

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

Question. Does the Navy support or oppose the acquisition of logistics ships through the lease purchase mechanism? Please articulate and explain the Navy's position on this issue.

Answer. We support the acquisition of naval vessels, including logistics ships through a lease-purchase mechanism when it makes economic sense to do so. In the past, we have used this mechanism for procuring SEALIFT tankers and Maritime Pre-positioning Force ships.

Given the current budgetary scoring conventions for capital leases, there would have to be significant cost advantages to pursue this approach. If that were the case, we would be hopeful that the Office of the Secretary of Defense and the Office of Management and Budget could arrange for the necessary budget authority to take advantage of such an arrangement.

Question. What are the Navy's highest priorities for accelerating shipbuilding? If Congress were to fund additional ships in the 2001 budget, should those ships be logistics ships?

Answer. We are facing the need to significantly increase our shipbuilding rate just beyond the existing Future Years Defense Program (FYDP) to maintain the force structure approved in the last Quadrennial Defense Review. Accelerating any of our ongoing shipbuilding programs would be helpful in that regard. I note, however, that in the case of the TADC(X), the lead ship will be contracted for in fiscal year 2000. I would prefer to see that program mature somewhat before increasing the building rate.

Question. Why should the acquisition of logistics ships be funded in the O&M (readiness) budget?

Answer. Lease payments are considered expenses and would appropriately be funded in the O&M appropriation. This is the practice now when we pay for chartered ships through the Military Sealift Command. The purchase option would be funded in the Shipbuilding appropriation. If appropriate adjustments to O&M budget authority are made, use of this funding line should not have any negative implications for readiness.

READINESS/AIR COMBAT TRAINING

Based on information made available to me, there are serious problems in the material support for the Navy's air combat training at Fallon Naval Air Station. Adversary and Topgun aircraft are old and inadequately supported by spare parts; compared to the past, there are relatively few adversary and Topgun aircraft, essential combat systems, and live munitions available for training, and the type of adversary aircraft available are not the types that our pilots are likely to meet in combat.

Question. What is the Navy's plan, if any, to supply dissimilar aircraft, such as reserve component F–16s, stationed at Fallon NAS for adversary training?

Answer. In my recent "Report to Congress on Adversary Aircraft", an annual Adversary shortfall of 26,000 sorties was highlighted. Included in this shortfall are 16,500 dissimilar Category IV (advanced threat) sorties. We are pursuing an Adversary aircraft strategy which includes the following elements:

(1) Maintain a force of at least 36 F–5 aircraft.

(2) Provide a minimum of 18 F–16 aircraft (28 aircraft optimum) to serve as advance threat fighter simulators. These aircraft could be new or from Foreign Military Sales accounts; such as the 28 Peace Gate F–16s that recently became available.

(3) Pursue joint solutions with the U.S. Air Force.

(4) Continue to employ the Naval Reserve component in the Adversary support role.

If the fiscal year 2001 "above core" requirement for 18 F–16s is supported by Congress, the Navy's priority for basing would be Naval Air Station (NAS) Fallon. There are enough active duty pilots resident at Naval Strike and Air Warfare Center (NSAWC) to support an F–16 program decreasing the pressure on the Naval Reserve component to support the F–16.

In addition, the use of USAF Reserve component and/or Air National Guard (ANG) fighter units to supplement Navy Adversary requirements is currently being pursued through a Joint Adversary Initiatives effort.

Question. What is the Navy's plan, if any, to increase the number of adversary and fleet representative Topgun aircraft, spare parts, essential combat systems (e.g. LANTIRN and other FLIR pods), and live munitions used for training at Fallon NAS?

Answer. Current fiscal constraints have driven expansion of the Navy Adversary program to an "above core" issue for the fiscal year 2001 budget proposal. While the requirement for additional Adversary assets are well documented, Congressional support above the current Navy TOA will be required to acquire additional Adversary aircraft.

The Navy's plan to increase spare parts at NAS Fallon includes reducing the long lead times associated with Fallon's reliance on "repair and return" to host stations (NAS Lemoore, NAS Oceana and NAS North Island).

The Navy has selectively increased Aircraft Intermediate Maintenance Department (AIMD) Fallon's repair capability for the F–14A. We have provided the station

with HCT–10 F–14 adapters that have significantly increased their Hydraulic Component Test and repair capability. An F–14A generator test bench is currently in shipment that will provide generator capability. We have begun to provide F–14A avionics test and repair capability with the installation of the first two Consolidated Automated Support System (CASS) stations. The next two will arrive in March and April of 2001 and the last two in 2004. With the arrival of the Test Program adapter Sets (TPS) currently in shipment we will have capability on roughly 50 percent of F–14A avionics. Through selective increases in "I" level capability, we expect to reduce the impact of the long lead times on NAS Oceana, VA, repair and returns on significant readiness degraders.

The CNO has included training ordnance as part of our above core requirements list for fiscal year 2001. Additionally, we intend to mitigate training ordnance shortfalls with programs such as Joint Tactical Combat Training System (JTCTS) and the Fleet Aviation Simulator Training (FAST) Plan, which take advantage of advances in simulation technology.

Question. What is the Navy's plan, if any, to increase the number of flight training hours actually flown by pilots before and after they come to Fallon for training?

Answer. The Navy's documented readiness "bathtub", a result of our austere funding environment, unfortunately constrains the number of flight hours a pilot can accomplish prior to arrival for Fallon training. The availability of aircraft during the Inter-Deployment Training Cycle [IDTC], the spare parts needed to maintain them, the availability and experience of maintenance personnel to keep these aircraft ready for training all contribute to limiting the hours of pilot flying experience, as does the timely arrival of new pilots at the completion of undergraduate flight training. Increasing the number of flight hours to squadron pilots while ignoring other contributing factors necessary to balance the readiness equation would accomplish little. Naval aviation leadership has identified the elements needed to balance this readiness equation and have developed a plan, Air Plan 21, that when resourced, will provide a path to improved readiness.

QUESTIONS SUBMITTED BY SENATOR PATRICK J. LEAHY

All of you discussed the problem of a historical increase in operating costs. To achieve the same level of capability, operating costs rise substantially every year. At a time when we are trying to find additional resources to modernize the force and maintain an intense global deployment schedule, it seems to me that one way to find the money to accomplish these goals is to stem that rising tide of O&M costs through the applications of new technology.

Question. I would like to know what technological research efforts that Navy is making to bring down these costs?

Answer. The Navy is investigating several technology areas to help reduce maintenance costs as part of the Navy's overall effort to reduce total ownership costs. We are looking at both the Sailor/Marine and the maintenance workload.

First, we want to recruit and match Sailors and Marines to the right jobs at the right time while balancing individual and Navy-wide needs. Second, we are studying ways to design affordable warfighter-centered systems, organizations and jobs by applying knowledge of human capabilities, limitations, and needs. Finally, we are investigating technologies and processes to equip Sailors and Marines with effective mission-essential competencies when and where they are needed at affordable cost. Efforts to reduce maintenance workload include "Smart" systems for total asset management. A "Smart" system is computer-based maintenance that integrates smart sensors, advanced diagnostics, and advanced fault-prediction technology to reduce operating costs by rationalizing maintenance procedures in the operating forces.

The Navy is also investigating—and now bringing into the fleet—very low maintenance components and long-life coatings and paints. Advanced materials, such as advanced composites, are more resistant to environmental damage than the steel and aluminum structures they replace. These zero or very low maintenance structures may substantially reduce the life cycle cost of the platforms on which they are installed. The Navy is also looking at novel materials and manufacturing processes for reduced costs. Finally, we are investigating new high temperature materials for engine components to improve thermodynamic efficiencies. These materials may prolong engine life and may reduce fuel costs. Science and technology will continue to contribute much to the Department of the Navy's efforts to reduce operation and maintenance costs.

Question. How much savings does the Navy anticipate from the Health and Usage Monitoring System slated for installation in its helicopter fleet?

Answer. The total cost avoidance for the H–53E and H–60 legacy and remanufactured aircraft is estimated to be approximately $1.0 billion (in constant fiscal year 1999 dollars) through 2020. This equates to a return on investment of 2.7 to 1 after considering the planned cost to acquire and sustain the system.

Question. What savings does the service anticipate from electric drive and similar propulsion conversions?

Answer. Integrated Power Systems (IPS) provide total ship electric power, including electric propulsion, power conversion and distribution and mission load interfaces to the electric power system. The Navy expects that the utilization of IPS with electric drive will achieve significant savings in ship operations and support costs over the life cycle of a ship class.

The Navy estimates that a gas turbine combatant with IPS will have fuel savings of 15–19 percent compared to a typical gas-turbine combatant with mechanical drive and a Controllable Pitch Propeller (CPP) system. With an IPS a ship designer can select the number and ratings of the prime movers/generators to optimize the life cycle cost without the constraint of having propulsion prime movers evenly divided among the shafts. By combining the electric plant and the propulsion plant, designers can reduce the number of prime movers, which contributes significantly to initial acquisition cost, ship manning costs, maintenance costs, and training costs.

Question. Mr. Secretary, can you please provide some detailed information for the record on the participation of the Navy in Department of Defense legacy programs? How many Navy personnel work on Naval archaeology matters in DOD's legacy program? What are annual expenditures for legacy programs over the past several years?

Answer. The Navy has received funding for 555 projects since the program's inception in 1991. 308 of those projects were for natural resource programs and the remaining 247 were for cultural resource programs. The types of projects changed every year in accordance with the varying areas of emphasis, which were published by DOD. The Marine Corps did not ask for or receive Legacy funds from DOD during fiscal year 1996 through 1999. During fiscal year 2000, the Marine Corps received $100,000 of Legacy funds for one natural resources project at MCB Camp Pendleton, CA.

The Navy's archaeological programs fall into two general categories, underwater and terrestrial archaeology. Navy legacy funding has historically been directed mostly to underwater archaeology.

The DOD Legacy Program has funded the Naval Historical Center's Underwater Archaeology Program (UA), which is responsible for the inventory and protection of the U.S. Navy's historic ship and aircraft wrecks. This funding has allowed the Navy to meet its mandate under the National Historic Preservation Act and pursue a number of underwater archaeology projects: the recovery of the Civil War submarine H.L. Hunley; a survey and excavation of a Revolutionary War wreck in the Penobscot River, Maine; site mapping, excavation, and possible retrieval of at-risk artifacts from CSS *Alabama* off Cherbourg, France; a remote-sensing survey of the military wrecks at Utah and Omaha Beaches at Normandy; and a protection and management plan for the recently discovered Benedict Arnold gunboat in Lake Champlain.

Since 1998, the Legacy Program has provided approximately $4 million to fund the Underwater Archaeology Branch. This figure includes salaries for four full-time archaeologists, as well as funding for conservation, state partnerships, equipment, travel and other operating costs.

In past years, the Legacy program has also funded archaeology projects outside the Naval Historic Center, including terrestrial archaeology. These projects covered a variety of archaeological issues, including curatorial needs assessments, artifact retrieval and conservation, and Historic and Archaeological Resource Protection Plans. These projects were completed by contract labor and overseen by cultural resource professionals employed by the Navy.

Funding for Legacy programs over the past several years follows:

	Nat'l Resources Prjts		Cultural Resources Prjts	
	Amount	Projects	Amount	Projects
1997	$575,000	4	$1,680,968	15
1998	350,000	5	1,151,000	6
1999	771,000	5	1,552,760	7
2000	[1] 706,562	6	[1] 2,487,976	6

[1] DOD has not yet released all funding for fiscal year 2000.

The number of projects funded in years 1997–2000 is relatively small when compared with the number of projects funded in previous years, 1991–1996. There are two reasons for this. Initially, Legacy funds were applied to a wide range of installation-specific projects, such as individual building rehabilitations or curation of an installation's artifacts. Over time, the Legacy program's emphasis has changed; it now seeks projects that have a broader scope, such as regional historic context studies or curation needs assessment for a region. In addition, the overall DOD Legacy program budget from 1997 through 2000 was $10–15 million per year, whereas, for years 1993–1995, the total annual appropriation for Legacy projects was approximately $50 million.

QUESTIONS SUBMITTED TO ADM. JAY L. JOHNSON

QUESTIONS SUBMITTED BY SENATOR THAD COCHRAN

NAVY THEATER WIDE

Last week, Navy officials briefed Congressional staff on a plan that would put the Navy Theater Wide system into the field with a contingency capability—as a few missiles on one cruiser—by fiscal year 2006.

Question. Is that date determined by the projected pace of technological progress or by funding constraints.

Answer. The Navy Theater Wide (NTW) program of record, baselined last year in May, had an initial capability with First Unit Equipped (FUE) as one cruiser and five missiles in fiscal year 2007. That program was never funded at an adequate level to meet the date specified.

The Upper Tier Strategy at the time, split funding between the Army Theater High Altitude Air Defense (THAAD) system and NTW. Upon Congressional direction the Department revised the Upper Tier Strategy in December 1999 in an effort to move THAAD into an Engineering Manufacturing and Development (EMD) phase, and position NTW to complete the AEGIS LEAP Intercept (ALI) series. As this testing proves out technology the Department will make a decision to go forward with an incremental development and deployment of NTW. The revised Upper Tier Strategy NTW System deployment option is currently funded only for AEGIS LEAP Intercept (ALI) through fiscal year 2002 with some program development through fiscal year 2005. The current funding profile in the fiscal year 2001 President's budget only funds the following:

—Program Definition Risk Reduction (PDRR) Flight Testing
  —Aegis LEAP Intercept (ALI) Flight Test Round series (FTR–1 through FTR–7) will complete in fiscal year 2001
  —Threat Representative Testing (TRT) (FTR–8 through FTR–10) will complete in fiscal year 2004
  —TRT (FTR–11 through FTR–13) not fully funded
—Minimally sustains industrial base capability through fiscal year 2005
—No funding for deployment capability

The NTW Spiral Evolution "block within a block" development, when appropriately funded in fiscal year 2001 and out, can provide the following incremental capabilities:

Block IA: Contingency Capability (fiscal year 2006)
—Initiate Engineering Manufacturing and Development (EMD) work in fiscal year 2003
—Single test Cruiser and remaining SM–3 test missiles (approximately 4 to 6)
Block IB: Single Mission Capability NTW (fiscal year 2008)
—Deploys 2 single mission cruisers with 50 SM–3 missiles
Block IC: Multi Mission Capability NTW (fiscal year 2010)
—Deploys 4 multi mission cruisers with 80 SM–3 missiles

Question. How much sooner could the system be fielded with adequate funding?

Answer. As stated earlier the directed program requires additional resources to meet the development and deployment schedule as delineated in the revised upper tier strategy.

With further resources there is a possibility that some amount of acceleration could be accomplished above the directed program capability introduction. The potential to accelerate development of NTW Block IA/IB/IC would move deployment of the increments from fiscal year 2006/08/10 to fiscal year 2005/07/08, respectively.

Question. Does the President's Budget contain sufficient funds to field Navy Theater Wide system by fiscal year 2006?

Answer. No, as stated earlier the directed program requires additional resources in fiscal year 2001 and out. The current funding profile does not fund deployment of capability.

Question. Are you concerned that there is not?

Answer. Yes, but as indicated previously, the revised Upper Tier Strategy positions the Navy Theater Wide program to move from successful AEGIS LEAP Intercept (ALI) flight series testing to continued system development, when appropriately funded.

Question. Given the current funding in the President's Budget, when will this system be deployed in a substantial way?

Answer. With the fiscal year 2001 President's Budget there is not sufficient funding past AEGIS LEAP Intercept (ALI) testing. The fiscal year 2001 President's Budget funding provides for the following:

—Program Definition Risk Reduction (PDRR) Flight Testing
  —AEGIS LEAP Intercept (ALI) Flight Test Round series (FTR–1 through FTR–7) will complete in fiscal year 2001
  —Threat Representative Testing (TRT) (FTR–8 through FTR–10) will complete in fiscal year 2004
  —TRT (FTR–11 through FTR–13) not fully funded
—Minimally sustains industrial base capability through fiscal year 2005
—No funding for deployment.

Question. I'm told that interceptor missile being developed for Navy Theater Wide system will have capability that cannot be fully utilized because of the limitations in the AEGIS radar.

Can you explain why the Cooperative Engagement Capability is important to getting the most out of this system?

Answer. Cooperative Engagement Capability (CEC) is not required for the Navy Theater Wide system. The threshold requirement for interoperability is the joint LINK–16 data link.

Only modest improvements to the radar are necessary because in most scenarios our ships are within a few hundred kilometers of potential enemy launch points, well within radar detection and tracking capability. That is why Cooperative Engagement Capability (CEC) is not a requirement for the BLK I NTW system. However, CEC has the potential to provide high quality data for NTW, since it provides fire control quality data to participating units as the threat ranges increase. For example, a ship that is deployed forward near an enemy launch position can detect and track a hostile TBM and pass accurate track data over CEC to assist a down range ship that cannot yet see the target. NTW Block IB (Single Mission Capability (SMC)) and NTW Block IC (Multi Mission Capability (MMC)) will both be capable of engaging the full set of anticipated Block I threats utilizing the operational requirement of Link 16. We are looking at possible upgrades in NTW Block II which include advanced radar, next generation SM–3s and command and control improvements as well as CEC, to meet an even more stressing family of threats.

Question. Can you also explain what benefits the SBIRS-Low system will have for Navy Theater Wide?

Answer. We are at present undergoing a thorough requirements analysis and definition process for SBIRS-Low and Navy Theater Wide. The planned introduction date for SBIRS-Low is scheduled to be very close to our development and deployment of NTW Block II. We are conducting our requirements analysis with preliminary Block II concepts and architecture in mind. Both the Block II Minimum Technical Data Set (MTDS) description and the SBIRS-Low Requirements Review (RR) process will be further defined in Summer 2000. In many scenarios, we expect SBIRS-Low to potentially provide track data necessary to engage longer range threats.

Question. Is the Navy fully participating in the process by which SBIRS-Low operational requirements are being determined, so that Navy ballistic missile defense systems can be as effective as possible?

Answer. Yes, we have Requirements Officers and technical program support personnel assigned and as participants in the Requirements Review (RR) process.

SEA-BASED NMD

According to an article in the Washington Post earlier this week, you asked the Secretary of Defense to consider using sea-based interceptors as part of the National Missile Defense architecture.

Question. Do you propose a sea-based element in lieu of a ground-based system, or in addition to ground based elements?

Answer. A sea-based element to NMD would be complementary in nature to supplement the land-based system, not as in lieu of planned land-based elements.

The Navy supports deployment of the initial land-based, single site C–1 system. Recently the Department of Defense has begun to consider broader NMD concepts, including different sites and more robust capabilities. If NMD postures beyond the original single land based site are under active consideration, then policy alternatives, which include providing a portion of our defense from ships at sea should also be considered.

Decisions taken in the coming months are likely to have a profound impact on the course of choices made in fielding an NMD system for our nation. For that reason, I recommended consideration of a sea-based Navy adjunct be included in any policy and/or architectural designs under development. Clearly, much work remains before any NMD system is fielded. Foreclosing a Navy contribution at the front end of NMD development would not be in the best long-term interests of our nation. I believe the potential future naval contributions to National Missile Defense are as a complement to the land-based NMD system.

Three different studies concerning Naval NMD have been completed over the past two years: a NMD Joint Program Office (JPO)—led Independent Assessment Panel, the DOD (BMDO) Report to Congress of May 1998 on the "Utility of Sea-Based Assets to NMD," and the Navy assessment. In each case, the conclusions included the following:

—Naval forces could enhance NMD operational and technical effectiveness.

—Land and sea based integrated NMD architecture is superior to a land only system.

—Navy capability could protect against sea-based NMD threats.

The fiscal year 2000 Authorization Act directed an in-depth study to explore more fully options for NMD, which include NMD configured ships for supplementing the initial land-based National Missile Defense (NMD) architecture. The overall objective is to define and evaluate sea-based NMD systems, and to assess their relative merits. The first Part of this study is nearing completion and potential Navy alternatives will be better defined upon completion of the study.

Placing a portion of our NMD capability at sea allows us to position interceptors, or sensors, or both forward, where they can take advantage of a greater portion of a threat missile's flight path, and where they can contribute to early discrimination of warheads amidst debris and/or penetration aids. As a result of this forward placement, you have the opportunity to see the threat earlier in flight, from a different look angle, and for a longer period of time, providing you with the potential to engage that threat earlier and/or more often.

Question. Is it your view that a sea-based element could be deployed before the ground-based elements, currently scheduled to be deployed in 2005?

Answer. Today, the Navy has no NMD program in progress and has no assigned NMD mission. The fiscal year 2000 Authorization Act directed an in-depth study concerning options for supplementing the initial land-based National Missile Defense (NMD) architecture with ships at sea. The overall objective is to define and evaluate the feasibility of sea-based NMD concepts and to assess their relative merits. The first Part of this study is nearing completion.

Deploying a sea-based NMD component, capable of complementing our planned land-based capability, will require development of an interceptor, sensors and BMC^4I systems capable of working in concert with developing land-based hardware and software. Development of the interceptor, evolving from the proven STANDARD Missile family technology and capitalizing on our ongoing Navy Theater Wide Kinetic Warhead development, along with supporting BMC^4I systems to provide essential connectivity, is certainly feasible in time to support C–1 deployment. Sensor development could also pace the threat, and could be deployed during the C–1 fielding period. Sensor development would be done through radar improvements and depending on the threat, could be ready to support C–1, moving to C–3. Development of the connectivity and sensor netting needed to support integrating sea-based systems into land-based capability in time to support C–1 deployment is also feasible.

A Naval adjunct NMD component is feasible and no major technical hurdles exist. Risks are similar to land-based design and development in the areas of missile and battle management concepts. Deployment and delivery schedules for this and other potential alternatives will be better defined upon completion of the study.

Question. The ABM Treaty prohibits not only sea-based defenses against long-range ballistic missiles, but any National Missile Defense system, whatever the basing mode.

Given the fact the administration is making formal proposals to modify the ABM Treaty to accommodate National Missile Defense, would you also like to see attempts made to modify the Treaty's prohibition on sea-based defenses?

Answer. The Navy does not currently have an NMD mission, nor is it part of the current NMD program. If NMD's requirements expand beyond the original land-based sites under consideration, then alternatives that include providing a portion of our NMD defense from ships at sea should be considered. The Navy supports deployment of the initial land-based, single site system. It is important however, to begin Navy NMD analysis and research in a forthright and deliberate manner as permitted under the ABM Treaty.

Question. If sea-based interceptors were to be made part of the National Missile Defense system, how important will it be to have the SBIRS-Low system in place to get the most out of sea-based interceptor missiles?

Answer. Various naval components for a Naval NMD complementary role are being examined in-depth in the ongoing Navy/BMDO study. We are currently conducting a thorough requirements analysis and definition process for SBIRS-Low and Navy Theater Wide. The SBIRS-Low Requirements Review (RR) process is looking at both National Missile Defense and Theater Missile Defense requirements. The analysis and requirements definition, which will result from the combination of these two factors, will provide us with more insight to the warfighting value and robustness of SBIRS-Low support to Navy ballistic missile defense systems. We expect SBIRS-Low to be an integral part of any NMD system, on land or at sea.

Question. Do you agree that the Navy's current and projected procurement rates do not meet the Administration's stated goal of sustaining a 300 ship Navy?

Answer. Over a 30 year period the Navy would need to build on average 8 to 10 ships per year to sustain a 300 ship Navy. Inconsistent build rates over the last two decades have caused peaks and valleys in demands for replacements, as a result, the immediate needs happen to be slightly less than the 8 to 10 ship sustaining rate. Large numbers of destroyers and submarines were authorized in the late 1980's and delivered to the Navy in the early 1990's. These ships are therefore still relatively young. Replacing these ships to sustain a constant sized Navy, of any size, is going to be a large challenge requiring renewed industrial capacity and a significant increase in resources in the 2010 to 2020 time period. Desired options to maintain or increase loading of the current industrial base to more economically efficient levels have been unaffordable. Therefore, although inventory requirements are adequately met with current shipbuilding requests, pulling forward future requirements would make sense if additional resources were available.

Question. Is 300 ships the right answer?

Answer. The 1997 Quadrennial Defense Review (QDR) force structure of approximately 300 ships fully manned, properly trained, and adequately resourced was assessed to be the minimum acceptable to satisfy the Navy's warfighting and forward presence requirements. Since that time, operational demands have increased somewhat, reducing scheduling flexibility and increasing demands on personnel, ship's equipment and aircraft. To meet current Unified Commanders-in-Chief global presence requirements, without gaps in coverage now being experienced, a 10 to 20 percent larger force that includes up to 15 Carrier Battle Groups and 14 Amphibious Ready Groups would be required. Given the considerable financial challenges to sustain the current force structure of approximately 300 ships in the future, such a larger force could not be considered without additional resources. The next QDR would likely be the best forum to evaluate any change in the projected size or composition of the Navy.

Question. What is your view of the Navy's combatant ship requirements, as you look down the road and try to envision the Navy's role and missions over the next few decades?

Answer. The Chief of Naval Operations noted in June 1999 that, "we must analyze our experience in the years since the last Quadrennial Defense Review; specifically, in terms of how the force has been and will be used, to arrive at a credible, confident and coherent plan to make sure we have the force sized and shaped correctly for the future." In addition to capturing the lessons of recent experience, we must anticipate new or altered missions brought about by the evolution of national security strategy as well as opportunities arising from new technology such as ballistic missile defense and sea-based land attack. Such changes will require continued study and debate as part of the process of determining how these will ultimately affect Navy force structure.

Question. Admiral Johnson, Recent testimony by high-ranking Navy officials emphasizes the need to meet the warfighting CINC's requirements for 15 carrier battle groups (CVBGs) and 14 amphibious ready groups (ARGs). This force structure includes more than 130 surface combatants, a greater number than the current target of 116 ships. This greater number would not appear to take account of possible future mission needs for surface combatants beyond escorting CVBGs/ARGs in current missions. Testimony also emphasizes the importance of retaining a production rate

of at least three surface combatants per year to meet the more immediate needs of replacing older surface combatants—primarily DD–963s and FFG–7s—that are going out of service, and to maintain the surface combatant industrial base.

(1) In light of these facts, what, in your view, should be the Navy requirement for DDG–51s?

(2) In addition, what should the build rate for these ships be over the next several years?

Answer. The DDG 51 program was established as a 57 ship program on 02 Feb 94 by Acquisition Decision Memorandum (ADM) for DDG 51 Destroyer Program Milestone IV. In light of the recent programmatic decision to delay the start of DD 21 production from fiscal year 2004 to fiscal year 2005, the DDG 51 program was extended to fiscal year 2005 and expanded to include an additional ship, for a total of 58.

The 1997 Quadrennial Defense Review (QDR) established 116 as the minimum number of surface combatants required to meet the CINC's warfighting requirements. The Navy has recently completed a study, now under review within the Department of Defense, which is expected to recommend a force structure greater than the QDR level of 116 surface combatants. Depending on the construction plan for DD 21, a portion of the additional ships called for by this draft study could be comprised of DDG 51 variants.

The DDG 51 shipbuilding rate has averaged just over three ships per year since 1994. The surface combatant shipbuilders, Bath Iron Works and Ingalls Shipbuilding, have sized their workforce and facilities to most efficiently produce destroyers at this stable production rate. The President's Budget request for fiscal year 2001 slows the surface combatant build rate to two ships per year in fiscal year 2002-fiscal year 2004 with a single DDG proposed in fiscal year 2005. This reduced surface combatant shipbuilding rate, though not most efficient (i.e., not "best price for the taxpayer"), strikes a necessary balance between the Navy's overall shipbuilding program requirements, resources, affordability and industrial base considerations.

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

F/A–18E/F

Question. Admiral Johnson, would you discuss your unfunded requirement for 3 additional F/A–18E/F aircraft in fiscal year 2001? Could you discuss your views on the Super Hornet and its recent completion of its Operational Evaluation (OPEVAL)? I understand it received the highest possible rating from the Navy's test community?

Answer. The Navy was forced to remove three aircraft from the fiscal year 2002 budget due to rising costs in maintaining current readiness within our top line. Procurement of three aircraft in fiscal year 2001 for a fiscal year 2003 delivery would put the Navy back on track to reach our procurement objective of 548 aircraft as validated by our most recent Quadrennial Defense Review (QDR). Our aging fleet of F–14s and older F/A–18s requires replacement in order to sustain overall strike fighter inventory to support CINC warfighting requirements. These aircraft would ensure the timely activation of the East Coast Fleet Readiness Squadron and mitigate risk to the current transition plan due to aircraft quantity shortfalls. If the present shortfall of aircraft is realized, non-deployed readiness will decrease because squadrons will have less than Primary Aircraft Authorized (PAA) when attrition rates and modification pipelines are considered, requiring them to accomplish their mission with less aircraft. The funding requested also includes provisions for spares and ancillary equipment that was also absorbed by the reduction of three aircraft.

The F/A–18E/F Super Hornet will be the centerpiece of Naval Aviation's power projection capability in the littoral battle space and strike arena. During its operational evaluation, it demonstrated the capabilities that are vitally important to our battle groups, specifically: increased range, payload and payload flexibility, carrier recovery payload bring back, survivability and provisions for growth. The F/A–18E/F has undergone exhaustive scrutiny and has been subject to rigorous DOD procurement, acquisition and evaluation standards. The Navy's independent test activity certified that the aircraft was operationally suitable and operationally effective which was the highest possible "grade" in this test. In addition, the Super Hornet achieved all Key Performance Parameters that were established in 1992. The Navy expects to enter a multi-year contract for the production of 222 aircraft that covers procurement in fiscal year 2000-fiscal year 2004. All full rate production criteria has been met which included: operationally effective and operationally suitable

OPEVAL, achievement of all KPPs and certification of a multi-year contract savings of 7.4 percent over single year contracts for the same number of aircraft. The F/A–18E/F will be a tremendous warfighting asset to our Naval forces and a value to taxpayers.

T–45

Question. The Navy and Marine Corps Pilot Training program has been improved by the incorporation of the T–45 Training System into Meridian, MS and Kingsville, TX. It's my understanding that the T–45, produced in St. Louis, is performing above standards. The three additional T–45s that you have listed very high in your Unfunded Requirements list could benefit further your pilot training program. What is the future procurement plans for this aircraft?

Answer. Fiscal year 2001 President's Budget shows a procurement of 12 aircraft in fiscal year 2001 and 4 aircraft in fiscal year 2002 for a total program procurement of 169 T–45 aircraft. USN is refining requirements and will use the fiscal year 2002 budget development process to define the FYDP procurement profile.

JOINT DIRECT ATTACK MUNITION

Question. The Joint Direct Attack Munition (JDAM) has proven itself in the air war in Kosovo. You have requested 1,500 additional kits in your Unfunded Requirements list and placed it very high on the priorities. Could you comment on the Navy's need for this weapon?

Answer. JDAM is a kit that upgrades existing general purpose bombs and provides the DON with a new accurate through-the-weather strike capability. Kosovo lessons learned highlighted the need for this all-weather capability. Following Kosovo, Sixth Fleet identified GPS-guided munitions as one of their two highest priority desired weapon improvements. Recently, the Navy has used JDAM with great success in Iraq, reinforcing the tactical significance of this weapon. JDAM has revolutionized Strike Warfare and is providing the warfighter with a true force multiplier.

SLAM-ER

Question. CNO—SLAM-ER is currently operationally deployed in critical hot spots in the world. Additional follow-on operational testing was recently completed with five outstanding missile shots. The results verify that the weapon is a significant improvement over the baseline SLAM. The budget drops the number of missiles procured to 30 in fiscal year 2001. Your Unfunded Requirements asks for 60 additional missiles, bringing SLAM-ER production into a very cost effective rate. Could you comment on the need for additional SLAM-ERs in the Navy inventory?

Answer. We are extremely gratified by the recent test results of the SLAM-ER and confident it will fill an increasingly important role in our weapons inventory. The budget, reflecting a balanced warfighting approach within the available resources, precludes procuring everything needed in the desired quantities. Moreover, we are continually updating our inventory requirements for all weapons to ensure we have the proper mix for the anticipated needs. With this in mind, an increase in required inventory, particularly with a weapon providing the standoff and precision of SLAM-ER, can be expected.

QUESTIONS SUBMITTED BY SENATOR PATRICK J. LEAHY

Question. As experienced military leaders who deal with missile defense issues every day, I would like to hear your personal views on National Missile Defense. Do you think that it embodies that right strategy to deal with the possible threat from so-called rogue states? Based on your knowledge of the test program, would you be willing to share with us your thoughts on a possible recommendation to the President that he deploy a National Missile Defense in June?

Answer. A decision to go forward with National Missile Defense deployment has to be made with a clear goal in mind and the benefit of test results not yet available. The Navy will support the Deployment Readiness Review (DRR) decision when determined.

Our greatest operational interest is of course, in the potential role of sea-based systems. The Department of Defense has been considering broader NMD concepts including different sites and more robust capabilities.

As the technologies mature, we will assume that consideration of a sea-based Navy adjunct be included in any policy and/or architectural designs for a NMD system.

Clearly, much work remains before any NMD system is fielded. I believe the potential future Naval contributions to National Missile Defense are as a complement to the land-based NMD system. As the technology develops, we may find that in same situations, they could be more desirable.

Question. Mr. Secretary and Admiral Johnson, would you provide for the record an estimate of the cost of building, deploying, and maintaining a sea-based national missile defense? When could the first interceptors be operational, and when could a sea-based system be fully operational? Also, what would the architecture of such a system look like? How many interceptors would initially be put at sea, and what might be an ultimate number? Would the sea-based interceptors be part of an integrated system with land-based interceptors, or could it stand on its own?

Answer. Today, the Navy has no NMD program in progress and has no assigned NMD mission. The fiscal year 2000 Authorization Act directed an in-depth study concerning options for supplementing the initial land-based National Missile Defense (NMD) architecture with ships at sea. The overall objective is to define and evaluate the feasibility of sea-based NMD concepts and to assess their relative merits. The first Part of this study is nearing completion. The second Part of this study, scheduled to begin this summer, will address the cost and schedule in more detail.

Deploying a sea-based NMD component, capable of complementing our planned land-based capability, will require development of an interceptor, sensors and BMC^4I systems capable of working in concert with developing land-based hardware and software. Development of the interceptor, evolving from the proven STANDARD Missile family technology and capitalizing on our ongoing Navy Theater Wide Kinetic Warhead development, along with supporting BMC^4I systems to provide essential connectivity, is feasible in time to support C–1 deployment. Sensor development could also pace the threat, and could be deployed during the C–1 fielding period. Sensor development would be done through radar improvements and depending on the threat, could be ready to support C–1, moving to C–3. Development of the connectivity and sensor netting needed to support integrating sea-based systems into land-based capability in time to support C–1 deployment is also feasible.

I conclude that a Naval NMD component is feasible because all the technical challenges we have identified seem to resolvable. Deployment and delivery schedules for this and other potential alternatives will be better defined upon completion of the study.

QUESTIONS SUBMITTED TO GEN. JAMES L. JONES

QUESTIONS SUBMITTED BY SENATOR THAD COCHRAN

Last year Secretary Danzig, Admiral Johnson, and General Krulak testified that the Navy had a requirement for a new LHD sooner rather than later. As you know, $45 million in advanced procurement was appropriated in fiscal year 1999, and $375 million and language authorizing the Navy to contract for the ship was included in last year's bill. Hopefully the Defense Comptroller will favorably respond to the Navy's recent request for release of these funds, in order that the Navy can go ahead and contract for LHD–8.

Question. Looking at a Marine Expeditionary Unit's (MEU) requirements to carry out its mission, what advantages, in terms of warfighting capability, does a more modern and better equipped LHD–8 provide compared to an older LHA?

Answer. The current plan is to decommission the five LHA–1 TARAWA class ships at the end of their 35-year Expected Service Life starting in the year 2012. The LHA–1 ship class replacement plan shows one ship funded approximately every 3–5 years with the last LHA–1 replacement ship funded in 2015. In replacing the LHAs, an LHD–8 Transition Ship and follow on LHX class ship will better serve and meet Marine Corps requirements.

LHD–8 is a good transition ship for the USMC, providing increased reliability and support capabilities over the LHA–1 TARAWA class ships. The enhanced capabilities of the current LHD ships include the following:

—Expanded C^4I (Command, Control, Communications, Computers, and Intelligence) Capabilities.

—Larger flight deck with enhanced aviation support facilities and expanded aviation fuel storage facilities specifically designed to support an Aviation Combat Element that includes a fix wing detachment of AV–8s.

—Greatly expanded and redesigned well deck capable of landing/launching and supporting the LCAC, our primary over-the-horizon landing craft.

—Designed with an enhanced damage stability capability by incorporating the Fuel Compensating System that corrects stability concerns identified with the LHAs.

Question. Can the older LHA class ships accommodate the number of MV–22's required to support a Marine Expeditionary Unit?

Answer. The LHA class ships as currently configured cannot accommodate 12 MV–22s required to support a Marine Expeditionary Unit. Deploying without a full complement of MV–22s, CH–53s, and AV–8Bs is unacceptable. The LHA ship class must be capable of safely deploying with our current/projected aircraft and equipment.

In order for the LHAs to accommodate the MV–22s, the Navy plan is to install the Fuel Compensating System ship alteration to correct the LHA–1 TARAWA class ships' stability concerns. This initiative is not currently funded. Additional alterations to the flight deck, superstructure, and support facilities are also required. These alterations consist of the removal of a bridge wing and countermeasure washdown piping to ensure proper rotor tip clearance, modifying the flight deck markings to accommodate the MV–22, and enhancing the Aviation Intermediate Maintenance Department's capability to provide nitrogen gas in support of aircraft operations and maintenance. These alterations are funded.

Question. What is the plan to support the Marine Expeditionary Unit with the MV–22s and when will you need a new LHD to accommodate the plan?

Answer. The MV–22s are scheduled to begin shipboard deployments with the Marine Expeditionary Units from the East Coast in fiscal year 2003 and from the West Coast during fiscal year 2006. Once V–22s begin deploying, the Marine Corps plans to maintain continuous V–22 deployments from the respective coasts. The Marine Corps and Navy have been working together to ensure all requirements are met to support continuous MV–22 shipboard deployments.

A separate but related issue is the need for an LHD–8 transition ship that will improve the Marine Corps' ability to respond to worldwide crises. Currently, the LHD–8 transition ship is partially funded with the balance of required funding scheduled in fiscal year 2005.

The centerpieces for Marine forces afloat are our Big Deck amphibious assault ships. These focal points of our Amphibious Task Force consist of five LHAs and six LHDs with a seventh LHD presently under construction with scheduled delivery during fiscal year 2001. These ships are critical to maintaining our amphibious lift and crisis response capability. The five LHA class ships reach the end of their 35-year extended service life between 2011 and 2015. The LHD–8 is the transition ship to the LHA Replacement ship that will replace the aging LHA ship class.

The LHD–8 transition ship will incorporate numerous and significant improvements over its predecessor. The ship will have a gas turbine propulsion system and a new robust electrical system, thereby eliminating steam service that is present on all existing Big Deck amphibious ships. These engineering advantages equate to improved reliability and maintainability that ensures the Marine Corps' ability to quickly respond to worldwide crises.

In replacing the LHAs, the LHD–8 transition ship and follow-on LHA Replacement ships will better serve and meet Marine Corps requirements. The LHA Replacement ship class would be either of two options: continue to redesign the LHD to a modified variant or a new design LHX. This LHD–8 transition ship/LHA Replacement shipbuilding plan makes good warfighting sense.

Question. Given the capability the MV–22 Osprey brings to a Marine Expeditionary Unit, please explain, the importance of replacing the older LHAs with the newer more modern LHD–8.

Answer. The MV–22 is the future centerpiece of the Marine Corps' vertical assault capability. The MV–22 will enable us to provide faster force closure with reduced strategic airlift through self-deployment, increased operational reach, greater operational tempo, combat effectiveness and efficiency, and increased combat survivability. The Advanced Amphibious Assault Vehicle (AAAV), Landing Craft Air Cushion (LCAC), and "Osprey" will comprise the mobility triad that enables Operational Maneuver From the Sea (OMFTS).

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The five LHA TARAWA class ships no longer meet designed damage stability criteria. LHA stability is a weight/growth issue with increasing higher topside weights

over the life of the ship class compounding the situation. Newer and heavier equipment (antennas, radars, tanks, trucks, and aircraft, e.g., the MV–22) has contributed extensively to the stability problem. The Navy plans to correct the stability problem on four or five LHAs (depending on LHD 8 delivery) by installing a Fuel Compensating System to allow for the full complement of MV–22s to begin deploying in fiscal year 2003. However, this initiative is presently not funded. In addition, LHAs will require specific ship alterations to properly integrate the MV–22 onboard. These ship alterations include removing a bridge wing, adding a nitrogen plant, moving washdown piping, and remarking the flight deck. These alterations are funded.

The current plan is to decommission the five LHA–1 TARAWA class ships at the end of their 35-year Expected Service Life starting in the year 2012. The LHA–1 ship class replacement plan shows one ship funded approximately every 3–5 years with the last LHA–1 replacement ship funded in 2015. In replacing the LHAs, an LHD–8 Transition Ship and follow on LHX class ship will better serve and meet Marine Corps requirements.

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—Designed with an enhanced damage stability capability by incorporating the Fuel Compensating System that corrects stability concerns identified with the LHAs.

Question. General Jones, in your prepared statement, you support achievement of 3 Marine Expeditionary Brigades (MEB), but point out that current budget plans will only support a 2.5 MEB lift capability by fiscal year 2008.

Can you elaborate on what this shortfall means and how the Nation's war fighting capability will be effected?

Answer. A global superpower must possess an ability to execute unilateral action. The key requirement for unilateral action is the ability to project combat power ashore in a theater without forward bases and in the face of armed opposition. The current Navy Long Range Shipbuilding plan meets the fiscally-constrained, programmatic capability established for the Marine Corps in the Quadrennial Defense Review resulting in an amphibious force structure capable of lifting 2.5 MEB assault echelon-equivalents by forming 12 Amphibious Ready Groups. Cutting, delaying, or inadequately funding amphibious ship procurement, will adversely effect our ability to conduct forcible entry operations and hinder our ability to comply with the current Secretary of Defense Global Naval Forces Presence Policy.

Question. What does the Marine Corps require to reach the desired 3.0 MEB Lift capability?

Answer. Amphibious forces are the nation's most flexible and adaptive combined arms crisis response capability. The requirement for an amphibious ship force structure that supports 3.0 Marine Expeditionary Brigade (MEB) assault echelon-equivalents of lift, as originally stated in the Department of the Navy Integrated Amphibious Operations and USMC Air Support Requirements (DoN Lift II) and later in the Mobility Requirements Study, is based on five fingerprints of amphibious lift. Those fingerprints are: personnel, vehicle square feet, cubic feet of cargo, vertical takeoff and landing spots, and landing craft, air cushioned (LCAC) spots. Achieving the required fingerprint remains a priority requirement.

QUESTIONS SUBMITTED BY SENATOR ARLEN SPECTER

Question. The Marine Corps doctrine Operational Maneuver From the Sea is based on the triad of V–22, the Advanced Amphibious Assault Vehicle (AAAV), and the Landing Craft Air Cushion (LCAC). Is the Marine Corps making enough progress on the procurement of these three programs?

Answer. Yes, the Marine Corps is making progress.

The current MV–22 procurement plan provides a continuous Marine Expeditionary Unit "Osprey" capability in fiscal year 2003. This is followed by a projected Marine Expeditionary Brigade MV–22 "Osprey" capability in fiscal year 2007. The complete tactical fielding of the MV–22 will occur around fiscal year 2013 with the

transition of the last Reserve MV–22 Osprey squadron. Final deliveries of the MV–22 to the training squadron will continue through the beginning of fiscal year 2015.

The Marine Corps desires to increase procurement to 36 MV–22s per year. This would allow the Marine Corps to increase the progress toward full Operational Maneuver from the Sea capability and to shorten the fielding plans by 2–3 years.

The Advanced Amphibious Assault Vehicle (AAAV) Program is currently nearing the completion of the Program Definition and Risk Reduction (PDRR) phase of development. The Government accepted the first of three PDRR prototypes for Developmental Testing in January 2000. The Program will enter the Engineering and Manufacturing Development phase in fiscal year 2001 during which ten prototypes will be fabricated and tested. Low Rate Initial Production for 101 vehicles begins in fiscal year 2004 with Full Rate Production starting in fiscal year 2006 and continuing through full operational capability in fiscal year 2013. The projected procurement plan will provide an initial and continuous Marine Expeditionary Unit AAAV operational capability beginning in fiscal year 2006.

Delivery of the final LCAC (total of 91) in December 2000 completes this procurement program. Currently, LCACs are scheduled to undergo a Service Life Extension Program (LCAC SLEP) that extends the useful service life of these craft an additional 20 years. LCAC SLEP encompasses the following:

—Replacement of obsolete electronics with a new command module introducing open architecture to facilitate low cost commercial off-the-shelf insertion as technology continues to evolve.

—Replacement of the buoyancy box solving corrosion problems while incorporating hull improvements.

—Incorporating Enhanced Engines providing additional power capable of lifting all required Marine Corps loads.

—Replaces current skirt design with Deep Skirt increasing craft performance under all operational conditions.

LCAC SLEP is critical to the Marine Corps' expeditionary warfighting capability as part of projecting combat power ashore. To support the MAGTF of the next 20 years the LCAC must be able to operate with heavier loads, at faster speeds and further distances, under adverse conditions, and with higher reliability.

Question. What level of funding is needed for the Marine Corps to satisfy the goal of 36 MV–22's per year?

Answer. To ramp up to 36 aircraft in fiscal year 2006, $1,066 million is required across the Future Years Defense Program (FYDP). This would reduce procurement in the outyears and achieve an overall savings of approximately $280 million. The following cost and profile adjustments are required to execute the desired 36 per year procurement of MV–22s by fiscal year 2006:

[Dollar amounts in million]

Quantity	Fiscal year—					Total
	2001	2002	2003	2004	2005	
Current Profile	16	19	28	28	28	119
Revised Profile	16	24	30	32	34	136
Delta	.....	5	2	4	6	17
Current WpnSys Cost	$1,208	$1,345	$1,746	$1,698	$1,637	$7,634
Revised WpnSys Cost	1,228	1,634	1,909	1,944	1,985	8,700
Delta	20	289	163	246	348	1,066
Tooling Delta	(+10)	(+25)	(+32)	.....	.....	.....
Adv. Procurement Delta	(+10)	.....	(+5)	(+10)	(+20)	.....

Tooling and Advance Procurement Deltas are included in the Weapons System Cost Delta.

The earliest that the MV–22 ramp could be increased to 36 a year is fiscal year 2003. Increasing the MV–22 in fiscal year 2003 will result in an estimated $500 million Weapons System Cost savings and reduces procurement by two years. The following cost and profile adjustments are required to execute the desired 36 per year procurement of MV–22s by fiscal year 2003:

[Dollar amounts in million]

Quantity	Fiscal year—					Total
	2001	2002	2003	2004	2005	
Current Profile	16	19	28	28	28	119
Revised Profile	16	27	36	36	36	151
Delta	.....	8	8	8	8	32
Current WpnSys Cost	$1,208	$1,345	$1,746	$1,698	$1,637	$7,634
Revised WpnSys Cost	1,238	1,820	2,172	2,129	2,126	9,485
Delta	30	475	426	431	489	1,851
Tooling Delta	(+10)	(+25)	(+32)	.....	.....	.....
Adv. Proc. Delta	(+20)	.....	.....	.....	.....	.....

Tooling and Advance Procurement deltas are included in the Weapons System Cost delta.

Total funding required across the FYDP to increase the ramp rate to 36 per year in fiscal year 2003 is $1,851 million.

The procurement ramp can be adjusted to go to 36 aircraft per year anytime after fiscal year 2003. However, total program savings are highest if we reach the 36 aircraft annual procurement rate in fiscal year 2003. Projected savings streams lessen each year we delay getting to the 36 aircraft annual rate.

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

AV–8B

In your fiscal year 2001 Unfunded Requirements List, you established a need for 4 additional Remanufactured Harriers. However, no mention was made of advance procurement for procurement beyond fiscal year 2001.

Question. Do you have a need to remanufacture the remaining 30 or so Day Attack AV–8B's in your Harrier inventory? Would additional advance procurement in fiscal year 2001 be appropriate to support the remanufacture of the remaining Day Attack aircraft? How does this tie up with the future procurement of Joint Strike Fighter?

Answer. Yes; the USMC is requesting a total of 16 additional Reman aircraft, 4 in fiscal year 2001 and 12 in fiscal year 2002. Yes; $18 million in advance procurement in fiscal year 2001 is required to support the procurement of the additional 12 Reman aircraft in fiscal year 2002. These 16 additional Remanufactured aircraft will allow us to maintain the temporarily reduced PAA of 16 (desired 20) in our 7 Attack Squadrons until JSF IOC of 2010 (desired JSF PAA of 20 aircraft in 7 squadrons).

USMC ECP–583

The Marine inventory of F/A–18A aircraft requires upgrades to bring them up to F/A–18C capabilities. You have identified funding for 20 additional ECP–583 upgrades (10 Active and 10 Reserve) in your Unfunded Requirements List.

Question. How important is this upgrade in modernizing your fighter attack capabilities?

Answer. The primary factor driving the F/A–18A upgrade is the mitigation of the current F/A–18C/D inventory shortfall that becomes almost unmanageable beyond fiscal year 2006. The 28 active and 48 reserve F/A–18A's represent 51 percent of the total single seat strike fighters in the USMC inventory. The F/A–18C/D is running out of service life faster than the F/A–18A due to operational demand. The F/A–18C/D is in higher demand for use by the CINCs and Marine Air Ground Task Force (MAGTF) than the F/A–18A because of its enhanced operational capability; mainly its ability to employ precision guided weapons.

ECP–583 consist primarily of avionics and hardware upgrades that allow the F/A–18A to process and utilize the updated versions of the F/A–18C software and accessories. The modified "A" aircraft will have comparable capabilities to a Lot 17 F/A–18C aircraft; an aircraft 8 years newer. ECP–583 will allow the "A" aircraft to employ all current and future POMed weapons available to the F/A–18C/D.

ECP–583 will allow the Marine Corps to spread operational demand over its full inventory of F/A–18s. This will help to slow the rate of accumulated service life on the F/A–18C/D. The modification also enhances commonality between the "A" and "C" aircraft, which reduces logistical footprints, pilot and maintenance training.

ECP–583 is the most cost effective means to bridge the warfighting capability required of Marine tactical aviation from present until the arrival of the Joint Strike Fighter in 2010.

QUESTIONS SUBMITTED BY SENATOR PATRICK J. LEAHY

ROLES AND MISSIONS

General Jones, as we continue to maximize the resources we allocate to the military, it seems to me that we need to ensure that the roles and missions of the Armed Services do not overlap substantially. Right now, the Army is refining its new vision for the future. The general outlines of the vision indicate the Army is going to be a lighter force that is much more deployable. This process of transformation raises a number of questions in regard to the roles and missions of the services. I would like to know whether the Army is taking advantage of the Marine Corps' expertise as in its development of doctrine and force structure plans.

Question. Do you believe that this new force will duplicate the capabilities you can already provide? Speaking from experience, can the Army balance this new role with its historical role as a heavy, sustained-fighting force?

Answer. Your Marine Corps and the Army have many professional commonalties; which includes shared types of equipment, training resources and requirements, and warfighting skills, tactics and techniques. Both of our services work diligently to ensure that we maximize economies of scale in obtaining common resources. To this end, we maintain liaison offices and cooperate on experimentation and acquisition programs to ensure that our doctrines and requirements complement one-another whenever possible. The development of redundancies cannot be ruled out and would not prove a major challenge to address so long as each of our services focuses on its core competencies.

Secretary Cohen has been very deeply involved in working with the Chief of Staff of the Army and making sure that the Army is focused in the right direction. In the long term, the Army's modernization will benefit your Marine Corps. The exact extent to which the Army is leveraging off of the Marine Corps experiences for developing its future doctrine and force structure is an issue that I will have to defer to Secretary Cohen and the Chief of Staff of the Army.

QUESTIONS SUBMITTED BY SENATOR RICHARD J. DURBIN

Despite Congressional concerns about the cost viability of the LW155, the Marine Corps keeps telling us that the LW155 program has sufficient funding. I'm told that the Marine Corps budgets which fund the ceiling priced development contract, that includes the first two production years, are the basis for your conclusion that the program has sufficient funding. One contractor has already walked away from this ceiling priced contract and I understand that the current contractor does not have the ability to live up to the requirements of the contract.

Question. Have you had a "should cost" study done on this effort to determine if you are being overly optimistic on this critically needed system due to your ceiling priced contract?

Answer. The previous prime contractor Cadillac Gage Textron would not honor the ceiling price options originally negotiated and was unable to perform prime contractor responsibilities for the LW155. That contract was novated to Vickers Shipbuilding and Engineering, LTD (VSEL) (now British Aerospace (BAE) Systems) who was the developer of the weapon. The new contract with VSEL (signed Dec. 1998) established ceiling price options for the first two years of production which BAE has every intention of meeting. The USMC has fully funded the LW155 program consistent with the ceiling price renegotiated with VSEL. BAE's corporate commitment to meeting the ceiling prices was reiterated to the GAO by BAE during GAO's visit to the Joint Program Office on March 9th, 2000. There have been several Government cost studies conducted which supported the ceiling prices negotiated with VSEL. It is our intent to try and negotiate those prices down from their current ceiling levels. To support this, the contract requires BAE to submit revised numbers two more times prior to option award. Based on the previous cost estimates and BAE Systems commitment to meeting the negotiated ceiling price options, we do not feel another "should cost" study is prudent at this time.

Question. Maintaining a viable U.S. howitzer industrial base should be a goal of all of us responsible for our National Defense. I agree with the current contractor's intent to subcontract 70 percent of this contract to U.S. sources. I am concerned,

however, that this 70 percent intent has been abandoned due to the current contractor's cost problems.

Is the Army and Marine Corps ready to accept having this critically needed howitzer system produced offshore? If not, when is the Marine Corps going to stop giving Congress the same ceiling priced contract answer and take the necessary steps to ensure maintenance of a viable U.S. howitzer industrial base?

Answer. The Marine Corps is fully committed to maintaining a viable U.S. industrial base for howitzers. The contractor's intent to produce up to 70 percent of the weapon in the U.S. has not been abandoned and there are no contractor cost problems influencing this matter. It is still British Aerospace (BAE) Systems' intent to procure material, fabricate parts, weld and machine assemblies, integrate assemblies into a complete weapon and test the end item in the U.S. They believe the sum total of this work will equate to 70 percent of the total weapon cost minus the GFE cannon and fire control. In fact, this intent was reinforced only last week when representatives from the General Accounting Office discussed this very issue with BAE Systems. There are numerous commercial activities that are capable and qualified to accomplish this work to include Army Arsenals. The national industrial defense sector is fully capable of producing the LW155 and of maintaining the U.S. howitzer industrial base. The Marine Corps understands the Senator's concern for maintaining the expertise resident at the Army Arsenals. The Army Arsenals do possess a wealth of experience in the area of howitzer development and production and they will be given every opportunity to compete with U.S. industry for the work.

SUBCOMMITTEE RECESS

Senator STEVENS. We will have Secretary Hamre here on Monday, March 6 at 2 p.m.

Thank you very much.

[Whereupon, at 4:10 p.m., Wednesday, March 1, the subcommittee was recessed, to reconvene at 2 p.m., Monday, March 6.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2001

MONDAY, MARCH 6, 2000

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 3:12 p.m., in room SD–192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Domenici, Inouye, and Harkin.

DEPARTMENT OF DEFENSE

DEPUTY SECRETARY OF DEFENSE

STATEMENT OF DR. JOHN J. HAMRE, DEPUTY SECRETARY OF DEFENSE

OPENING STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. Dr. Hamre, I apologize for being late, and this is a sad occasion for us.

Dr. HAMRE. Me, too.

Senator STEVENS. As a matter of fact, it has been a long time, my friend, since I recognized you at a committee meeting, and you were what I called the spy of the Armed Services Committee at the appropriations process.

Do you remember those days?

Dr. HAMRE. I do, indeed.

Senator STEVENS. I think you have appeared before us more than any other person in the last 7 years representing the Department of Defense (DOD), and you have provided us an unfailingly candid, honest, and really meaningful testimony, and we thank you very much.

As a matter of fact, we just could not have you leave without having a meeting and putting it on the record how much we have appreciated your service for our Government, whether you have discussed overseas contingencies, improving the Department's financial and accounting systems, or sparring with us over base closures. Things we still do not like, but beyond that, your service in the Department, your assistance to Congress, and your absolute devotion to the men and women of our Armed Forces has not gone unnoticed. John, we really do thank you. You have served with great distinction.

I think the committee is aware, all the members of this committee are aware you will now become the chief executive officer

of the Center for Strategic and International Studies here in Washington. Despite the fact they interviewed all of us, you got the job.

We do wish you well. You have a tough job in the year 2001. You and the Secretary have presented us a budget much different from last year's. There are no gaping holes in the 2001 request, no unspecified rescissions, no split funding of military construction, and the early assessments from the Congressional Budget Office (CBO) and the Office of Management and Budget (OMB) indicate that they are very close. I cannot say the same thing about the rest of the budget, but this year's defense budget is one we can work with easily.

However, that does not mean we have an easy year, and it is going to be very difficult for us to go forward. The House will report their supplemental bill, I am told, and provide more than the $2 billion in emergency funds for the Kosovo contingency operations, and these are matters covered also by the 2001 budget.

It is no secret that around here some people think we ought to just move into the 2001 budget and forget the supplemental. The request for the first time since 1994 for DOD exceeds the estimate forecast by Congress in last year's budget resolution, and there are some problems as we will go ahead, but I do think that everyone should know that the resources available to the Department of Defense because of your work on this bill as a swan song really has been very excellent, and one that we can look forward to dealing with.

We would welcome comments on the unfunded priorities presented by the service chiefs, as well as your assessment of how the Department is doing on financial management reform, defense reform initiative, and the Y2K effort. If you do not wish to make comments on those we will call you back as a witness from one of those other entities later, but I think it will be a very pleasant afternoon.

Senator Inouye.

STATEMENT OF SENATOR DANIEL K. INOUYE

Senator INOUYE. Thank you very much, Mr. Chairman. I wish to echo your sadness in noting the departure of John Hamre. We really hate to see you go. You have been extremely helpful to all of us. Your wise counsel and your innovative suggestions I think have helped all of us immensely, but, as noted by the chairman, you are going to be just a few blocks away from us, so you can be expecting us to call on you quite often for your advice and counsel.

Dr. HAMRE. I will come any time.

Senator INOUYE. And, as noted by the chairman, we are very pleased with the budget and also the fact that it is an increase for the past 2 years now, 2 fiscal years, but there are a few things we have discussed in the past, and I suppose we will continue to discuss.

The chairman and I have been traveling to visit our forces overseas, and we have come to the following conclusions. These are old hat to you. Retention, recruiting, readiness remain serious concerns. Overseas deployments continue at historically high levels. Spare part shortfalls and cannibalized equipment problems persist. Military departments are beginning to lower the standards for recruiting purposes.

Military families and retirees are concerned about the state of military health care. Some of the families have expressed concern about being relocated in the middle of the school year. Our military and civilians are concerned about the prospects for careers in an institution that is still talking about downsizing. When is the ax going to fall? And if these were not enough, our military live and work in buildings that are literally crumbling.

Simply put, we are still not doing enough, although we are trying our very best to resolve these matters, so as we begin our hearings this year these are a few of the concerns that some of us in the Congress have and I for one believe we need to redouble our efforts to improve the living and working conditions of our men and women in uniform.

Yours has been a difficult challenge, I know, but you have done your best, and we are grateful for all you have done. In many ways, the fault lies with us here. You have consistently over the years shared with us your concerns, your concerns with world affairs, and we are the ones who decide how much you can spend.

I think something has to be done to further educate us. I discussed this just a few minutes ago with the Chief of Naval Operations (CNO), and maybe I will do that with others also, but as you prepare to depart we welcome the opportunity to hear your final thoughts, and was this statement cleared by OMB, or since this is going to be the last one——

Dr. HAMRE. I always clear the written statement with them.

Senator INOUYE. Thank you very much, Mr. Chairman, and we hate to see you go, John.

[The statement follows]:

PREPARED STATEMENT OF SENATOR DANIEL K. INOUYE

Thank you Mr. Chairman and welcome again to you Mr. Secretary. As the chairman noted, we expect this will be your last appearance before this subcommittee. I think I speak for all the members of the committee when I say that we are sorry to see you go.

We have come to rely heavily on your counsel over the past several years.

Mr. Chairman I would like to add that Dr. Hamre has been a true friend of this subcommittee. His willingness, in fact eagerness, to assist the committee in finding solutions to very difficult problems has made him a great asset both to DOD and to those of us in the legislative branch.

John, thank you for all you have done during your many years of public service. We are very grateful for your dedication and tireless efforts on behalf of our nation.

I understand that you will be staying in the Washington D.C. area. Let me assure you we will continue to seek your counsel and assistance in finding creative solutions to difficult problems. Dr. Hamre, we salute you.

Mr. Chairman, today we continue our review of the fiscal year 2001 budget for the Department of Defense. I want to congratulate the administration for requesting a significant increase in funding for the Department of Defense for the second straight year.

The DOD request is $12.2 billion higher than this year's funding. It is obvious to us on this subcommittee that an increase is sorely needed.

Mr. Secretary, as we visited our troops in the field during the past year and spoke with our military leadership, we have come to the following conclusions:

—Recruiting, retention, and readiness remain serious concerns.
—Overseas deployments continue at historically high levels.
—Spare parts shortfalls and cannibalized equipment problems persist.
—The military departments are changing (lowering) their standards for military recruits.
—Too many troops are still voting with their feet and leaving the military in large numbers.

—Our families are disturbed about health care, but little has been done to achieve meaningful improvement.
—Our military and civilians are worried about the prospects for careers in an institution that is perpetually talking about downsizing.
—Our families worry about being relocated in the middle of the school year.
—And, if these were not enough, our military live and work in buildings that are crumbling. Simply put, we are still not doing enough to repair and modernize our bases.

As we begin our hearings this year, these are a few of the concerns that some of us here in the Congress have. I, for one, believe we need to redouble our efforts to improve the living and working conditions of our men and women in uniform.

Dr. Hamre, yours has been a difficult challenge to help manage this immense agency. We are grateful for all that you have done and continue to do.

As you prepare to depart the government we would welcome the opportunity to hear your final thoughts on the challenges that face our military and their families and your personal views on what we need to do to ensure that our nation's security remains intact.

Senator STEVENS. Senator Domenici.

STATEMENT OF SENATOR PETE V. DOMENICI

Senator DOMENICI. Thank you, Mr. Chairman.

Mr. Secretary, I have some questions about some of the research aspects of the budget, in particular with research on directed energy, laser energy, and laser hardware. But first, I wanted to come particularly to thank you for the time you served here. One of my best friends in this place, as you well remember, was Sam Nunn, whose success in military matters we all understand. I remember you back when both you and I were a little bit younger, and looking back on it, there is no question that part of Sam Nunn's success was because he had you around. There is no question about that.

He had a few other critical staff members, but you were number 1. I look at the military and what you have done since you have been there, and I cannot imagine doing the job you did. We changed things. The world changed. Technology changed so rapidly in such a short time. You never would have expected it when you took the job.

The missions of the military are still in the process of evolution. I am not sure we have defined yet what we expect of you and them, and as a consequence, some things are going very well and some things are not. As well, I am not sure that we are capable of defining exactly what we expect of the military, because any time something happens in the world that is untoward, something that strikes at our principles or our common sense of humanity, the first people we think of as having an impact are the military.

I am not sure that we yet understand the impact and frequency on our military of these long episodes overseas which are totally disruptive to their lives.

In addition, it seems to me we never expected the all-volunteer Army to come into competition with an economy like this one. If anybody would have ever said your ability to recruit and maintain will come into focus with an economy growing at 4 percent a year, where many States have 2 percent unemployment, you would not have believed them. And if anybody told you to continue to get young men and women in abundance to come and sign up for the military, and then, after we have given them great education, stay in, obviously you would have said it would be a tough, tough job. So, you danced to very different tunes than you expected when you

came in, and I do not know that anybody could have done it much better. I thank you as one Senator, and my questions will be very focused and brief.

Thank you, Mr. Chairman.

Senator STEVENS. Thank you very much. Dr. Hamre, we would be happy to have your statement. The lights are not on today. There is no limit.

DR. HAMRE'S OPENING STATEMENT

Dr. HAMRE. Thank you so much, Chairman Stevens, Senator Inouye, Senator Domenici. I am very grateful to be here and, frankly, I find myself surprisingly emotional about coming. I have enjoyed being before this committee more than anything I have done, and I am just very grateful for it, and I thought about preparing some words about how I felt, but someone beat me to the punch and, if I may, I would like to share these words. It only takes about 90 seconds.

It was, I think, the best little speech that has been given in 25 years, and it was given by Bob Dole when he was awarded the Presidential Medal of Freedom, and he had a very brief acceptance speech and it says absolutely everything that I am feeling right now, so if I may I would just like to read it. I think this speech has not gotten the attention or the credit that it deserves, so if I may, I would just like to read it. It is how I feel about being here today.

At every stage of my life I have been a witness to the greatness of this country. I have seen American soldiers bring hope and leave graves in every corner of the world. I have seen this Nation overcome depression and segregation and communism, turning back mortal terrorists to human freedom, and I have stood in awe of American courage and decency, virtues so rare in history and so common in this precious place.

I can vividly remember the first time I walked into the Capitol as a Member of Congress. It was an honor beyond the dreams of a small town. I felt part of something great and noble. Even playing a small role seemed like a high calling, because America was the hope of history. I have never questioned that faith in victory or in honest defeat, and the day I left office it was undiminished.

I know there are some who doubt these ideals, and I suspect there are young men and women who have not been adequately taught them, so let me leave a message to the future. I have found honor in the profession of politics. I have found vitality in the American experiment. Our challenge is not to question American ideals or to replace them, but to act worthy of them.

I have been in Government at moments when politics was elevated by courage into history, when the Civil Rights Act was passed, when the Americans With Disabilities Act became law. No one who took part in those honorable causes can doubt that public service at its best is noble.

The moral challenges of our time can seem less clear, but they still demand conviction and courage and character. They still require young men and women with faith in our process. They still demand idealists captured by the honor and the adventure of service. They still demand citizens who accept responsibility and who defy cynicism, affirming the American faith and renewing her hope. They still demand the President and the Congress to find real unity in the public good.

If we remember this, then America will always be the country of tomorrow, where every day is a new beginning, and every life an instrument of God's justice.

I think that is the best little speech in 25 years, and it says absolutely everything I feel about you, about this committee, about what it means to have served this country either in the Department of Defense, or especially here in the Senate, and I would thank all of you for what you are doing and for giving me a chance

to be here, and I would also thank the remarkable staff that serves with you.

They do not get the credit, frankly, that they deserve working the countless hours that make it happen around here, and I know that because I was lucky enough to be one of the staff members for the United States Senate, the proudest time of my life, and I will always think back with gratitude for having had that kind of an opportunity, and to have had an opportunity to work and to serve with people like you who have done what too few Americans are willing to do, and that is now serve in elected office, and I thank you for that, and I thank you for letting me come today.

Mr. Chairman, if I might turn——

Senator STEVENS. You could have just given the statement that you made the day that you were sworn in in your present position and have matched Bob Dole's statement. I was there. It was a marvelous statement.

What do you want to do now?

Dr. HAMRE. I want to go through a few charts to introduce our budget and use it more as a basis to highlight some of the strengths and some of the weaknesses in the budget we have given you, and to point out some of the things, especially as you are coming up on preparing the supplemental, and if I might ask, Captain, if you would start.

Senator STEVENS. Senator Inouye wants a copy of that speech.

Dr. HAMRE. Absolutely. I frankly think this is the kind of speech that should be carved on a wall some place.

Senator STEVENS. Give us your statement you made when you were sworn in and we will put it in the record and let other people see it.

[The information follows:]

DOD NEWS BRIEFING, MONDAY, SEPTEMBER 8, 1997, ACCEPTANCE SPEECH

Deputy Secretary HAMRE: Secretary Cohen, General Shalikashvili, I thank you for your remarkably generous words. I'm so pleased my parents, Mel and Ruth Hamre, are here because at least two people believe what you just said.

I'm very honored to be here today, and I'm very honored especially to have so many very, very fine leaders of Congress to join us here today. You honor the Department by coming. I'm so very grateful. And my colleagues especially from other Departments of the Executive Branch. It's a great honor that you've given the Department of Defense that you would come today. Thank you.

The German philosopher Goethe once said that if you discard what he owed to others, there wouldn't be much left of him. I am indebted to so many people who are here today, and I'm fortunate to have them here to share the joy of my time with you.

I start, again, with my parents, Melvin and Ruth Hamre, and I'm so delighted they're here. My brother, sisters; my larger family; and I'm especially happy to have my large church family who's here with me today. I'm very grateful that you're all here.

I also would have to say thank you to my friend and my partner in life, Julie—my wife. I thank you for joining me on this latest leg in our journey through life together.

The great humanitarian Albert Schweitzer once told a group of his friends, "I do not know what your destiny will be, but one thing I do know, the only ones among you who will really be happy are those who have sought and found how to serve." I stand here before you today as the happiest man in America. Words cannot capture what an honor it is for me to be here today.

As Secretary Cohen said, I grew up in a very small town in South Dakota where none of the houses had numbers and none of the streets had names, and to think that someone like me could end up being the Deputy Secretary of Defense really

speaks volumes about the greatness of this country and its unbounded opportunities for all.

I'm grateful to my country for this opportunity to serve. I'm grateful to you, Mr. Secretary, and to the President for the confidence that you have placed in me. I'm very grateful to the Congress, to the leaders of the Congress, who have extended to me their trust and their willingness to work with me. Finally, I'm very thankful to all the members of the armed services for this opportunity to lead them, and I'm very grateful, indeed.

I pledge to all of you my complete loyalty, my honesty, and every ounce of my energy as we, together, set about the process of defending America.

This month marks the Golden Anniversary of the Department of Defense. We celebrate 50 years of guarding America—a half a century of excellence. Created at the dawn of the Cold War, this remarkable Department has protected America during its darkest hours, and saw us through to the dawn of a new and brighter era. Today, in the twilight of the 20th Century, this nation is blessed with unprecedented opportunities to build peace and a better tomorrow.

Secretary Cohen, on behalf of the President, has set us on a clear path for our nation's defense today and in the future. Working with the Congress, the Department will retain the ability to meet all conceivable challenges to America and to our allies today and in the future. We will give America a Department that is ready in the future to meet the demands for defense that we think will emerge. We will emphasize and promote the innovation inherent in the American spirit so that the Department can adapt to unforeseen challenges that lie ahead.

We will give highest priority to our greatest natural resource—our talented men and women who comprise this remarkable force. We will eliminate needless spending by streamlining and reengineering the Department, especially in the areas of support and administration. And we will emphasize the values that constitute the foundation of this great country and of this Department—duty, honor, integrity, honesty, faithfulness.

As President Clinton has said, "America is the indispensable nation." You, the men and women of the armed forces—and I include all civilians here in that—are the indispensable people of this indispensable nation. Because of your willingness to serve and sacrifice, America will accomplish much in coming years. I pledge that I will seek with every fiber of my being to support you and to live up to your trust.

As I begin this challenge, I'm inspired by the words of a very great American who is also a fellow Mid-Westerner, and that is Senator Bob Dole. Last January, President Clinton honored Bob Dole by presenting him the Presidential Medal of Freedom. Senator Dole, in turn, gave America a great gift with a lovely little speech that he used to acknowledge that gift. I would like to read to you a few portions of it because it says everything that I feel today.

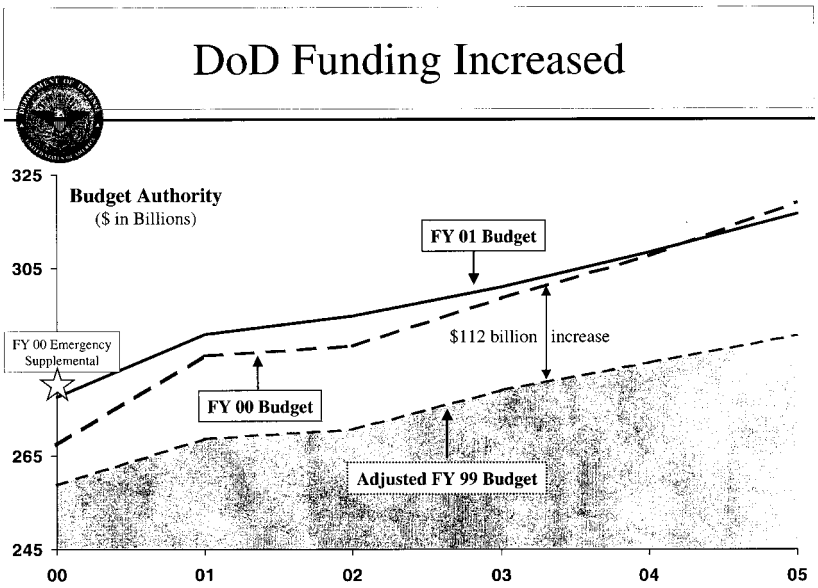
Senator Dole said, "I have seen American soldiers bring hope and leave (inaudible) in every corner of the world. I have seen this nation overcome depression and segregation and communism, turning back mortal threats to human freedom. And I have stood in awe of American courage and decency, virtues so rare in history and so common in this precious place.

"I have been in government at moments when politics was elevated by courage into history. When the Civil Rights Act was passed; when the Americans with Disability Act became law. No one who took part in those honorable causes can doubt that public service at its best is noble.

"The moral challenges of our time can seem less clear, but they still demand conviction and courage and character. They still require young men and women with faith in our process. They still demand idealists captured by the honor and adventure of service. They still demand citizens who accept responsibility and who defy cynicism—affirming the American faith and renewing her hope. They still demand the President and Congress to find real unity in public good.

"If we remember this, then America will always be the country of tomorrow where every day is a new beginning and every life an instrument of God's justice."

Thank you all very much for coming today.



DOD FUNDING INCREASED

Dr. HAMRE. The budget we are submitting to you builds on last year's initiative by the Secretary, with the President, to get an increase, the $112 billion that was added, and you can see that is the difference between the shaded portion, the adjusted 1999 budget, and the dashed line that says the $112 billion increase.

Now, you can see the solid top line is the budget we have submitted, and it is slightly higher. Of course it is higher in 2000 because you added funds with the supplemental, and it is because of that it was a significant increase that made it possible for us not only to pay for the Kosovo operation but also, frankly, to patch some other holes, and you did that last year. It is higher in 2001, and I will show you—why don't we go to the next chart to show the actual numbers.

FINANCING THE DOD INCREASE

[Budget Authority in billions]

	Fiscal year—						
	2000	2001	2002	2003	2004	2005	2001–05
Fiscal Year 2000 Budget	267.2	286.4	288.3	298.7	307.6	318.9	1,499.8
Contingencies	.....	2.2	1.0	1.0	1.0	1.0	6.2
Fuel Costs	.....	1.4	.6	.4	.5	.5	3.4
Other Increases	.....	1.2	.4	.2	.2	.2	2.2
Re-phasing	.....	.....	4.5	.6	(.9)	(4.2)	.....
Fiscal Year 2001 Budget	277.6	291.1	294.8	300.9	308.3	316.4	1,511.6
Supplemental Request	2.3	.....	.....	.....	.....	.....	.....

As you can see, Mr. Chairman, in the 2001 column we have added about $4½ billion compared to where we said we would be last year. Now, that is in the three areas, the contingencies, and I will talk about the contingencies in just a moment. It is very important, if we can, to get early action on the supplemental request, because we for all practical purposes were borrowing our funds against our readiness accounts in the final quarter of the year.

The fuel cost—and you will remember last year, when we submitted the budget, we said we are really getting $12 billion, but we only asked for $4 billion, and there were all the kind of funny financing things that got everybody so ticked off at us. Well, part of that was that we had lower fuel cost, and we assumed lower fuel cost.

Well, of course, fuel costs have gone up, and one of the arguments we made to OMB, and they honored it, was that we needed to increase it above our top line if the fuel prices went up, and so we added the $1.4 billion in 2001, $3.4 billion across the Future Years Defense Program (FYDP). Now, we will still have to take a look at that to see if that is right, because fuel prices are high, as you know, and it is going to be a big bite on us.

Senator STEVENS. I understand that is not only the case for 2001, but we also have to go back and readjust this current year because at least half of this year will be at this enormous cost of over $30 a barrel. What was your dollar-a-barrel fuel cost in your projection for 2001, do you know?

Dr. HAMRE. Our projection in preparing the fiscal year 2001 budget was $18.62 a barrel during fiscal year 2001. And then we had some other minor increases, but as you can see the budget is up a bit. It is not a dramatic amount. There was this important thing, rephasing. As you see, we moved up about $5 billion from 2004 and 2005 and moved it up, and of course that let us get the aircraft carrier, and that is why we were able to have it earlier in the FYDP.

Fiscal Year 2000 Emergency Supplementals

[Dollars in millions]

Contingency Operations	$2,123
Colombia Supplemental	137
Storm Damage	27
Total Fiscal Year 2000 Request	2,288

FISCAL YEAR 2000 SUPPLEMENTALS

Now, the contingency operations, we are asking for $2.3 billion, and we do need this as an emergency. We have submitted it, and we would ask for your help in passing this supplemental. As you know, we are borrowing from our Operation and Maintenance (O&M) dollars, and it really is hitting the Army very heavily. The Army for all practical purposes has given out to the field the dollars that it requires to execute the full year, but if we do not get the funds they are going to pull them back and we are going to have a readiness crisis in the Army unless we get the supplemental passed, so I would ask for your help in any way for that.

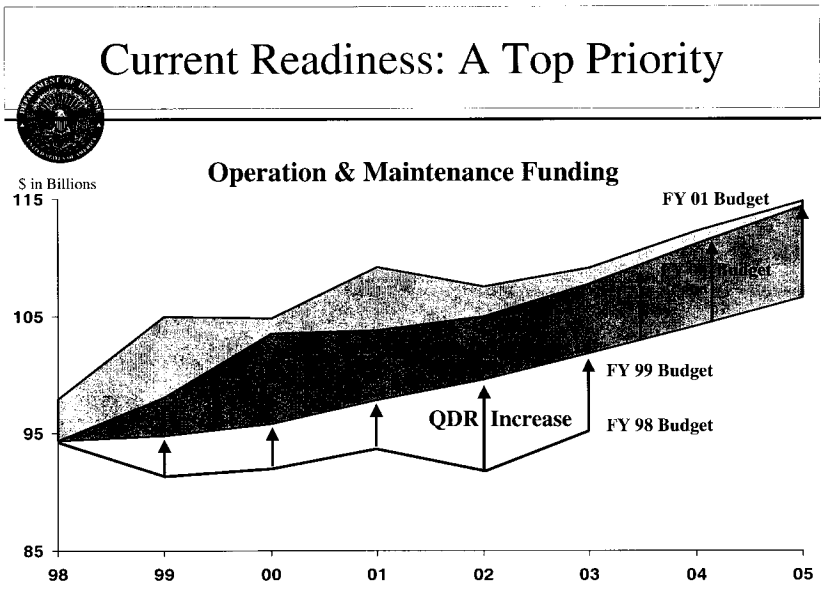
There is, of course, some money in our budget for Colombia, the Colombia supplemental. The Colombia supplemental, of course, is much bigger, but this is just the portion that is DOD, and it is relatively modest, and then we had some storm damage, and it does not cover all of it, but it covers the essential things, about $27 million.

HOW THE BUDGET SUPPORTS THE QDR STRATEGY

Budget increases supported each element of shape-respond-prepared strategy
Highest priorities
—Readiness requirements funded
—Quality of life programs enhanced
—Procurement goal achieved
—Efforts to reshape the force supported
—Defense reform initiatives continued

QUADRENNIAL DEFENSE REVIEW (QDR) PRIORITIES

Very briefly, I am just going to talk about these highest priorities, or really in essence the following charts. We talk about readiness, quality of life, procurement, et cetera. Let's go to the next one.

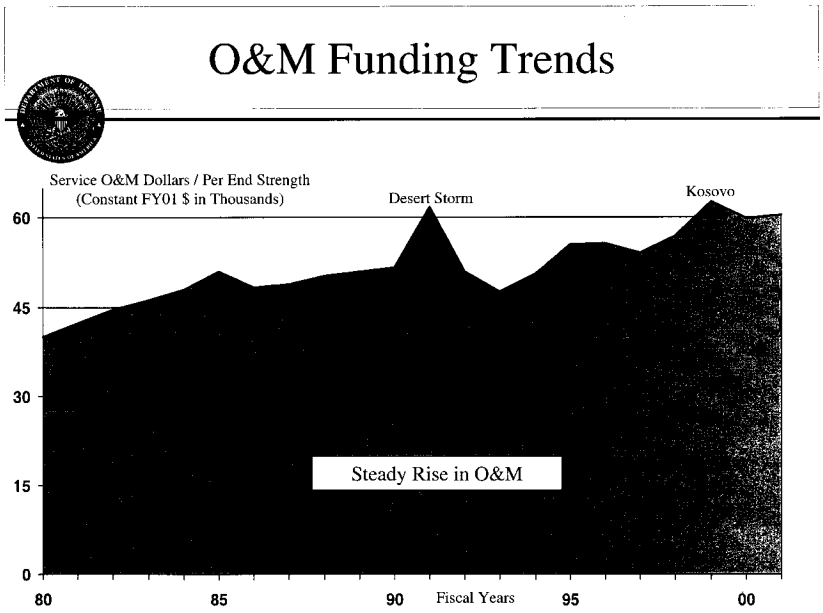


CURRENT READINESS

O&M has been going up consistently each year. You see that very bottom line, where that is the 1998 budget, and that was the O&M funding level, and then it went up in 1999, up in 2000, and up again in 2001, and we have been underbudgeting for operations. I mean, I think we had been incorporating some hopeful assumptions that we thought would come to pass, and some of them have

and some of them have not, and as a result each year we have had to go back and add additional funding to cover O&M.

I have said many times the main reason that we have slipped procurement is because every year we have to go back and cut something in procurement in order to put it back into O&M, and the best way to fully fund your procurement program is do not underfund your O&M accounts.



O&M FUNDING TRENDS

If I could show you the next chart, which shows you what we are doing in trends is a very steady increase from over the last 15 years in O&M dollars per soldier.

Now, there is a study that was done by the Center for Strategic and International Studies that talks about needing another $100 billion a year. I am caught in a pretty awkward spot talking about that. I do not think we need another $100 billion a year, but we certainly need more because of exactly this phenomena.

You see the cost of doing business in real terms increases every year, and if you do not budget for that increase, you cut out procurement in order to pay for it, and that is one of the reasons our modernization program has been lagging. We have had this procurement holiday period which has gone on quite a while, and I will show you some charts subsequently that indicate the impact of that, but we really are putting a good deal more money into O&M on a per-soldier basis to reflect the higher cost of doing business.

PEOPLE COME FIRST

Basic Allowance for Housing (BAH) plan will eliminate out-of-pocket expenses by fiscal year 2005
Fiscal year 2001 pay raise equal to ECI +½ percent
Military retirement restored
TRICARE reforms proposed

PUTTING PEOPLE FIRST

These are some of the bumper stickers about people and Senator Inouye, you said this. We place such a premium on getting good people, and we cannot afford to lose them. I mean, that is America's true secret weapon. It is the quality of the people that are willing to serve right now, but that means you do have to take care of them when they come in, and these are some of the things we have done. I will talk about the basic allowance for housing in just a second. The pay raise, I think we have charts on each of these. Let's go to the next chart.

BASIC ALLOWANCE FOR HOUSING INCREASED

	Fiscal year—					
	2000	2001	2002	2003	2004	2005
BAH Absorption (percent)	18.8	15.0	11.3	7.5	3.5	.....
Additional Costs (millions)	.....	$160	$350	$600	$885	$1,140

$3 billion initiative to lower average out-of-pocket costs from 18.8 percent in fiscal year 2000 to 15 percent in fiscal year 2001, and to zero by fiscal year 2005
Three-part plan benefit:
—Increases tax-free allowances for service members
—Reduces demand for base housing
—Improves prospects for privatization

HOUSING INCREASES

This is the housing increase. Now, we have two ways in which we house people. One is on base, military housing, and where we build houses, and we are only able to house about a third of our population. The other two-thirds of the population lives on the economy. By custom and actually by law we do not fully pay them the cost of living on the economy. As a matter of fact, there is a legal restriction. We cannot pay more than 85 percent of what it costs to live on the economy.

Well, that is an incredible disincentive for someone. No wonder people want to get on-base and live in substandard housing, if you only get paid 85 percent of what it costs to live off-base and you have to pay your utilities on top of it, so the Secretary said, we really need to tackle that both as a kind of equity issue, but also this is the most important thing we can do to rejuvenate the private sector housing initiative that we are trying to promote.

Mr. Chairman, you recall how we almost lost the housing project up in Alaska, and that is because the basic allowance for housing

was too low, and so if we can get this number up, then builders are able to count on a healthier cash flow in order to subsidize the construction of housing. This is an enormously important initiative.

Next chart.

PAY RAISES

[Annual Percent Change]

	Fiscal year—		
	1999	2000	2001
Pay Raises	3.6	4.8	[1] 3.7
Employment Cost Index	3.6	4.3	3.2
Consumer Price Index	1.9	2.6	2.4

[1] Fiscal year 2001 Pay raises exceed inflation and ECI.

PAY RAISES

You see the pay raises, and we thank you for the pay raise last year. It made a big difference. As you can see, in the 2000 column we had asked—the employment cost index is only 4.3 percent, and you provided 4.8 percent, and you should compare that with the cost of living, which is at the bottom chart, so finally we are getting on the positive side of paying people more than the cost of living, and it is showing up here in this year and then 2001, and again we are one-half percent above the cost of living adjustment for employment.

MEDICAL CARE

$80 million added in fiscal year 2001 to improve access to health care
—Lower out-of-pocket costs for active duty families who do not live near military treatment facilities
—Eliminate co-pays for all active duty families
$369 million added in fiscal year 2000 and $348 million added in fiscal year 2001 to Defense Health Program for:
—In-house pharmacy
—Managed care support contract costs
—Newly legislated custodial care benefits
DHP issues:
—New contractor claims
—Health care coverage for over-65 retirees

This is probably the weak spot in our budget. I will be honest. We certainly did a couple of things, and these highlight positive things we tried to do with the budget. We have added funds so that we can improve access to the managed care program. We have taken care of the underfunding in the current contracts. That is for the Defense Health Program (DHP), and that is where we added about $400 million to do that, and we have got to try to improve the quality of the service, the face that appears to the service personnel.

Nothing is more irritating when you call to the medical center and you just get into one of those endless holds, you know, on the phone, or for this dial 1, for this, dial 2, that sort of stuff, and too

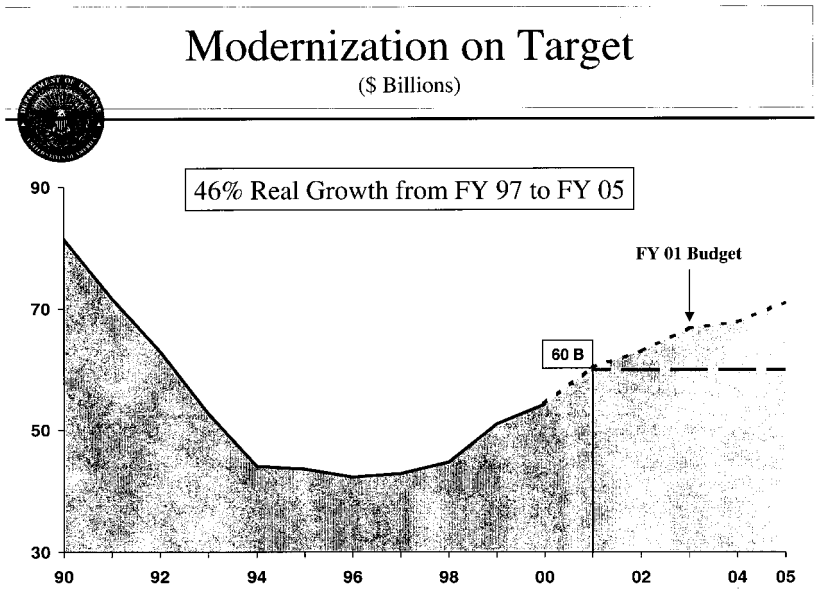
much of that has been going on in our world, and the service members and their personnel are ticked off. They do not feel like the system is responsive to their needs. We need to change that.

One of the problems, for example, is if a service member was leaving one of the regions in the West Coast and moving to Norfolk, segueing from San Diego to Norfolk, they were going out of one contract into another contract, and we made them reenroll. When you think about it, that does not make any sense. They ought to have total transportability of their benefits without having to reenroll at another location. That is obviously something we need to change.

We need to change the way that we are paying people when they make out-of-pocket expenses, and we are slow in reimbursing them, and we actually have members that have debt collectors hounding them to make payments when we have not reimbursed them, and that is a shame. We have got to do better than that, so this is a major priority for the Secretary and for the chairman.

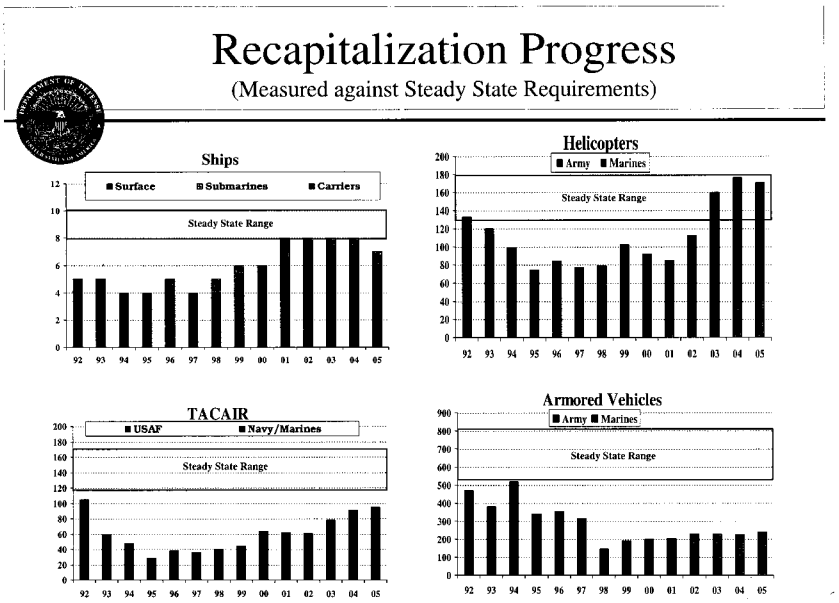
I know you are going to have a hearing next week. I think you have Mr. Lynn and Mr. de Leon coming up next week, and of course the big problem and the big hole in this budget is that we have only fully funded the health care program for 2001 and 2002. In the out-years we underfunded, and we underfunded by a significant amount of money, and that is before we changed the benefit package.

We tried to get our arms around it, and we could not. It was too big of a problem to try to do it in the last months of this fiscal year, and I am not pleased to tell you, but we did get at least this year properly priced and next year properly priced, but we are going to have to do something about the out-years, and I think you will go into that in greater detail at the hearing later this week.



Sir, we are very proud that we were able to meet the target of getting to $60 billion for our procurement budget, and that was a target that was put in front of all of us by General Shalikashvili 3 or 4 years ago. There is nothing magic abut $60 billion and, indeed, what you will see just shortly, $60 billion does not provide enough money to actually capitalize or recapitalize the force.

Let me go to the next chart, just to show you what I mean.



RECAPITALIZATION PROGRESS

In this case, I am showing you ships, helicopters, TACAIR fighters and armored vehicles, and in every case you see a vertical bar which represents the numbers of things we are buying, and then a horizontal bar or band. Any time that you fall below the horizontal band, we are falling behind, because you need to be in that horizontal band if you are going to be buying things roughly on the basis that you are wearing them out in terms of age.

And so any time that you are below it—and so let us take helicopters. In 2003 and 2004 and 2005 we are submitting to you a budget that buys enough helicopters to keep the force current on a steady state basis, but look at the bow wave from the past.

Every time—that white space between the vertical bars and that horizontal space, it means we took an IOU out. We were not buying enough to stay current with our current level of force structure, so we have gotten in a deeper hole, so at some point to make up for that the vertical bars have to go above that horizontal band, and as you can see we do not have any in that category, so we continue to have a problem.

Even though we got to $60 billion in our modernization budget we are still not really making up for the hole that we dug for ourselves during the nineties, and that is just the reality, actually the

second half of the eighties and the nineties, and we are going to have to do a better job later on. This is where—people said, well, what will it cost to do that? I again do not believe it is $100 billion a year to do that, but I think it is in the $10 to $15 billion a year more for procurement in order to start getting out of that hole.

MISSILE DEFENSE

[In billions of dollars]

	Fiscal year—						
	1999	2000	2001	2002	2003	2004	2005
NMD	1.1	1.5	1.9	2.6	2.1	2.0	1.8
Upper Tier:							
THAAD	.4	.6	.5	.7	.8	.8	.8
Navy Theater-wide	.3	.4	.4	.3	.2	.2	.4
Lower Tier	.7	1.0	.8	.6	.6	.8	.8
All Other [1]	1.2	1.4	1.1	1.1	1.0	1.1	1.2
Total	3.8	5.0	4.7	5.3	4.7	4.9	5.0

[1] Includes Air Force funding for Airborne and Space-based Laser program.

MISSILE DEFENSE

I wanted to show you where we are on missile defense. We have funded a missile defense program that presumes the deployment at some point when the President authorizes it of a national missile defense system. That decision still is going to be made sometime this summer whether or not we go at this time, but we have put it into the budget, and over the 5-year period the resources that it takes to deploy a national missile defense system.

As you know, it will be in two phases. The initial phase, which is funded, is the phase that would put the fire control system in place, move the interceptor field to Alaska and put the fire control radars in place in order to have the command and control of that system, and that is in the budget.

What you also see are the upper tier and lower tier systems. We were able roughly to keep the Theater High Altitude Area Defense (THAAD) program and the Navy upper tier program in roughly the same time cycle within a couple of years of each other. A year ago, when we had so much trouble with THAAD, we had proposed that we combine the funding for THAAD and Navy upper tier into a single account in order to put pressure on the system. A little competition, we thought they would do better. They did. Congress did not like that we put it together, and so you gave us instructions to split it apart, and we have done that, and that is the way the budget appears at this stage.

DEFENSE REFORM INITIATIVE

Complete and reengineer to ensure that functions are performed in the most efficient organization
Reengineer processes and business practices
—New travel system, reformed financial management, purchase card, paper free procedures
Eliminate unnecessary infrastructure
—2 new BRAC rounds

Excess overhead threatens readiness and force structure

DEFENSE REFORM

I will be very brief on defense reform. The Secretary was adamant that we really do try to adopt more modern business practices, and I think we have a mixed bag on how we have done. I think it has been good in certain areas. Let me give you an example. We tried to commit to buying many more of our goods and services with commercial credit cards. We make about 10 million purchases a year, and 70 percent of those purchases are for less than $2,500.

Now, in the old days we used to write contracts for every one of them, and it cost us about $250 to write a contract for $2,500. That did not make a lot of sense. We have now shifted over and about 5 million of the 10 million actions this year will be with a credit card, so I think we are making good progress. I think we have made good progress on trying to get to a paper-free acquisition environment and we set a goal of trying to be paper free by this year. We missed that, but we are about 90 percent paper-free in this environment.

We have got a new travel system. We are about 1 year behind schedule, but we are going to have it in place, that will be state-of-the art. It will be as good as anything in the world.

We have done, I think, a fairly good job on moving the A–76 process to get competition into public-private competitions for work. When we started this we had some people that said you should just privatize everything and we said no, we think that Government employees have a right to compete for it.

Up until 1995 there had been a total of about 13,000 jobs that had been competed through the A–76 process. We have now done over 100,000, and we will commit to do almost 200,000 before it is over, so a major commitment to get efficiencies through competition, and it looks like it is working. We are getting between 25 and 30 percent savings on the average across the entire inventory, and so I think that has been good. I am not going to dwell on base closures. Everybody knows where we are, and we will await the will of the Congress on whether we are going to do base closures or not, and I think that is our last chart.

Sir, again, if I may say something about Y2K. First, it was unusual in that this was one of those problems where the Government and the private sector saw a shared problem and worked together.

Now, it took your passing legislation that took the liability ax away from everybody's head, and once that happened the world

opened up and we were able to get information and insight, and share information. It was very powerful. I hope we think of this as a model for how the Government and the private sector ought to work together on the complex, cross-cutting issues of the future.

Almost all of the problems we face are really horizontal in nature, and cut across individual departments. The Department of Defense has only a part of the problem, and we have to cooperate with others, and it frankly was the reason you created a standing committee just for purposes of looking at Y2K. I thought it was a great success, and I think it probably is one of those models we should think about for Government in the future.

Sir, let me end with this and open up to questions. Again, I would tell you how grateful I am for having a chance to come here, how much I value having been a part, a small part of this very great activity, which is the way in which this country every year puts its priorities together through you that are elected representatives who give them the priorities for the future, and I think you have always struggled with the hard problem of how do you invest in the future, and how do you support what exists today, and I do not know anyone who has worked at it more hard or more diligently than have you, and I just thank you for having let us be a partner to you in this, and I am gratified that I could do that, and I am gratified that you will let me be a participant maybe in the future in a different way.

Thank you so much, sir.

Senator STEVENS. We look forward to those days, Mr. Secretary. I am going to yield to my good friend from New Mexico and the Senator from Hawaii, because I know the Senator from New Mexico has an appointment, and I will come third, and we are not running a clock, but if we just think of each other when we are asking our questions.

RELEASE OF KIRTLAND AFB FUNDS

Senator DOMENICI. Thank you, Mr. Chairman. I want to first raise two questions. One is very parochial, one is semi. Last year, we earmarked some Air Force O&M funding for the theater air command and control simulation facility at Kirtland Air Force Base. These have not been released, and contractors on the ground are going to start laying off people. I wonder if you would take a look at that.

Dr. HAMRE. I will call you before the day is out.

Senator DOMENICI. Thank you very much.

SCIENCE AND TECHNOLOGY FUNDING

Now let me talk a minute about science and technology in this budget. Frankly, I think you are well aware one of the real problems we have, looking at the past few years, is that science and technology budgets have fluctuated over the past decade from a 17 percent increase, to a 21 percent increase. Then it drops to a 7 percent decrease, to end at the $1 billion we appropriated last year.

As I look at this budget I wonder if my analysis is even close to correct, but it does not appear to me there are any patterns in the science and technology (S&T) funding. Or is this simply a question of money?

Dr. HAMRE. Sir, I think the variability from year to year usually reflects a different base. Congress usually gives us more money in this area, and then the budget we submit is usually off of our previous year's plans and not Congress' previous year's action, so this year, for example, we are $1 billion less than Congress appropriated last year, but we are $250 million more than we said we were going to submit in the budget this year, than we said we were going to ask for this year last year.

So I think the difficulty is we did not have enough money to meet the goal. Congress had been saying we ought to be putting more money into it, and we protected these accounts for inflation, and it is the only area of the budget that gets a kind of a guaranteed protection, but it looks like it is less because you added additional funds last year and we were not able to use that as a starting point.

Senator DOMENICI. Well, I note that the bill, which we called the Strom Thurmond National Defense Authorization Act, could not bind everybody in the future, but it said sound policy would require at least 12 percent a year increase in the S&T budget. I assume when that was passed you thought it to be sound policy, if we could achieve it.

Dr. HAMRE. Yes. We would love to have more money if we could do it, but in the case we just ran out of dollars before we ran out of things that were worth spending it on, but we were balancing it across a range of things we had to do.

MILITARY CONSTRUCTION FUNDING

Senator DOMENICI. One further question before I get to lasers and directed energy is, as we look at the budget for this year, the military construction request has gone down from the fiscal year 2000 appropriation level. Now, part of the reason for this decrease appears to be the absence of contingency funding included for unforeseen construction cost. Will the Department be able to execute all the military construction projects appropriated without contingency funding?

Dr. HAMRE. Well, we hope so. In the past we had budgeted for contingencies, and I believe we took it out this year because Congress 1 year ago took out the contingency money and we thought we were putting it at risk if we left it in the budget, so that was part of how we got the additional $250 million for S&T, for example, but I do not think—I think there is some risk of not having contingency funds in. You know what construction is like. There are always cost increases, and you would like to be able to have some cushion to be able to accommodate that rather than have to cancel projects to accommodate it, so there is some risk, I think, with that.

DIRECTED ENERGY PROGRAMS

Senator DOMENICI. My last question to the Secretary, I think, is a very important one. The Department of Defense is considering centralizing and consolidating its directed energy programs. I would be interested in hearing from you the most recent ideas and plans regarding directed energy within the Department. Do we currently desire to create a centralized function for all its efforts in di-

rected energy, and what sort of synergies would be leveraged, or advantages could be derived from this? I believe you know what I'm talking about.

Dr. HAMRE. I sure do, and you gave me a heads-up on this issue, and unfortunately I was only able to get part of the information for you. There is a study that was underway inside the Department. Dr. Etter had been conducting the study, and I am told had reported it up to her chain of command, and it is now with Dave Oliver or with Jack Gansler, that looks at what should be our prioritization and how should we resource it. Do we need to make any organizational changes?

Unfortunately, I have just now told you everything I know about the subject. I do not know anything about the content of it, and what I will do is go back and learn more about it, share it with you, and then we will find out are we on the right path or not on this issue.

Senator DOMENICI. Do you know enough to tell me whether it is time to centralize because of the diffused nature of these programs?

Dr. HAMRE. Sir, I probably should not say what I am going to, but the problem we have had is, we have tended to have projects that get started and then, for whatever reason, they do not get funded in subsequent years by a service, and so the lab directors go off and sometimes come up here to ask for money for that, and then that gets added.

Then, of course, the services tend to say, well, if Congress is going to add money let's not put it in ourselves, so then we tend to have programs that are not kind of rationally constructed, because we have intended to integrate them into the priorities of the Department and they tend to go off on their own.

I do not think that is healthy. I think it would be a lot better for us to get our arms around it, find out what we really need to do, are we doing it the most efficient way, and then present you a coherent plan. I do not think we have probably done that. I think what we have tended to do is to let 1,000 bloom, and when all of a sudden there gets to be a dry spell the people go off and try to find resources where they can, and in the long run I do not think that is as effective or as efficient as it should be.

Now, that reflects my personal view about it, and let me study it and find out what we should be saying more constructively about organizational changes.

Senator DOMENICI. Thank you very much. Mr. Chairman, thank you for yielding. I very much appreciate it. I have no further questions.

ARMY TRANSFORMATION

Senator STEVENS. Senator Inouye.

Senator INOUYE. Mr. Chairman, I have a whole flock of questions, but I will submit them, but if I may ask just one. Before I do I must admit my Army bias, having had some service in that service. There is a new program in the Army transformation.

Dr. HAMRE. Yes, sir.

Senator INOUYE. You worked with the Armed Services Committee in the Senate. You have been with the CBO. You have been

Comptroller, and now the number 2 Secretary, so the word modernization and streamlining, they are all common to you.

I have been told by some that the bureaucracy in the Army and those who feel some of their activities are being downgraded, such as those in the heavy armor, just do not want to see this go through, but I for one believe that our Army has to be streamlined. We have to be able to respond as fast as we can. It has to be lightened. It has to be fast and mean.

Now, with your background and your involvement in modernization, I would like to know what you think about this transformation program.

Dr. HAMRE. Senator, I think General Shinsecki and Secretary Caldera deserve great credit for having tackled a problem that most people said was too big and was impossible. I think the Secretary, the Secretary asked General Shinsecki to make this a priority, and to General Shinsecki's great credit he did that. It is enormously hard, because he is telling the culture of an Army that feels so proud about how they did in Desert Storm—and they should be proud. They did a wonderful job, but to say you are too big, you are too heavy, it takes you too long to get you to the combat theater and it takes too big a footprint logistically to sustain you when you get there. We have got to get lighter and more quickly deployable, and I think in theory everybody in the Army agrees with that. It is the practical problem which you next meet, which is to say, well, if I am going to do that, does that mean I do not build a new artillery piece, I go into combat with a tank that cannot go 40 miles an hour over rough terrain and shoot 2 kilometers and hit a bull's eye? It is when you start getting into the engineering details that the consensus starts to get questioned as to whether that is something that you want to do.

The Army has laid out a very complicated transformation program which really is going to take multiple years, and I think it is so important that they enjoy your confidence, because it is going to take the continuing part of the Government—that is, the Congress—that overrides the changes from one administration to the next, or one chief of staff to the next to put a priority on this, and to make sure that this remains a priority for the Army to stay on the modernization plan.

Part of it is to upgrade what they currently have so that they can still field the best heavy forces in the world and beat anybody if they have to go out tank-to-tank, but in the long run they have got to develop new equipments and a new approach to warfare, because the lethality of armor and missiles today is so great that you cannot do it with the lightly armored vehicles unless you can afford being hit, and that takes a whole new approach to going into combat, ground combat.

The Army needs to have this transition period where they experiment with new types of equipment and new doctrinal concepts, and some people will say, well, that sounds like it is just an experiment. We do not know that we need to experiment, but I think the Army needs the time to get it right, to design the right sort of equipment for the future.

This is unprecedented, to see such a fundamental, major change. I have not seen one in the 25 years that I have been working on

military issues. This is unprecedented, and there is going to be a lot of challenge to the Army both inside and out. People are going to say they do not have this completely wired together.

I do not know, maybe we should just wait 1 year. That would really be the wrong thing to do for the Army. They need to step up. They need to get going on this, and they need your support to give them encouragement to do it. I think they are doing the right thing.

Senator INOUYE. From that, can I assume that it is of the highest priority in your Department?

Dr. HAMRE. For the Army. I cannot place it at a higher priority than missile defense or health care or F–22. I mean, those, that gets complicated, but for the Army it is the absolute highest priority.

Senator INOUYE. Thank you very much, sir.

OVERSEAS U.S. COMMITMENTS

Senator STEVENS. Dr. Hamre, we all have our little occasions where we have explored new things. I have been reading a lot about Hannibal lately, and one of the things that struck me about Hannibal was, he kept losing support at home because he was keeping so many forces overseas, and he gradually lost complete support at home because he was overseas so long.

Are we not getting to the point now where we are going to lose support here at home if we do not start keeping our commitments, the length of time of these deployments? Bosnia was supposed to be home by Christmas. They are still there. Kosovo was supposed to be just a year. We have not even initiated the civilian side of it within a year.

And again I am asking you to get a little philosophical here on your last day with us, but how can we keep support for the American people of our programs for modernization for this military if they do not see us keeping our promises about how long we keep their sons and daughters deployed overseas?

Dr. HAMRE. Sir, that is a very hard question, and to give you my personal view here, I was just in Kosovo last week, and talking to our senior officers who are there. They are very frustrated, because they have done their job and they have brought a security structure to the theater, but I was talking to General Sanchez. He is supposed to have 350 policemen provided by the international community in his sector, and altogether he has got 100.

It is very hard for us to get out if the structure of replacing our forces does not show up, and Secretary Cohen has said very specifically that the civil implementation side is our exit strategy, and when that does not happen, when we only get a third of the policemen that the international community has promised, we only get a third of them into the theater, we are caught for a longer period.

Now, so far I think the American public has been tolerant because the troops have done so well. They have done a good job, but we do worry that we are going to be caught in a long period of time if we cannot get the civil reconstruction effort going, and that means we have to stay for a longer period than we think is appropriate.

We will do our best to scale back the size of the deployment, as we have in Bosnia, and we have done a good job of getting the numbers down in Bosnia without accepting undue risk to the troops that are there, but in the long run we all have to put a priority on getting the civil reconstruction side going more effectively earlier in the process, and I think that is a priority for us in the Department as well.

POLICE OPERATIONS IN KOSOVO

Senator STEVENS. Well, we were there just before you were there, Mr. Secretary, and we saw American soldiers on foot patrol, and they were guarding individual civilian residences, directing traffic at corners, and guarding people who went from one country to another, literally to shop.

Now, they were the people we have trained to be the toughest, most well-equipped, and most fearsome force in the history of the world, and they were doing what the local police do in almost every city in the country. In addition to that, our American soldiers were assaulted when they went to help the French forces.

We have just been lucky so far we have not had any body bags come home from over there. I do not know how we can keep our support for our modernization program if the people are getting so disturbed about the policies of these deployments. I do hope that somehow or another in your new job you can help us think over those issues.

I worry about the lack of support. Our forces are down in number. They are out of the country. One of the things that is for the military to be seen, whether it is on holiday or some place else, in some patriotic activity. Even that is being cut back now to an absolute minimum. I do hope we can get a hold of that and do something about the concept of how do you maintain support from the civilian community if they do not really have some real vision of it. You do not have daily coverage on the nightly news with young men and women just standing guard or walking with children as they go to school. That is just not something we have in our American vision of what you do in uniform, military uniform.

Dr. HAMRE. That is exactly what there are supposed to be civil police forces to be doing, and that is why we all have to demand that the international community honor their commitments to put those policemen on the ground. That is holding us and making our troops do things that really are police activity.

FUNDING ARMY TRANSFORMATION

Senator INOUYE. Senator Inouye asked you about the transformation of the Army called the New Vision. General Shinsecki I think rightly has taken off on that, but we have a difficulty fitting this new concept into our national military strategy in view of the funds that you have just outlined. Did the Department really review what the chief of staff of the Army was doing and plan to fund it accordingly?

Dr. HAMRE. Sir, as a matter of fact this was one of the large issues we had when we were closing out the budget, and we moved about $1 billion a year around to cover these costs. Some of them came from outside of the Army's resources, and some of them came

from inside the Army's resources by reprioritizing them. They canceled a couple of programs they would rather not have canceled. In some cases we were able to bring them dollars when we got to keep the inflation dividend that showed up again, so there were very significant resources that were added.

Now, the budget justification material is going to look thin to you this year because they were running so fast and so hard at trying to get it together that it does not have the same richness that we do for normal programs that have been around for years, and you are going to have to give them the benefit of the doubt, I think, this year on a fair amount of the program that they really do have their act together. It is going to take a little while for us to be able to demonstrate that in the field.

They would like to have more money than we had for them, and we had fairly blunt conversations, should we take dollars away from another service in order to put it into those accounts, and we decided that we could not do that, that we were able to give them additional resources from outside without taking it away from anybody else.

But this ultimately has to be the Army transitioning itself, or its own future, and that does mean they are going to have the reprioritize some of their resources.

AIR TRANSPORTABILITY AND ARMY TRANSFORMATION

Senator STEVENS. Well, this morning I was talking to some people about the transformation in the Air Force. The transformation in the Air Force in terms of its functioning with the Army is something that worries us also, because if you look ahead a few years, our 141's will be gone. Our C–5's will be ready to retire. We have just a few C–17's.

Some people here put limits on the construction of the C–17's, which I did not think was very good news then, and it is worse news now, and I do not see how we can get along with a deployment strategy unless we do go through the Army's New Vision. That's the only way it can fit together, by using the C–17's to take our people, along with the Civil Air Reserve Fleet, to distant locations, and then using the 130's within the theater to transport them around. There is not enough long distance transportation to initiate them all from here, or to lift heavy divisions.

I do not think we will have deployment capability unless we go through the New Vision, but I really do not see the support for it yet that is needed. I think Shinsecki is one of the most distinguished soldiers we have had in that position. He is a Hawaiian, by the way, and he has really got the bit in his mouth, but I am afraid that there is going to be a real deep disappointment and disenchantment with the whole service if we do not find a way to carry out that vision.

Dr. HAMRE. Sir, if I may, I think we all agree with you. I think that it is very clear that right now the footprint of the Army is too big and too heavy, and it needs to be lightened up for these sorts of deployments. You are still going to need a heavy, very capable Army to go into a Desert Storm in the future, and so we are always going to keep a heavy corps, but the deployment part has got to get lighter.

Sir, you mentioned the airlift, and one of the real problems that we and, frankly, the next administration is going to have to wrestle with is what do we do about modernizing the C–5 versus replacing the C–5? This is a major question, because it will be very expensive to update and modernize the C–5. On the other hand, replacing the C–5 inventory capability with C–17's will be expensive, too.

You rightly pointed out it is not just a case of military airlift. It is also about Civil Reserve Air Fleet aircraft. At the very time that we are going to try to replace the current airlift capacity of the C–5's the commercial sector is going to expand by about fivefold the number of aircraft in the freighter business. We are not going to be able to take advantage of that unless we get lighter equipment so that we can get on commercial aircraft, and that is why it is so important for the Army to go through this.

Senator STEVENS. Absolutely, and General Shinsecki sees that, and I think he sees the limitations on the Air Force as far as being able to transport his people as rapidly as they must be taken to destinations throughout the world.

C–17 PRODUCTION AND COSTS

I am worried about the C–17, and this will be my last question, Senator Harkin. We have reached a full rate of production now. We have had delivery of 34 airplanes on an average of 35 days early, and it is below the cost. Now we are getting into real stride with the C–17, but I am told now the British are considering canceling their orders, which had something to do with the overall full production line.

If Great Britain does not purchase its three C–17's, have you figured out, can anyone tell us what is the effect on the cost of our production line? What will it do to that production line?

Dr. HAMRE. Well, it would drive it up if we do not buy replacement aircraft.

Senator STEVENS. By how much?

Dr. HAMRE. Sir, I do not, but I will find out, but I have not heard that they were thinking of doing that. Originally, the plan was that they were going to lease the aircraft with an intention to buy them, and we would like to encourage them to buy them.

[The information follows:]

C–17

If Great Britain does not purchase or lease three C–17s in fiscal year 2001, USAF production line costs for airframes remains the same. The USAF and Boeing have taken steps to ensure the production rate, contract delivery schedule, and total airframe costs over the remaining 35 aircraft of the 80-aircraft multi-year contract remain unchanged. These steps include protecting the advance procurement to the original 15–15–5 buy profile and rephasing $60 million of fiscal year 2003 aircraft procurement into fiscal year 2002 advance procurement, to protect the vendor base and ensure no break in the original aircraft delivery schedule.

Dr. HAMRE. We think it is exactly the right airplane for them, and they have a plan to buy—I forget the number, 17, or something of that nature. It is exactly the right airplane for them, and this was the way to start, but if they do not do it, we will probably ask you to consider plugging that hole for us, or at least we will have to come up and talk to you about how we would realign dollars to plug that hole.

Senator STEVENS. Well, they have got their A–400. We all know that, and there is a little bit of intracontinental rivalry here in terms of the aircraft producers, but I would hope we all realize the C–17 is our only hope for the future in terms of the deployment of forces by air, and we have got to keep that on schedule.

Dr. HAMRE. Sir, that A–400 cost them $600 billion to get the first one. You could buy C–17's, a lot of C–17's for that kind of money.

Senator STEVENS. It sounds like some of the cost—I heard the other day about some of the—I am not getting into the latest procurement stories. We will get into that with someone else, John, but I am sure you all heard that, and that is not something that is music to my ears.

Senator Harkin.

Senator HARKIN. Thank you, Mr. Chairman.

IOWA ARMY AMMUNITION PLANT

I have a couple of items I want to go over with Dr. Hamre, and the first has to do with the Iowa Army Ammunition Plant near Burlington, Iowa.

This is a plant at which nuclear weapons were assembled back in the forties and fifties and sixties. It has been closed now for 25 years. Well, the nuclear line has been closed. It is still an ammunition plant. The Defense Department has a policy to "neither confirm nor deny" that nuclear weapons were ever at any site, including this one.

Well, we know they were there. The Department of Energy (DOE) is quite clear about that, and they have got the records from the old Atomic Energy Commission (AEC) to help us on that. Quite frankly this has to do with exposure of workers who were exposed to beryllium and things like that, at Paducah and places like that.

When I first wrote a letter on this about 1 year ago I was told also by the Department of Energy that nuclear weapons were never assembled there. Well, we found out that is not right. I recently had a town meeting there with Secretary of Energy Richardson to talk about the weapons work that occurred there. The Energy Department is dealing with this openly, and trying to get people tested and all of that, but the Defense Department is still basically denying, or they say they will not confirm or deny that that work ever went on there.

Now, the Army, as I understand it, even petitioned the Pentagon to lift the restriction in a similar case, but the petition was denied by the Department of Defense. I hope you will before you leave get something going to review this policy.

I understand you have got to strictly enforce secrecy when it is necessary for protection, but something that has been closed for 25 years? We know full well what was done there. I mean, I took a tour of the place. The Department of Energy has all the records, so they are on the one hand saying all this happened, and the Defense Department is saying, well, we do not know. We do not confirm, we do not deny.

What implications does that have? Well, good, hardworking people that worked there took an oath of secrecy and signed it, that they would never during their lifetimes talk about what they did there. This was top secret stuff, and a lot of them being patriots

and good citizens still wonder whether or not they can talk about it. They want to go to the doctor, and they want to describe what they were doing, and yet they do not know if the Army or the Defense Department will let them do that, and so they are caught in a kind of a cross-fire here.

The Department of Energy has been very open. They are talking about it, trying to get people checked and tested. And I get the question from Iowans, well, here is one Federal agency that is openly talking about it, that was in charge of this, the Atomic Energy Commission, now DOE, but the Defense Department that was in charge of the place and is still in charge down there through a private contractor it is a GOCO, Government-owned, contractor-operated—the Defense Department will not talk about it. And so it sends out really confusing signals.

Anyway, my question is, should a worker who worked there, who took an oath of secrecy, be able to talk about what they did there with a doctor or anybody else, maybe family members, discuss it among themselves? It just seems to me once it has been closed for 25 years the Department of Defense ought to say yes, we did assemble nuclear weapons there. I mean, everybody knows it. It is no secret any longer, and the Department should at least let these workers know that whatever oath of secrecy they took does not apply any longer.

Dr. HAMRE. Sir, in this case, when I say neither confirm or deny it, what it really means is, I do not have a clue. I have never heard of this before.

Senator HARKIN. I am sure you have not, but some of your people have.

Dr. HAMRE. I have never heard about it, but I will look right into it, and I will call you.

Senator HARKIN. It has been going on for about, well, a little over 1 year now, about 1 year.

Dr. HAMRE. I was totally unaware until you just raised the issue. I am sorry about that. I will get on top of it.

Senator HARKIN. It is just, I would like to get the policy changed.

Dr. HAMRE. I understand. I understand very clearly what you want.

Senator HARKIN. It just does not seem to make sense, and it is causing problems in terms of letting these workers know they can openly go ahead and discuss what they did.

Dr. HAMRE. Sir, I will find out.

Senator HARKIN. I appreciate that, and you do not have to get back to me personally.

Dr. HAMRE. I will.

ARMY TRAILERS

Senator HARKIN. The other issue I have is one that I have been on now for some time, and it has to do with trailers. There is a recent report by the General Accounting Office (GAO)—and I asked for this study to be done. We purchased 6,550 trailers for the Army over the next 5 years for $50 million. They are sitting in storage because they are unsafe. They cannot be used. Some TV show did a show about it sometime last year.

Now they say they may have to modify every Humvee to pull them, all 100,000 of them. A letter from Paul Hoeper of the Army to me stated the Army needs at least 18,412 more trailers, but there is no money to purchase these in this year's budget or in future years' plans, so we are sitting there with—the initial buy was supposed to be 10,000. I think they got 6,550. They are sitting there. They cannot be used. They need 18,000 more, and there is nothing in the budget to do anything about it.

So again, you do not have to respond here. I do not mean to catch you flat-footed on this, but I will send you a letter on it and see what you can do.

Dr. HAMRE. This has not been our finest hour, I know.

Senator HARKIN. That whole trailer thing is a mess, and I just would like to know what you are going to do in the future on the 18,000.

Dr. HAMRE. That is a fair question, and I will find out.

Senator HARKIN. Thank you very much, Dr. Hamre. Thank you for your service.

Senator STEVENS. Dr. Hamre, because of the timing of the last scheduled hearing and this one, there are many of our members who could not be here. There is a little extracurricular activity taking place in the country, I am sure you know, so I have been asked by many of your friends to say they were sorry they could not be here, but they look forward to seeing you at one or more of your events that are held here in this city.

But we do thank you, and in deep sincerity, for the very, very great help you have given us, and for the feeling you give us that what we do is worthwhile in connection with what you are doing.

The mutual admiration society here is obvious, but there is a lot of hours that go into a job like you have held here both in the Senate and over in the Department of Defense. The public does not know about those hours. We all know about the hours that you spend, and you know about the ones we spend, so we thank you for working with us.

[The statements follow:]

PREPARED STATEMENT OF SENATOR CHRISTOPHER S. BOND

Good morning Dr. Hamre. Welcome to what appears to be your last appearance before this committee. I would like to take this opportunity to make a brief statement on the Defense Budget and what should be our priorities.

First, we must improve readiness, recruiting and retention, and the state of our equipment. This requires an investment. That investment should include the best equipment we can design and build consistent with budget realities, a pay raise, and improvements in our training and readiness accounts.

Second, we must continue to plus-up our full-time manning accounts for the National Guard. The threat from rogue nations and others with potential serious conflicts with the United States is real and growing. Consequently I am confident our reliance on the Guard and Reserve will continue to grow unabated. Therefore it is imperative we continue to increase the number of full-time support personnel who serve our National Guard and Reserve forces.

Dr. Hamre, I look forward to discussing these and other important defense issues with you and your staff as our hearing process continues. Again, welcome sir. You have served our nation's Defense Department faithfully for over seven years and I wish you well in your new endeavors.

PREPARED STATEMENT OF SENATOR RICHARD C. SHELBY

Good morning Dr. Hamre. It is a pleasure to see you here before the Committee. I am sorry that it will be your final appearance in your current position. As you prepare to move on, I would like to commend you on your past seven years of service as Comptroller and Deputy Secretary of Defense. It has been a pleasure to work and travel with you to ensure that our armed forces remain the finest in the world. You have always been professional and responsive to requests and questions from me and my staff. Your knowledge of national security issues and dedication to this country are second to none. The Center for Strategic and International Studies is very fortunate to be acquiring your expertise. I wish you the best of luck in your future endeavors and I look forward to your continued insights on issues affecting national security. Congratulations on a job well done.

Mr. Chairman, I have a few brief comments concerning the defense budget and the state of our military. While there is some improvement in this year's defense budget, I remain very concerned about this nation's military readiness and our spending priorities.

First, the decreased defense budgets of the past ten years coupled with an increased number of missions of questionable national interest, have had a corrosive effect upon our military readiness. I believe that we are fast approaching the hollow military of the 1970s. Recently, it has come to light that two of the Army's ten divisions are unprepared for war. The Air Force continues to have a shortage of pilots and spare parts. The Navy does not have enough attack submarines to execute basic contingency plans nor to conduct vital intelligence collection missions. Additionally, the recruitment and retention of trained personnel have become problematic. This difficulty affects active duty, guard and reserve.

Second, I am concerned about a number of the budget priorities in this year's request. While I am pleased that the Administration made National Missile Defense a priority I am concerned about the continuing need to increase investment in support technologies. These technologies are essential to ensure that our missile defense systems and other weapons systems are effective against future and as yet unknown threats. Additionally, I will be closely scrutinizing the Army's transformation to a lighter medium force. I am concerned that the Army is rushing to procure equipment for this as yet undefined medium force, at the expense of readiness for the forces needed to fight the wars of today and in the immediate future.

Dr. Hamre, I look forward to discussing these and other important defense issues with you and your staff as our hearing process continues. Again, welcome sir.

ADDITIONAL COMMITTEE QUESTIONS

Senator STEVENS. There will be some additional questions which we will be submitting to you for your response.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR THAD COCHRAN

AIRBORNE LASER

Question. According to senior Air Force officials, for reasons of "affordability" the Air Force submitted a budget request to the Office of the Secretary of Defense cutting $256.7 million from the Airborne Laser (ABL) for the period covering fiscal years 2001 through 2005. Is it correct that OSD then increased the Air Force cut by $638.7 million in PBD 743, which you signed, for a total cut to the program of $895.4 million over the 2001 through 2005 period?

Answer. The Air Force budget request for fiscal year 2001–2005 contained many unfunded requirements. At our request, Air Force provided several different options for resolving these budget problems. Through deliberations with the Air Force it was decided that ABL would be reduced to fund higher priority Air Force requirements.

Question. Was your additional cut of $638.7 million also for "affordability" reasons?

Answer. Yes. As mentioned above the Air Force had significant funding shortfalls and provided a viable solution to support their highest priority requirements. Several major Air Force acquisition programs that had funding shortfalls that were fixed during the budget review were the Joint Standoff Weapon (JSOW), the Joint Direct Attach Munition (JDAM), the NAVSTAR Global Positioning System (GPS), and the Joint Surveillance, Targeting, and Reconnaissance (JSTARS) aircraft.

On December 6, 1999, the Secretary of the Air Force signed a certification to Congress stating, "the ABL program continues to meet or exceed every technical and programmatic milestone and remains on-cost and on-schedule."

Question. Are you aware of any technological problems with this program that the Secretary of the Air Force was not aware of?

Answer. No. ABL reductions were not based on technical problems. The current fiscal environment drove difficult decisions and ABL was used to partially offset higher Air Force requirements.

Question. Can you explain why the Air Force's proposed cut of $256.7 million was more than tripled by OSD?

Answer. The Air Force recommended using the additional ABL reduction as an offset to fund higher priority requirements. The Department used this recommendation so that Air Force could fund higher priority requirements.

Question. Of the approximately 100 programs designated by the Office of the Assistant Secretary of Defense as Major Defense Acquisition Programs, in addition to ABL, how many others are on schedule and budget?

Answer. At the time when we prepared the budget, which was nearly six months ago, most of our MDAPs were on schedule and budget. Of course, estimates and schedules change over time, and when an MDAP breaches cost, schedule or performance parameters, we provide the required notifications to the Congress as required by the Nunn-McCurdy legislation. The ABL program, although on track, was offered as a proposal to support higher priority Air Force programs. It was discussed and decided that using ABL funding to offset other requirements would have the smallest impact to the Air Force and the Department.

Question. The proposed $895 million cut to ABL over the fiscal year 2001–2005 period amounts to 52 percent of its budget over that period. Are there any other MDAPs for which you have proposed a budget cut of over 50 percent?

Answer. We have not proposed budget reductions of over 50 percent to any other MDAPs.

Question. Can you explain why you propose ABL for the greatest funding cut—in percentage terms—of any MDAP when it is on schedule and budget?

Answer. As mentioned earlier it was due to current fiscal constraints to support higher priority requirements.

Question. Do these budget cuts in any way reflect you questioning the requirement for this program?

Answer. Nobody is denying the fact that there is a valid requirement for this futuristic program and that it would be a great asset to our theater missile defense arsenal—particularly to support boost phase intercept. However, with ABL being an unproven technology, it made more sense to use those resources for higher priority Air Force requirements and still maintain a robust theater missile defense capability through Patriot Advanced Capability (PAC)-3, Navy Area Theater Ballistic Missile Defense (NATBMD), Theater High Altitude Area Defense (THAAD) and Navy Theater Wide (NTW).

THEATER HIGH ALTITUDE AREA DEFENSE (THAAD)

Question. The unclassified summary of the National Intelligence Estimate on the ballistic missile threat to the United States states, "The proliferation of MRBMs [Medium Range Ballistic Missiles] driven primarily by North Korean No Dong ales has created an immediate, serious, and growing threat to U.S. forces, interests, and allies in the Middle East and Asia, and has significantly altered the strategic balances in the regions."

Do you agree with this assessment?

Answer. Yes; North Korea's development of the No Dong and Taepo Dong-1 enable it to threaten U.S. forces, interests, and allies not only throughout Korea, but also Japan, to include Okinawa. Likewise, Iran has used ballistic missiles against Iraq as a punitive measure, and its development of the No Dong-based Shahab-3 gives it a capability to threaten U.S. forces, interests, and allies throughout the Gulf.

Question. Do you also agree that more capable theater range threats, like Iran's Shahab-3, are becoming available sooner than had been projected by the Administration only a few years ago?

Answer. More capable theater range threats are available for use sooner than previously expected, because countries such as Iran and North Korea are not following traditional (i.e., Russian and U.S.) development timelines.

Question. The current schedule for THAAD has the "First Unit Equipped" in fiscal year 2007. But my understanding is that by adding $400 million to THAAD over the fiscal year 2001–04 period—money that was previously removed from the program by OSD—the "First Unit Equipped" date can be moved forward by two years,

to fiscal year 2005, with no increase in the program's level of technological risk. Is that your understanding, too?

Answer. In fiscal year 2001, $150 million could accelerate the first unit equipped/early operational capability (FUE/EOC) by approximately 9 months. However, with continued added funding in fiscal year 2002/03, it is conceivable you could accelerate the FUE/EOC by 12–18 months.

NATIONAL MISSILE DEFENSE (NMD)

Question. Mr. Secretary, I note that the budget request for National Missile Defense has increased significantly this year, but this represents both the need to catch up after chronic underfunding, and the funds required to begin deployment of the system. If more funding were provided, are there additional activities that could be undertaken to reduce technical risk in this program?

Answer. As you know, the Department has already added an extra $285 million to the National Missile Defense program in response to the recommendations of the second Welch Report. Our measures included adding two more risk-reduction flights and a second target launcher. Budget enhancements would provide further risk reduction in a variety of efforts aimed at maintaining schedule should problems appear in the execution of our program plan.

Question. Is it correct that a single site system based in Alaska, supported by one X-band radar, does not meet the full approved operational requirement for National Missile Defense?

Answer. No, that is not correct. Our detailed analysis shows that the NMD C1 architecture, which consists of a single weapon site in Alaska, one X-Band radar, five Upgraded Early Warning Radars, and DSP/SBIRS-High, will meet the approved Operational Requirements Document (ORD) threshold performance requirement. Future evolutions of this architecture are designed to meet the ORD objective performance requirement (same level of protection against a larger more sophisticated threat).

Question. If our NMD system were to be deployed at a second site in addition to Alaska, what are the advantages of putting that site in the Northeast—for example, at Loring Air Force Base in Maine—instead of at Grand Forks?

Answer. The single site in Alaska will meet the User requirements for all 50 states. An additional site in the northeast U.S. will add robustness to the system by increasing the opportunities for shoot look shoot, which allows for reducing the number of interceptors fired against each threat. Also, an additional site allows for protecting against some variations in the threat launch trajectories which could be outside the current design envelope.

Question. Secretary Hamre, do you agree that there is a potential long-range ballistic missile threat from both North Korea and Iran between now and 2005, when the National Missile Defense system could first achieve operational capability?

Answer. During the 2001–2005 period: North Korea, Iran, Iraq could test ICBMs of varying capabilities—some capable of delivering several hundred kilogram payloads to the United States.

—Most believe that non-flight-testing aspects of the Taepo Dong-2 program are continuing and that North Korea is likely to test the system as a space launch vehicle unless it continues the freeze. If flight-testing resumes, the capabilities would increase.

—Some believe Iran is likely to test some ICBM capabilities in the next few years, most likely as a Taepo Dong-type space launch vehicle.

Question. Assuming both of these countries develop long-range ballistic missiles, is there any reason to believe that one of these countries would deploy these missiles in lower quantities than the other?

Answer. There is no data to suggest that one state will deploy a larger ICBM force than the other. Neither state would be expected to field a force greater than a few to tens of missiles by 2015.

Question. If there is, what is the evidence supporting this belief?

Answer. There is no data to suggest that one state will deploy a larger ICBM force than the other. Neither state would be expected to field a force greater than a few to tens of missiles by 2015.

RD–180 ROCKET ENGINE

Question. Can you explain why it is important to the Defense Department to have Lockheed-Martin competing in the EELV program?

Answer. It is important for the United States to maintain two Evolved Expendable Launch Vehicle (EELV) contractors. If Lockheed-Martin were no longer competing, then once DOD finishes launching the last of the heritage Delta, Atlas, and

Titan vehicles, the United States would be left with only a single launch provider. This is a situation similar to the one the nation faces today with Titan where a single launch failure can shut down the United States' heavy lift access to space for months for accident investigation/recovery efforts. And if the results of these efforts should call for a major redesign, it could be years before the United States would be ready to launch again. Further, two EELV competitors assure the United States a healthy industrial base as well as competitive pricing.

Question. How important is the approval of this manufacturing license to Lockheed-Martin's continued viability in this competition?

Answer. The potential damage to Lockheed-Martin's viability is significant. The Lockheed Martin program has already experienced serious delays and cost impacts in obtaining the licenses they currently require. Their U.S. RD–180 engine production facility, required so that U.S. access to space cannot be denied by a foreign supplier, is already more than one year behind schedule due to delays in obtaining the brokering license. Other related licenses, that are also part of the Congressional notification package submitted on 20 March, have been held up awaiting notification, causing Lockheed-Martin to develop work-arounds, resulting in an additional six month delay.

Question. Why was it necessary for you to send a memorandum to the Secretary of State urging her to issue this license?

Answer. As stated in the memorandum, it was clear we had come to the end of a process, agreed to in December, of working to address the concerns of the Senate Foreign Relations Committee (SFRC) and House International Relations Committee (HIRC) staffs about the proposed licenses. Further delays would not have changed the minds of the program opponents, but would have added additional risk to the viability of the Lockheed-Martin/Pratt & Whitney RD–180 co-production program for the reasons stated above.

LHD–8

Question. Dr. Hamre, I am advised that the Navy has formally submitted a request to Comptroller Lynn for release of funds previously appropriated for LHD–8. $45 million was provided in fiscal year 1999 for Advanced Procurement items and another $375 million was provided in last year's bill—along with language that would allow the Navy to contract for the construction of this important ship on an incremental basis.

When will these funds be released to allow the Navy to put the ship under contract?

Answer. The Navy's request for release of the funding is still under review. The Department's shipbuilding plan, as outlined in the fiscal year 2000 and fiscal year 2001 President's Budget submissions, includes $1.5 billion for the construction of LHD–8 in fiscal year 2005. Although Congress provided approximately $400 million to the Navy to begin construction of the ship sooner, the Department has not yet determined how modernization requirements can be reprioritized to finance the more than $1 billion in follow-on costs to ensure an executable and efficient construction program. Once this review is completed, I will inform you soonest of the Department's execution plan.

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

SCIENCE AND TECHNOLOGY

Question. Science and technology budgets have fluctuated over the past decade. After a 17.4 percent increase in 1992 over 1991, the S&T budget changes have ranged from positive 21.1 percent in 1994 to negative 7.7 in 1997. The DOD budget for 2001 is $1 billion below what Congress appropriated last year, even though it reflects a 2 percent increase over the Administration's fiscal year 2000 budget proposal.

There does not appear to be any pattern to S&T funding. Can you explain these fluctuations? Or is this simply a question of money?

Answer. Successful businesses, intending to stay in business, invest in the future. Our downsized military needs its technological edge now, more than ever, and we place high priority on our S&T investment as a hedge against future uncertainties. As you know, the Department has several important objectives including: high readiness; forces adequate in size to sustain our strategy of global engagement; and increased resources for procurement to underwrite our modernization program—as well as a robust science and technology program. The fluctuations you cited in S&T funding are not, "simply a question of money" but are the result of balancing the

Department's competing resource requirements within a constrained fiscal environment.

Question. The 1999 Strom Thurmond National Defense Authorization Act called for the DOD to increase S&T budgets by at least 2 percent a year above the rate of inflation.

Would you agree that this is a sound policy?

Answer. Determining a sufficient level of S&T investment is not a precise science, rather I believe it is a strategic decision. Our downsized military needs its technological edge more now than ever. It has always been our goal to fund S&T at a level adequate to ensure the technological superiority of our armed forces. However, we also need to ensure that the funding levels of the various components in the Department are balanced based on our assessment of the most urgent requirements at any given time. The S&T funding in the fiscal year 2001 President's Budget reflects a program that maintains its buying power and continues to explore new technologies and applications, but has been balanced against our compelling desire to increase the modernization budget while sustaining readiness at a high level.

Question. As I mentioned, I am concerned about the loss of scientific expertise due to inadequate budgets.

Do you believe that you can maintain the scientists and infrastructure required for success at the present level of resources?

Answer. Yes. The resources are adequate to sustain our current scientific workforce. The more serious threat to our having sufficient scientific expertise is the same problem facing all technical organizations today—how to successfully compete for technical talent in this booming economy. A number of initiatives are underway to improve the Department's competitiveness, but the scarcity of national technical personnel suggests this problem will persist for the foreseeable future. Resources for the infrastructure are also considered adequate. However, the Department's position is that further BRACs are required to eliminate unwarranted excess capacity. The current technical infrastructure footprint is larger than we need and this results in unnecessary expenses that could otherwise be used for infrastructure revitalization.

DIRECTED ENERGY

Question. As you know, the DOD is now considering its plans to centralize and consolidate its directed energy programs. At present, I believe that Albuquerque is viewed as the best location for this initiative in light of the resources, assets, and capabilities already at Kirtland and White Sands.

I would be interested in hearing from you the most recent plans for directed energy within the Department of Defense.

Does the Defense Department currently desire to create a centralized administration for all of its efforts in directed energy?

Answer. Currently the Department of Defense (DOD) has no plans to consolidate all of its efforts in directed energy. Both High Power Microwave (HPM) and High Energy Laser (HEL) efforts are underway within the DOD, but each of these technology areas has its own unique problems. We have separate management constructs for dealing with HPM and electronic warfare, and we see no immediate benefit in combining these development efforts with HEL efforts. HPM and electronic warfare programs are well defined. The needed focus, as discussed in the High Energy Laser Master Plan (HELMP) report that was presented to Congress on March 24, 2000, is on HEL technologies. The HELMP report recommended that the Defense Department implement a new DOD-wide coordinated investment and execution strategy and a new management structure for HEL technologies which centralizes and consolidates leadership in a new Joint Technology Office (JTO). The office will be tasked with developing and managing a join-services-program for revitalizing HEL Science and Technology (S&T) and serving as a clearinghouse for new S&T initiatives proposed by DOD components. The office will not be responsible for either HPM or electronic warfare activities.

Question. What sort of synergies could be leveraged or advantages could be derived for directed energy programs?

Answer. This question presumably speaks to the synergies among specific topics that fall under the more general designation of "Directed Energy" programs. The directed energy investments within the Department fall primarily into one of two topical areas—High Energy Lasers (HEL) or High Power Microwaves (HPM). Grouping these two together in the past has provided scant synergistic advantage or opportunities that were enabled from doing so. The HEL and HPM technical communities are distinctly different with minimal crossover. HEL and HPM are vastly different in terms of device technology, propagation effects and target lethality. HPM weapons are designed to induce damage to electronics; HEL weapons impart material or

structural damage through thermo-mechanical effects. We currently treat these programs separately and we see little advantage to be derived from combining HEL and HPM under a single management or program structure.

Question. What weaknesses or strengths does Albuquerque provide as a location for an OSD-led National Energy Center?

Answer. Albuquerque is geographically well suited to be a national center for high energy laser technology. Kirtland Air Force Base is the location of several key Air Force laboratory and test range facilities. Also, the Army HELSTF facility and the Air Force North Oscura Peak facility, both located on the White Sands Missile Range (WSMR), are within reasonable driving distances from Albuquerque. However, as we embark on a new Department-wide coordinated investment and execution strategy to take full advantage of the opportunities presented by high energy laser weapon technologies, we believe it is important, at least initially, to centralize the new OSD management structure. This will convey neutrality that will assure the active participation by all stakeholders and will hopefully lead to a more balanced investment strategy for the Department.

Question. What role can the DOE laboratories play in achieving the military objectives of our directed energy efforts?

Answer. The DOE laboratories are developing solid state laser devices and beam diagnostics that, properly leveraged, may be highly relevant to future DOD High Energy Laser (HEL) weapon systems. Additionally, the DOE laboratories have conducted experiments that suggest the presence of new lethality mechanisms that require much lower laser power than more conventional approaches. There is no question that both Departments could benefit from a closer, collaborative technical relationship in these areas. Developing such a relationship would be greatly facilitated by the ability to cost-share joint new initiatives.

RELEASE OF $14 MILLION FOR TACCSF

Question. Would you see to it that the O&M funds for this facility are released as soon as possible?

Answer. Operations and Maintenance (O&M) funds are used in the Theater Air Command and Control Simulation Facility (TACCSF) only for Civilian Pay and those funds have been issued and are executing. Congress added $14.0 million in R&D funds for TACCSF which were released on 10 March 2000.

MILITARY CONSTRUCTION

Question. Since this is the first defense budget request since 1985 to request real growth in the defense budget I am disappointed to see that the Military Construction request has gone down from the fiscal year 2000 appropriation level. Part of the reason for this decrease appears to be the absence of contingency funding, included for unforseen construction costs, in your military construction projects.

Will the Department of Defense be able to execute all the Military Construction projects appropriated without contingency funding?

Answer. Yes. Removing funds for contingency will provide an incentive for Department of Defense Components to improve their cost estimating techniques and monitoring procedures. However, there is some element of increased programmatic risk associated with eliminating contingency, but this risk is more than offset by the greater good gained by using the funds elsewhere.

Question. My staff has identified almost $90 million in mission critical, worthwhile projects.

Why, for the second year in a row, is there no military construction for New Mexico in the President's budget?

Answer. For fiscal year 2000, Congress authorized and appropriated $41.1 million for four construction projects for installations in New Mexico. While these projects are of value to defense and were added by Congress, they were not high enough in the Department's overall priority requirements to have been included in the fiscal year 2000 President's budget request because of current year budget constraints. The Department's Future Years Defense Program (FYDP) includes $67.8 million of military construction projects for installations in New Mexico programmed throughout fiscal year 2002–2005 that could not be funded in the fiscal year 2001 budget request due to current year budget constraints. There are simply not enough dollars to fit all our valid requirements in the budget year.

QUESTIONS SUBMITTED BY SENATOR MITCH MCCONNELL

MANNING THE FORCE INITIATIVES

Question. What is the Department going to do to ensure that TRADOC units—that is non-deployable units—do not serve as the sole bill-payer in the effort to fully staff TO&E units?

Answer. The manning task force initiative is a four-year plan to fill all Army organizations to 100 percent of their authorizations. This year for instance, only the 10 divisions, 2 Armored Cavalry Regiments and Separate Brigades will be filled to 100 percent. All other units, to include both the TOE and TDA Army will fair share the remaining inventory. TRADOC and the rest of the TDA Army (non-deployable units) will fair no worse this year than the rest of the Army that is not part of the group of units that will be filled to 100 percent. Next year, the early deploying units will be added to the 100 percent fill with the rest of the TOE and TDA sharing the remaining inventory. The year after (fiscal year 2002) the rest of the TOE Army will be brought to 100 percent and then by the end of fiscal year 2003 the HQDA approved TDA, which includes TRADOC, will be manned at 100 percent. Spreading this transition out over four years was designed to ensure that we had sufficient time to grow the inventory necessary to man all of our forces to 100 percent. It is not the intent to break any unit during this transition period.

Question. Is there a breakout of how these reductions will impact TRADOC posts?

Answer. The most significant impact throughout TRADOC during this transition period will be at skill level one (E1–E4). This is due to our inability over the past couple of years to recruit enough soldiers to fill our skill level one requirements. For the non commissioned officer grades, TRADOC will continue to be filled between 96–98 percent, with drill sergeants, classroom instructors and recruiters manned at 100 percent.

Question. Isn't part of the answer that we need to increase our overall end strength?

Answer. That option is certainly being considered, along with several other initiatives to drive down the requirements throughout the Army. At present there are several task forces studying the issue of turbulence, well being, perstempo and manning and how they impact on our ability to sustain the force. There are a certain percentage of faces that must exceed the structure in order to fully man our units. The task at hand is to find the right number.

ARMY VISION

Question. The Army is having to reduce funding on a number of programs in order to pay for its proposed new vision, it is also standing up two medium brigades in Fort Lewis—brigades which will now be unavailable for potential deployment. What does the Department view as acceptable risk as this vision is implemented?

Answer. Army recognizes that there will be additional risk associated with conducting Transformation. The additional risk is, however, manageable and the Army, in close coordination with the Joint Staff and the geographic Commander's in Chief (CINCs), has developed a number of strategies designed to accommodate and reduce the risk associated with Transformation. These strategies encompass, but are not limited to, greater integration and use of the Reserve Component (RC) and more flexible, dynamic management of wartime force flows to war theaters. Regarding the two brigades at Fort Lewis, only one brigade will transition at a time. The armor brigade (3d Brigade, 2d Infantry Division) is first followed by the light infantry brigade (1st Brigade, 25th Infantry Division).

QUESTIONS SUBMITTED BY SENATOR RICHARD C. SHELBY

NATIONAL MISSILE DEFENSE (NMD)

Question. Dr. Hamre, the National Missile Defense Program had its ups and downs over the past few months. A successful test in the fall was followed by a failed intercept in January. I have been told that the recent failure was probably caused by a simple mechanical failure in the kill vehicle, one that can be rectified. I have also been briefed that the primary objective of the test, the integration of the varied and complex segments that constitute the NMD system, was deemed to be successful. I believe that the successes of our testing programs are many times lost on the public when a target is not destroyed.

Dr. Hamre, would you please comment on the successes, as you view them, of the recent NMD test.

What is your prognosis for the system's next test in May?

Answer. Integrated Flight Test 5 is now scheduled for not earlier than 26 June 2000 and will be the third intercept attempt. (The first succeeded and the second failed.) This is a two month delay from the previous target date of 27 April 2000. This two month period has involved comprehensive efforts to analyze the failure, determine corrective action, bring to bear the best experts on the subject to review the results and implement the corrective action. We fully expect IFT–5 to meet all of its' objectives including intercept. This expectation is based upon both the corrective action to eliminate the IFT–4 mechanical failure as well as the extensive pre-flight analysis, testing, and check out currently under way.

Question. Dr. Hamre, assuming that there is a successful test and intercept in May, what is your assessment of the Administration's readiness to order the deployment of the National Missile Defense system?

Answer. The data from this test will be a significant contributor to the criteria used in determining a deployment readiness decision.

TECHNOLOGY

Question. Dr. Hamre, I have repeatedly expressed my concern about this nation's lack of investment in BMD related support technologies. I believe that we must invest more robustly in technology today so that our defensive systems can meet the emerging missile threats in the future.

Do you agree that during the development of the fiscal year 2002–2007 future year defense plan, the Pentagon should consider increasing the overall missile defense technology budget?

Answer. Robust technology investment is our hedge against potential surprises that the evolving and dynamic threat might pose. While research and development remains a critical component of the overall BMD program, it continues to be difficult to maintain an aggressive technology program in the face of competing demands presented by our BMD acquisition programs. The Director of the Ballistic Missile Defense Organization (BMDO), Lt. Gen. Ronald Kadish, is addressing the issue by implementing a new management structure for BMD Science and Technology in order to revitalize the program. BMDO's Chief Scientist and his staff will concentrate on planning an integrated technology program, in collaboration with the Services and other government agencies. Execution of the approved program will be decentralized and performed by the Services and other appropriate Executing Agents. We are also strengthening the BMDO Chief Architect's and System Engineer's roles in the process, to better focus our technology development on our most critical future needs. This new management structure will allow the technology program to better compete for increased resources within the Department.

QUESTION SUBMITTED BY SENATOR RICHARD J. DURBIN

UNUTILIZED PLANT CAPACITY (UPC)

Question. The fiscal year 2001 Defense Budget includes funding for unutilized plant capacity (UPC). UPC allows facilities like the Rock Island Arsenal, Illinois to be more price competitive. Specifically, the budget includes $4.3 million for Rock Island Arsenal and $25.2 for the Watervliet Arsenal in New York under UPC. The Illinois, Iowa, and New York congressional delegations asked the Administration in December 1999 to include $50 million in the fiscal year 2001 budget for UPC, divided equally between Rock Island and Watervliet Arsenals. Why is there such a significant difference between Rock Island and Watervliet UPC funding? What is the UPC funding need at both arsenals?

Answer. In recent years, both Watervliet Arsenal and Rock Island Arsenal (RIA) have been faced with dwindling workload that has strained their ability to pay for unutilized/underutilized capacity thereby increasing their composite labor rates. This situation will reach a critical point at Watervliet in fiscal year 2001. Without additional Industrial Mobilization Capacity (IMC) (formerly UPC) funding, Watervliet would have to charge over $5,600 per Direct Labor Hour to recover its costs in fiscal year 2001. With the additional funding, the rate at Watervliet is $197.11 per hour. The budgeted rate at RIA for fiscal year 2001 is $158.29 per hour. Subsequent to developing the fiscal year 2001 budget, it became apparent that RIA is expected to reach a similar critical point within the next 12–18 months. The Army is currently conducting a study on the rightsizing of its ordnance facilities to determine the required capacity for mobilization and to recommend options regarding excess capacity, such that unutilized capacity is reduced to minimum essential levels. For fiscal year 2001 Rock Island's required IMC funding is $11.670 million and Watervliet's is $30.137 million.

SUBCOMMITTEE RECESS

Senator STEVENS. The hearing will be in recess until Wednesday at 10 a.m.

[Whereupon, at 4:17 p.m., Monday, March 6, the subcommittee was recessed, to reconvene at 10 a.m., Wednesday, March 8.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2001

WEDNESDAY, MARCH 8, 2000

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:08 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Hutchison, Inouye, Leahy, and Durbin.

DEPARTMENT OF DEFENSE

MEDICAL PROGRAMS

STATEMENTS OF:

HON. RUDY DE LEON, UNDER SECRETARY OF DEFENSE FOR PERSONNEL AND READINESS

HON. WILLIAM LYNN, UNDER SECRETARY OF DEFENSE (COMPTROLLER)

ADM. DONALD L. PILLING, U.S. NAVY, VICE CHIEF OF NAVAL OPERATIONS AND CHAIRMAN, DEFENSE MEDICAL OVERSIGHT COMMITTEE

OPENING STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. My apologies. I am pleased this morning to have a chance to, with my colleagues, to review the Department of Defense (DOD) medical programs, the defense health program. We have three panels today, allowing for a full and deliberate review of DOD medical programs. We welcome the gentlemen of our first panel: Rudy de Leon, the Under Secretary of Defense for Personnel Readiness; Bill Lynn, the Under Secretary of Defense and Comptroller; and Admiral Donald Pilling, the Vice Chief of Naval Operations, who is appearing here today in his capacity as Chair of the Defense Medical Oversight Committee.

We do appreciate your coming here today. You are here as you are going on to something new, right, Bill? Rudy, you are the one, Rudy?

Mr. DE LEON. Yes.

Senator STEVENS. Pardon me, yes.

Senator INOUYE. He is going up.

Senator STEVENS. Going up.

We look forward to working with you in your new capacity, and this is twice for you in 1 week. That is service above and beyond the call, Bill.

We welcome you, Admiral. It is your first appearance before the committee, I believe. I hope I have pronounced your name right. I am bad at that. You represent the uniformed military leadership and this hands-on active involvement in medical issues by the leadership is absolutely vital to what we are all trying to do, and we thank you for your efforts.

The President's request for the defense health program is $11.6 billion, a 4 percent increase over this year's enacted level. The request provides health care for about 6 million beneficiaries and for the operation of 81 military hospitals and 500 military clinics. In this year of housing and health care, there are many challenges facing the defense health program, the foremost of which is full and robust funding for the current program and current benefits.

Your request is $446 million more than this year's appropriation, but it is our understanding that that may be insufficient and we want to ask you questions about that. Looking down, or really ahead, beyond fiscal year 2002, there are reports of shortfalls that we may face out there that we ought to explore now. We are aware of unpaid and unfunded liabilities from previous years in TRICARE contract claims.

Senator Inouye and I know first-hand the value of military medicine, he more than I, and we intend to honor the commitment that our Nation made to our service members, their families, and our veterans. We are committed to working with you to find sound solutions to the challenges we face and make them on our watch.

Senator INOUYE.

STATEMENT OF SENATOR DANIEL K. INOUYE

Senator INOUYE. Thank you very much, Mr. Chairman. I join you in welcoming Secretaries de Leon and Lynn and Admiral Pilling.

Mr. de Leon, I understand you are going to be the number two man in DOD and congratulations, sir.

I wish to echo what the chairman has stated, but put my word in to suggest that it is very important that we provide the finest medical care because we have noted that it plays a major role in the retention and recruiting of quality personnel. With that, I look forward to receiving your testimony.

Senator STEVENS. Senator Leahy, do you have a comment?

STATEMENT OF SENATOR PATRICK J. LEAHY

Senator LEAHY. Just briefly, Mr. Chairman.

I think you put together a great panel here discussing military health care. I think the panel reflects what both you and Senator Inouye and all of us feel about ensuring that the men and women in uniform are receiving the highest quality health care possible. I completely agree with what both of you have said.

There are a number of important issues I want to discuss. I will wait either to ask questions or, if I have to go to another committee meeting, to submit them. There are a couple of areas we should be looking at, though. One is the rising cost each year to give servicemembers the same level of care. I would hope that in the military health care system that somehow we could build up some immunity from the pressures that drive up costs in the private sec-

tor because of quantities of scale and so forth. That is something I think everybody is going to have to look into, that issue of scale.

The other is a troubling trend that we are seeing both in private areas but also in the military, and that is the persistence of medical errors. I know that the military is not immune to mistaken diagnosis and misunderstood prescription requests that plague the U.S. medical systems. We hear it everywhere and I know it is a great concern of hospital administrators, both in the private sector and in the Government sector.

There are a number of innovative technologies that can be used to reduce these errors and we should be looking at what alternatives are used. My wife is a nurse and I know she tells me that reading the handwriting of doctors who leave prescriptions for nurses is worse than trying to read notes that I leave around the house. Also, sometimes the resistance of medical personnel to use computers and all, we might want to look at that.

On the second panel, General Blanck is going to be on that. I do want to encourage you, General, even though your daughter has graduated now from the University of Vermont, that you will continue to visit our State. You do not have to during mud season, but the rest of the year feel free.

Thank you, Mr. Chairman.

Senator STEVENS. Yes, sir.

PREPARED STATEMENT OF SENATOR CHRISTOPHER S. BOND

The subcommittee has also received a statement from Senator Bond which he asked be included in the record.

[The statement follows:]

PREPARED STATEMENT OF SENATOR CHRISTOPHER S. BOND

Mr. de Leon, Mr. Lynn, and distinguished military leaders, thank you for joining us today. It is a pleasure to offer a brief statement on the Military Health Care Program and what I believe should be our primary focus as we address health care requirements for the military. Above all, we must improve the quality of health care for all military beneficiaries—retirees, service members and families. Quality healthcare is essential to military readiness. It affects not only recruiting and retention but also morale. Our service members cannot focus on their missions if they are concerned about the quality of care their family members are receiving at home.

We must improve military health care with a program that is responsive and reasonable. There is a limited amount of money to spend on health care, so we must be very prudent in our approach. As you know, we have moved military health care to the top of the legislative agenda. Recently, several legislative initiatives were introduced to address health care for the military. This hearing will assist the committee in finding the right combination of provisions to formulate the best final product. It will also help us ensure the right amount of funding in the fiscal year 2001 budget so that you will have the tools you need to conserve the fighting strength.

Mr. de Leon, Mr. Lynn, and distinguished military leaders, I look forward to discussing these and other important military medical issues with you and your staff as the hearing process continues.

Senator STEVENS. Mr. Secretary, we would like to have you present your statement as you wish and then the other two gentlemen make such statements as you wish. We will not interrupt you until you all three have finished.

Mr. DE LEON. Thank you, Mr. Chairman. I will just make a few brief comments. First, as the personnel chief this is my first opportunity to testify before the Defense Appropriations Subcommittee

and I would like to thank the committee for all the work on pay and benefits, the retirement fix, and the pay raise and the pay table reform that were incorporated into last year's bill.

Those are extremely important. We see the retention in the Army being particularly strong right now, retention in the Marine Corps being strong. We see retention in the Navy improving. We are working with the Air Force to improve both recruiting and retention. But first I would like to thank you for that work last year.

MILITARY MEDICINE

Second, I would like to thank you and the other committees of Congress for work that they did more than a decade ago when they created the medical health care scholarship programs for our doctors and nurses. This is potentially the single most important piece of recruiting and attracting quality medical professionals to our force. When you look at the young doctors and nurses that we are producing, coming from the best medical schools in America, this is a program that has strengthened military medicine greatly, and we are in the debt of the committee for their work in the past.

Military medicine, as Senator Leahy raised and as the chairman and Senator Inouye raised, in many respects reflects the civilian community. Health care costs are rising and managing health care costs in the Department is becoming an increasing challenge.

One of the critical decisions I think we have made in the last 2 years is that we want to very much maintain the existing medical infrastructure that we have, not that we will not be making minor modifications at one location or another. The heart of our medical system are the military treatment facilities (MTF's). They have great doctors, great nurses. They are really the heart of our system.

So, starting with that, that brings us into other aspects of the health care program. But one area where we are trying not to mirror the commercial sector is that the commercial sector and many private health care plans are cutting benefits and they are increasing enrollment and deductibles. We are working to keep faith with our military men and women, including one of the provisions that Secretary Cohen and General Shelton included in this bill to make sure that our active duty family members that use the TRICARE system have no out of pocket expenses.

The second piece included in the Secretary's budget is to make sure that our service members that serve in remote locations, whether they are recruiters or on a remote assignment, have adequate medical care. We have an initiative that would construct and create a fee for service type benefit for them when they do not have an MTF that they are able to go to.

Second, we have an executable and funded 2000 and 2001 program. There are some bid price adjustments that we are working with the TRICARE contractors right now in terms of the negotiations of claims. We are expecting to maintain a very close dialog with the committee on this as work on resolving these issues continues and comes to a conclusion.

In terms of the general state of military medicine today, I think we all know that our service members face frustrations with the business side of health care. When our military members actually

deal with our doctors and nurses, all of our surveys indicate that the quality of care that they receive is very good. But they are frustrated in terms of dealing with the business side of health care delivery—scheduling appointments and then reimbursement from the TRICARE system if they have to see a personal physician outside the MTF.

There are a number of initiatives that are ongoing in the Department to make sure that the business side of TRICARE is a seamless effort for our military men and women.

One additional piece that we are working on is utilization. One morning I went with the Sergeant Major of the Army, to Fort Belvoir to sit in the waiting area as the morning patients were received. One of the elements of our initiative that the surgeon generals are working on (and will be discussing) is utilization, to make sure that our MTF's are seeing the maximum number of patients possible and that we have given each of our doctors the right set of tools so that doctors can see multiple patients and do not get bogged down with paperwork and administrative activities.

PHARMACY COSTS

Additionally, as is the private sector, we are coming to grips with the increasing cost of pharmacy. Pharmacy is now the leading cost driver of civilian medical. We are facing the same set of issues in military medicine. Pharmacy is improving and it is improving dramatically. I use in my discussion with the surgeons a high school football coach that I knew died of what was then called hardening of the arteries in the 1960's. In the seventies and the eighties, that person would have had bypass surgery, and in the nineties that person might be prescribed Lipitor or Zokor as a way to preemptively treat the underlying problems. With these tremendous gains in pharmacy are coming great additional costs.

So all of these are factors that are impacting the defense medical program that we present to you. We are trying to keep the defense budget cycle in sync with the medical marketplace for our civilian society.

One additional piece that is critical was the creation of the DMOC, or the Defense Medical Oversight Committee. From my perspective, I need the support of the vice chiefs as we work medical budget issues and also as we oversee and deliver health care to our military members. We have created a mechanism, with the support of Dr. Hamre and Secretary Cohen, that put the vice chiefs at the table in terms of critical budget decisions on military medicine as well as a critical oversight responsibility to make sure that we have an efficient and effective program.

PREPARED STATEMENT

So Mr. Chairman and members of the subcommittee, we look forward to a dialog with you. Also, I am pleased to be backed up by the surgeon generals and the chiefs of our military nursing programs, and would also note that, in terms of this hearing, this is probably the last time that General Blanck and I believe Admiral Nelson will be testifying to this subcommittee. They have had a tremendous impact in their roles as Surgeon General of the Navy

and Surgeon General of the Army. So I just wanted to acknowledge that in my testimony.

Thank you, Mr. Chairman.

Senator STEVENS. Thank you.

[The statement follows:]

PREPARED STATEMENT OF HON. RUDY DE LEON AND HON. WILLIAM J. LYNN, III

Mr. Chairman, distinguished Members of the Subcommittee, it is our distinct honor to appear before your Committee today at the start of the "Year of Health Care" to provide for you an overview of the Military Health System.

The Military Health System is a vast and extraordinary health system with just under 100 hospitals and over 500 clinics worldwide serving an eligible population of 8.2 million. There is no other health system like it in the world. We ensure the health of our forces and care for them when ill or injured anywhere around the globe. Further, we provide comprehensive health coverage to the families of our service members, our retirees and their families, and the surviving family members of those who have died in service to our country. Our attention to the health of our forces involves research, health promotion, and appropriate care whether deployed or at home stations. It demands timely, supportive, and quality care for family members; and it relies on fully trained and militarily prepared healthcare personnel. The support for deployed forces is inextricably linked to the operation of hospitals and clinics. We cannot provide Force Health Protection in wartime without a robust peacetime healthcare system.

Fiscal Year 2001 Defense Health Program Budget

For fiscal year 2001, we are seeking funding for the Defense Health Program in the amount of $11.6 billion. Under the President's budget request, the total proposed budget for the Military Health System is $17.2 billion. Our proposed funding for military personnel is $5.4 billion, and $202 million for military construction.

The President's fiscal year 2001 budget request:

—Continues and increases funding for the numerous Force Health Protection measures designed to promote health, prevent injuries and disease, care for casualties, and have a viable automated record system for all service members detailing their health status, plus possible exposures to health hazards
—Supports increased medical readiness training
—Contributes funds to the Global Emerging Infectious Disease Surveillance initiative
—Requires management efficiencies within the military treatment facility operations while providing increased funding for additional services and new benefits
—Funds the managed care support contracts
—Provides funding for quality initiatives and advances in medical practice
—Funds demonstration programs for providing healthcare coverage to our beneficiaries age 65 and older. These demonstrations include TRICARE Senior Prime, Federal Employees Health Benefit Program, TRICARE supplemental benefit to Medicare, and expanding the national mail order pharmacy program to include Medicare-eligible military beneficiaries.

Force Health Protection

The Department is deeply committed to protecting the health of all service members while at home and during deployments. FHP is our unified strategy that protects service men and women from health and environmental hazards associated with military service through their continuum of service from accession, training and deployment(s), to separation or retirement, and beyond. The number and scope of current military operations, the variety of deployment environments and hazards, and our expectations of men and women in uniform all have increased as the Nation responds to changing global threats.

Force Health Protection reflects a commitment to: Promote and sustain wellness to ensure that we can deploy a fit and healthy military force; implement medical countermeasures to prevent casualties from occurring in the deployed environment; and provide high quality casualty care.

The Department has many activities underway to improve monitoring of individual health status and the continual medical monitoring and recording of hazards that might affect the health of service members. Medical Surveillance has been in effect for recent deployments to Southwest Asia, as well as for deployments to Bosnia, Croatia, and Hungary. Included are pre- and post-deployment medical briefings

and individual health assessments, extensive environmental hazard monitoring in the theater of operations, plus increased preventive and mental health resources in the theater.

We face a new era in our efforts to prevent casualties. In the battlefield of the future, rogue nations, extremist groups, or terrorists could use weapons of mass destruction against our forces. To counter these threats, ongoing application of the latest technology for Chemical and Biological Warfare (CBW) detection, prevention, and immunization (pre-treatment) are now employed to assure the protection of our forces. The Department's Anthrax Vaccine Immunization Program is one example. The Department has identified anthrax as a known threat, a weapon at least 10 enemy countries are capable of using. Anthrax presents a clear and present danger to our service personnel. The anthrax vaccine is highly effective against this dangerous threat. On the advice of the Chairman of the Joint Chiefs of Staff, the Secretary of Defense directed implementation of the total force vaccination program. To date, over a million vaccinations have been given to nearly 400,000 service members.

The U.S. Armed Forces of the 21st Century will become the highly mobile, technologically advanced forces envisioned by the Chairman of the Joint Chiefs of Staff. Medical support units can be no less mobile, no less agile, no less advanced if they are to discharge their Force Health Protection responsibilities. We have several initiatives underway that will afford us greater flexibility and improved patient care in conflict and wartime scenarios. Computerized patient records, deployed preventive medicine resources, and combat stress control measures are just a few examples of these initiatives.

The Reserve Components are participating more frequently in our operational missions. Consequently, we have taken steps to facilitate their meeting their medical readiness requirements. Through agreements with the Department of Veterans Affairs (DVA), Reserve Component members now may obtain examinations and immunizations at DVA facilities. Both Reserve Component members and their families will be able to participate in the Department's family dental program beginning in February 2001. Finally, we have developed a dental health documentation form that will allow Reserve Component members to have their personal dentists conduct their annual dental health examinations.

Further, FHP acknowledges that the service member cannot focus on the mission at hand if he or she is concerned about the healthcare that his or her family is receiving at home. Therefore, we must have a high quality, patient-focused healthcare program to care for family members and, in turn, give confidence to our troops about their families' care.

TRICARE

TRICARE is an integrated health care delivery system that has enabled the Department to provide better access to high quality care for more of our beneficiaries more cost-effectively than the previous health care delivery modalities available in the Military Health System. As a health plan, TRICARE offers a triple-option health benefit package providing beneficiaries a choice of: TRICARE Prime, an enrolled HMO-like option; TRICARE Extra, a preferred provider option; and TRICARE Standard, the previous standard CHAMPUS option. All active duty service members are enrolled in TRICARE Prime.

TRICARE implementation began in 1995, and in three short years the new system has become operational throughout the United States and in our overseas locations. While the quality of health care in our system is consistently rated very high by our beneficiaries, we have experienced problems with the business practices of TRICARE, in such areas as making appointments, telephone services to our beneficiaries, enrollment in TRICARE, and payment of claims. Problems in these areas have reduced customer satisfaction with TRICARE and made the program at times difficult for our customers to access and use. Over the past year, senior Department and Service leadership have visited each TRICARE region to listen to our beneficiaries, health care providers, and MTF personnel to identify problem areas in both our direct care and managed care support contracts. We have developed an aggressive action plan to correct problems with access, enrollment, and claims processing. We are working closely with the Joint Chiefs of Staff, the members of the Defense Medical Oversight Committee, and the Services, to ensure these improvements will make TRICARE more accessible and customer-friendly, simpler, and more uniform throughout the country.

The following access improvement initiatives are underway:

—Optimize TRICARE Prime Enrollment—defining our beneficiary population and encouraging increased enrollment in TRICARE Prime.

—Improve telephone access—deploying uniform standards for both military treatment facilities and civilian networks.
—Improve and standardize appointing processes—accelerating deployment of the standardized system, and integrating demand management and appointing.
—Improve primary care management—implementing a standard definition of Primary Care Manager by Name/Team for TRICARE Prime enrollees.
—Improve case management—identifying patients who require case management and those who need case management services but do not meet the current definition.
—Implement DEERS 3.0 on schedule—facilitating continuity of care and improving portability.
—Improving TRICARE Claims Processing through such reforms as:
  —*Claims Processing Cycle Time*.—The TRICARE Program has adopted claims processing timeliness standards compatible with industry standards, requiring contractors to process 95 percent of retained claims within 30 days/100 percent of retained claims within 60 days. Implementation of this process began on 1 September 1999.
  —*Ease Provider Authorization*.—With this change, when a contract is awarded, the new contractor is required to re-certify only TRICARE network providers and will depend on existing state licensing and credentialing records for all non-network providers. All contractors completed implementation of this process in 1999.
  —*Better Explanation of Why Claims Returned to Providers*.—If a problem claim is submitted, the contractor returns the claim to the submitting party with an explanation as to why the claim is being returned. All contractors completed implementation of this process in summer 1999.
  —*Third-Party Liability*.—Contractors will be permitted to process claims to completion and not defer them until all third-party liability issues are resolved. Implementation is expected in spring 2000.
  —*Comprehensive Evaluation of Claims Processing System*.—The Department has contracted with an expert-consulting firm to assess the claims processing system. Initiatives identified through this review include proposals to increase electronic claim submission; increase auto-adjudication; improve customer service, provider and beneficiary education, improve program-wide data quality; improve enrollment and eligibility process; and enhance fraud and abuse mitigation capabilities.

The Military Health Care Benefit

Secretary Cohen and General Shelton have identified healthcare, along with housing, as a key quality of life issue for our service members and their families that must be addressed this year. The President's budget adds funding for two important expansions of the TRICARE benefit that will lower out-of-pocket medical costs for service members and their families. First, the budget proposal includes $30 million to expand TRICARE Prime Remote to cover family members. In October of last year, the Department launched TRICARE Prime Remote to reduce out-of-pocket co-payments for service members living and working in areas far from Military Treatment Facilities. The President's budget proposal would now extend this benefit to health care obtained by these service members' families. The budget request also includes $50 million to eliminate co-pays for all active duty family members enrolled in TRICARE Prime when they receive care from civilian health care providers. This proposal will stop service members from having to pay out of their own pocket for health care simply because there is no appointment available for them in a military hospital or clinic.

Among our beneficiaries are those who have extraordinary or very costly medical needs. Our healthcare providers and military treatment facilities have developed dynamic case management programs to help these families identify all available resources in both the civilian and military communities. Our individual case management program, which we implemented in March 1999, now gives us an opportunity under many circumstances to provide for services, such as custodial care, that we previously were unable to provide for our former CHAMPUS-eligible beneficiaries. While we do not have a definitive projection of what this individual case management program will cost, President's budget includes $20 million for implementation of this new benefit.

Secretary Cohen and the Chairman have expressed their strong commitment to expand health care access to our military retirees. The President's budget includes funding for the demonstrations we currently have underway, or will soon begin, to test alternative means of expanding health care benefits to our Medicare-eligible retirees, their spouses, and survivors. The Department is conducting several dem-

onstration programs to test the best means to expand health care to Medicare-eligible retirees. Over 130,000 retirees are eligible to participate in these demonstrations. These demonstrations are:

—*TRICARE Senior Prime: 28,000 enrollees*.—Now being tested in a three-year demonstration period at eight military treatment facilities. Under this program, Medicare-eligible retirees enroll with an MTF which serves as their Medicare+Choice plan, and Medicare reimburses DOD at a capitated rate for care provided to these enrollees beyond the level of effort already provided by DOD.

—*Federal Employee Health Plan: 70,000 eligibles*.—Under this demonstration, Medicare-eligible retirees at eight demonstration sites can enroll in the FEHBP. The DOD and beneficiaries will pay the same premium cost shares of other participants in the FEHBP and receive the same benefits as all other federal employees and annuitants under this program.

—*Expanded Pharmacy Benefit: 6,000 eligible enrollees*.—Effective spring 2000, DOD will offer an expanded pharmacy benefit for Medicare-eligible retirees at two sites. Retirees will be offered a pharmacy benefit equivalent to the TRICARE Extra pharmacy benefit with an enrollment fee plus applicable copayments.

—*TRICARE Senior Supplement: 11,000 eligible enrollees*.—In spring 2000, DOD will test offering a TRICARE Senior Supplement to military retirees at 2 sites. Under this program, TRICARE will cover Medicare cost sharing as well as services not now covered by Medicare.

We currently partner with seven managed care support contractors (MCSC) covering twelve geographic regions that include the continental United States and Alaska to deliver the TRICARE benefit. Each MCS contract covers five, one-year option periods and they range in price from $600 million to $3.6 billion for the anticipated contract life. As is normal with contracts of this magnitude there are unforeseen changes that create costs that result in bid price adjustments, change orders, and equitable adjustments. We have funded our known managed care contract requirements, and are committed to expeditiously resolving future contract changes and other claims.

As advocates for military medicine and our beneficiary population, we would like to be able to care for all of our beneficiaries, providing them the care they need when they need it. But we are also public servants entrusted with the responsibility to manage the health requirements of the Department within the budget. Based on the current definition of our benefit and our level of usage, we can tell you that we have adequately budgeted for patient care in this fiscal year 2001 request.

Quality and Performance in the Military Health System

Military medicine has always aimed to provide the very best, the highest quality healthcare possible. That goal continues today with our efforts toward ensuring patient safety, examining our quality programs, and gaining maximum efficiency of the Military Health System.

Since the Institute of Medicine (IOM) issued its report, *To Err Is Human*, in December 1999, the nation has expressed increased interest in patient safety. In fact the Military Health System has had a number of programs underway prior to the IOM report that serve to improve patient safety. Among them are numerous computer systems, medication bar-coding, participation in the National Patient Safety Partnership, and concerted efforts to reduce errors in high hazard environments such as Emergency Rooms and Intensive Care Units. We have joined with other federal agencies in accepting the challenge of the IOM report to do more. We participate as a member of the Quality Interagency Task Force and use their recommendations to implement measures that will reduce errors and improve patient safety within military medicine.

Additionally, responding to this Committee's direction, we established the Department of Defense Healthcare Quality Initiatives Review Panel (HQIRP), to look into and report on the Military Health System quality initiatives begun in 1998. The HQIRP, which includes 5 medical professionals and 4 MHS beneficiaries, is well into its assessment of whether all reasonable measures have been taken to ensure that the Military Health System delivers health care services in accordance with consistently high professional standards. The members have met four times, attended our annual TRICARE conference, and plans to visit military medical facilities in Tidewater, Puget Sound, Albuquerque, and Quantico. In their final report to the Secretary of Defense and Congress later this spring, the HQIRP will offer their assessment, conclusions, and recommendations.

In the past year we have identified needed policy and created the tools necessary for our military medical facilities to begin implementing this strategy for a High Performance Military Health System. These changes are brought together through

the MHS Optimization program. The focus of MHS Optimization is to shift from providing periodic medical services to better serving our beneficiaries by preventing injuries and illness and improving health. The underlying tenets include:

—Effective use of readiness-required personnel and equipment to support the peacetime health service delivery mission.

—Equitably align resources to provide as much health service delivery as possible in the most cost-effective manner—within the MTF.

—Use the best, evidence-based clinical practices and a population health approach to ensure consistency.

Through full implementation of this plan, we will ensure adequate staffing and resourcing. A pivotal component of the MHS Optimization Plan is an increase in MTF utilization management. MTFs continually deliver quality health care services at lower costs than civilian counterparts. The prototype for the optimization plan began in Region 11 (Oregon and Washington) in January 2000.

Optimization of the Military Health System will be more successful with the implementation of TRICARE 3.0, the new generation of the TRICARE managed care support contract. TRICARE 3.0 moves away from highly prescriptive, government-developed requirements and processes; identifies government required outcomes and invites bidders to propose their best commercial practices to meet or achieve government outcomes; reduces cost for separately designed contractor systems and practices to meet requirements unique to the government; and gives government more effective, more immediate authority to enforce performance of MCSCs in such areas as claims processing, appointments, and access standards.

Mr. Chairman, this statement has addressed the highlights of our fiscal year 2001 budget request, our strategy of Force Health Protection, progress in our TRICARE program, new benefit proposals, and our comprehensive reengineering initiatives. These are vitally important aspects of the system of military healthcare. Together they provide the resources and organizational improvements that cause men and women to want to be physicians in the military. They cause soldiers, sailors, airmen and Marines to want to stay in the service of their country; and they cause the American people to have great confidence in those who run the military.

We are very proud of the Military Health System, its people, and the many courageous missions they undertake. We are deeply committed to do whatever is necessary to take care of our people, in both wartime and peacetime. Again, we thank you, Mr. Chairman and all the members of this committee for your continued strong support of the Military Health System.

Senator STEVENS. Gentlemen, Mr. Secretary, do you have any comments?

Mr. LYNN. Just a couple of brief ones, Mr. Chairman. When we were here on Monday, I think you and Dr. Hamre noted this was a generally strong budget. I think that is true, although I think this area that we are discussing today is the major challenge that we face.

We sought to give you a fully funded budget, but I am afraid we have to time-date stamp "fully funded." We added resources for medical claims and pharmacy costs as we knew them, but we are in a very dynamic period and they are continuing to grow. I think in the near term we will face serious challenges with bid price adjustments for the contracts we have for TRICARE now and we are going to have to discuss with you how we are going to find a way to address those.

Over the longer term, I think we are returning to a period we saw—from the mid-eighties to the early nineties, medical inflation was running 7, 8, 9, 10 percent a year and the portion of the defense budget that was devoted to health care doubled in that time. I think we are in a similar period of dynamic growth and over the long term we are going to face a serious choice between restricting benefits, shifting resources from other areas of defense into health care costs, and shifting resources from other areas of the Government into defense.

All of those have serious problems with them. They all have serious challenges. This hearing is not going to end this story. This year is not going to end this story. Indeed, we are going to I think be facing this over the next years and probably a decade.

Senator STEVENS. Thank you, Mr. Secretary.

Admiral.

MILITARY HEALTH SYSTEM

Admiral PILLING. Mr. Chairman, thank you. Members of the committee, thank you for the opportunity to discuss the military health system with you today.

With the chairman's permission, I have a written statement I would like to submit for the record.

Senator STEVENS. Yes, sir.

Admiral PILLING. I appreciate the opportunity to address you in my capacity as Chairman of the Defense Medical Oversight Committee. I want to personally assure you that the senior line leadership of the Department of Defense strongly believes that maximizing the health and wellness of our service members and their families is a vital component of readiness. We are acutely aware of the problems our medical system and our beneficiaries face and we are committed to working with the Congress to improve the military health system.

Let me also assure you we are committed to keeping the promise of providing quality medical care to our retiree population.

Last year the Deputy Secretary of Defense convened a medical summit to discuss problems faced by the military health care system. The summit concluded that greater service oversight in the operation of the health program, in establishment of health care benefits and budget priorities was required. As Chairman of the DMOC, I am committed to ensuring that the military health system delivers a consistent equitable benefit for all beneficiaries.

In the past few months the DMOC directed a thorough budget review of the defense health program to determine the scope of current and projected funding requirements. This resulted in over $250 million being added to the defense health program in the President's budget proposal for fiscal year 2001.

The results of this review also highlighted a shortfall of over $6 billion across the future years defense plan (FYDP). Since this $6 billion shortfall cannot be managed away, our first priority is to fix the bottom line without breaking the system.

The DMOC also directed an analysis of the TRICARE 3.0 request for proposal (RFP). The Center for Naval Analysis completed a preliminary review of the RFP, making several recommendations regarding financing and performance criteria that were incorporated into the recently released RFP for TRICARE Region 11.

Another, longer-term and more rigorous evaluation will be conducted by an outside consulting firm to ensure that we have the best possible vehicle for contractor health care delivery, especially from the standpoint of our beneficiaries.

The DMOC leadership is also concerned that many older military retirees do not have full access to the military health care system and we have been working with the Chairman of the Joint Chiefs

of Staff to evaluate alternatives for enhancing and financing the health benefit for older retirees.

We support the demonstration programs funded in the President's budget and will continue to pursue the definition and financing of a stable long-term benefit for retirees.

PREPARED STATEMENT

The challenges we face are substantial, but the senior line leadership within the Department is committed to ensuring that our military health care system remains the best in the world. In closing, I would like to again thank you, Mr. Chairman, and all the members of this subcommittee for your continued strong support of the military health system.

Thank you.

[The statement follows:]

PREPARED STATEMENT OF ADM. DONALD L. PILLING

I appreciate the opportunity to address you in my capacity as Chairman of the Defense Medical Oversight Committee. I want to personally assure you that the senior leadership of the Department of Defense strongly believes that maximizing the health and wellness of our service members—and their families—is a vital component of readiness. We are acutely aware of the problems our medical system and our beneficiaries face, and we are committed to working with the Congress to improve the Military Health System. Let me also assure you, we are committed to keeping the promise of providing quality medical care to our retiree population.

DMOC

Last year, the Deputy Secretary of Defense convened a Medical Summit to discuss problems faced by the military health care system. The summit concluded that greater Service oversight in the operation of the health program and in establishment of health care benefits and budget priorities was required. The Defense Medical Oversight Committee (DMOC) was formed in August, with membership consisting of the Under Secretary of Defense (Personnel and Readiness), the ASD(HA) the four service Vice Chiefs, the military department Under Secretaries, the Under Secretary of Defense (Comptroller), the Director for Logistics from the Joint Staff, and the Surgeons General.

Since its inception, the DMOC has engaged senior military and civilian leadership in discussions and review of the health care benefit, Defense Health Program (DHP) funding requirements in the context of other service decisions, and management and reengineering initiatives. As Chairman of the DMOC, I am committed to ensuring that the Military Health System delivers a consistent, equitable benefit for all beneficiaries. The DMOC has two primary responsibilities: ensuring adequate funding for a high quality military health care system, and strengthening the benefit we offer our military families.

Funding

In the past few months, the DMOC directed a thorough Budget Review of the Defense Health Program to determine the scope of current and projected funding requirements. This resulted in over $250 million being added to the Defense Health Program in the President's Budget proposal for fiscal year 2001.

The results of this review also highlighted a shortfall across the Future Year Defense Plan (FYDP). Since this shortfall cannot be managed away, our first priority is to fix the bottom line—without breaking the system.

One of the options the DMOC has discussed for financing retired military healthcare involves conversion from a pay-as-you-go system to an accrual financing system. The healthcare costs for retirees would be funded using the same system that DOD uses to fund their retirement pension. The healthcare retirement cost would be included in active duty programming rates based on actuarial estimates and would accrue to a new trust fund. This trust fund would then be used to finance retiree health benefits.

TRICARE Contracts

The DMOC also directed an analysis of the TRICARE 3.0 Request For Proposal (RFP). The Center for Naval Analysis completed a preliminary review of the RFP,

making several recommendations regarding financing and performance criteria that were incorporated into the recently released RFP for TRICARE Region 11. Another, longer term and more rigorous evaluation will be conducted by an outside consulting firm, to ensure that we have the best possible vehicle for Contractor health care delivery—especially from the standpoint of our beneficiaries.

Readiness

In its role of integrating Service priorities with those of the health program, the DMOC also recently evaluated a Theater Medical Readiness strategy designed to integrate successful deployment of the supporting Theater Medical Information Programs, to include a patient movement module, a defense medical logistics system, and a composite health care system used to track patient information within the military treatment facility.

Health Benefit

Secretary Cohen and the Chairman of the Joint Chiefs of Staff have expressed their strong commitment towards expanding health care access to all our beneficiaries—active duty, retirees, and members of their families. The DMOC has been working to identify ways to improve the health benefit, both the nature of the benefit and the manner in which it is delivered.

Included in the President's Budget proposal for fiscal year 2001 are two initiatives to improve the health care benefit for Active Duty Family Members. First, TRICARE Prime Remote would be extended to military families living in areas not serviced by TRICARE Prime, so these family members can enjoy the same benefit as that experienced by families living in Prime areas. Second, the DMOC supported elimination of copays for all Active Duty Family Members enrolled in TRICARE Prime, so that family members receiving care in the network have the same benefit as those receiving care in our Military Treatment Facilities.

Retiree Health Care

The DMOC leadership is also concerned that many older military retirees do not have full access to the Military Health Care System, and has been working with the Chairman of the Joint Chiefs of Staff to evaluate alternatives for enhancing and financing the health benefit for older retirees.

The President's budget includes funding for the demonstration programs for our Medicare-eligible retirees, their spouses, and survivors. To date, over 130,000 medicare-eligible retirees are qualified to participate in demonstrations, including TRICARE Senior Prime, the Federal Employee Health Benefit Plan (FEHBP), TRICARE Senior Supplement, and an Expanded Pharmacy Benefit. The DMOC supports these demonstration programs, and will continue to pursue the definition and financing of a stable, long term benefit for these retirees.

Best Business Practices

The DMOC also supports adoption of business practices that will improve billing and claims payment, telephone access, timely appointing, and provider network development. Our service members say they are very satisfied with the healthcare they receive, but they are often frustrated by administrative and customer service issues. The DMOC is committed to fixing these problems to ensure the well being of our Service members and their families.

Conclusion

The challenges we face are substantial, but the senior line leadership within the Department is committed to ensuring that our Military Health Care System remains the best in the world. In closing, I would like to again thank you Mr. Chairman and all the members of this subcommittee for your continued strong support of the Military Health System.

Senator STEVENS. Thank you very much, gentlemen.

We will go on a 5-minute rule. I would urge you to make your responses as short as possible. We have three panels. We will all submit questions to you, if others desire. I have some here. We would urge you to answer them as they come to you, so we will just print them in the record as though they are a dialog here.

PHARMACEUTICALS

I do appreciate the fact that we are all here today and it is a chance for everyone involved in this total system to be part of the dialog we want to have with you.

Let me open up on one thing. Yesterday Senator Gorton pointed out to Secretary Shalala that it is now possible to build U.S.-produced pharmaceuticals abroad, Canada or Europe, substantially lower than we buy them here because of the policies of our pharmaceutical companies in selling drugs here to put the costs of research and development on American consumers about their not exporting them because of competition abroad. Of course, the people abroad have not participated in the development costs and those who might produce drugs abroad using our systems would produce them at less cost.

I do not know why we should continue to buy drugs through your system under this approach. We are looking at the concept of trying to require that Government-purchased pharmaceuticals, that we cannot pay less for them here—pay more for them here than we would pay for the same manufactured, U.S.-manufactured drugs abroad.

I would like to have you look at that and see what it would do. Perhaps you are one of the major purchasers of pharmaceuticals and we ought to just put a shot right across the bow of those companies. If we are paying these costs, the people who enjoy those drugs abroad should pay part of the costs of development and the research. It certainly should not be borne by our people like our retirees and others.

We have asked Secretary Shalala to look at it. I am asking you. I am not asking for a comment today.

TELEMEDICINE

Second, my question is this. We are putting a lot of money now in the development of telemedicine, and it is working up in my State. I think it is working in Hawaii. Why should we not explore that for the retirement communities? Why should people have to drive 50, 100 miles in some of our States to go and have an interview with a physician? Why can we not have some sort of a drugstore, storefront, or a contract with some clinic in these small areas and put in a telemedicine concept with some of our physician's assistants in those places and have them each have a time-frame for calling in to centralized areas in the military system, in the nearest military hospital or something like that?

That is working in Alaska with the Public Health Service and there is no reason why it could not work with you. I get more complaints in Alaska that people have to drive 200 miles to go have their pulse taken to see if they can continue to take the same pharmaceutical. Somehow we have got to adapt. And that would save costs if we did something like that.

Would you gentlemen mind looking into that to see if it is possible? The rampup cost for such a program should not be too much, and certainly there is incentive for the system to develop many more physician's assistants. I am told that there are a lot of people that like that kind of occupation. It is an officer, it is a commis-

sioned position, and it has great dignity as far as small towns are concerned. I urge you to think of that system. We would like to work with you.

Last, and I will take my 5 minutes, I want to tell you if we do get to a supplemental—and I am not sure we will get to them yet because of the time-frame and everything that is going on around here—if we do, I want your counsel, because we want to take care of part of the shortfall in this year's supplemental. Let us go out and eliminate that as quickly as we can so it does not hang over our heads out into the future.

Now, it may be we cannot do it all in one year, but we can certainly pick up some of it in 2000 and some in 2001, and by 2002 if it is really as big as it looks like today it will not be a wall; we might run into a high hurdle instead.

I would like your help to tell us what should we fund in the supplemental, what should we fund in 2001, as far as the shortfall is concerned, all right? You do not have to answer here unless you want to, Mr. Secretary. But you can give us a report on that, because I do not want to have us making guesses as to what you need. You know your needs better than we do. But if you do not tell us we are going to give you something, and it is liable to be in the wrong place.

Mr. LYNN. We will be happy to work with your staff and provide the detail as we have it.

[The information follows:]

The Department has been developing for submission a reprogramming action for fiscal year 2000 to address any unforeseen DHP funding requirements. We are still evaluating the impact of fiscal year 2000 Appropriations Act language directing the development of a Bid Price Adjustment process for Managed Care Support contractor pharmacy adjustments. This process may affect the funding levels for fiscal year 2000 and fiscal year 2001. As our evaluation continues we will develop the appropriate resourcing strategy i.e., reprogramming or supplemental request.

Senator STEVENS. Thank you very much.

Senator Inouye.

TRICARE SENIOR

Senator INOUYE. I would like to follow up where my chairman left off. In 1997 we passed the Balanced Budget Act and in that Act we authorized the demonstration of the TRICARE Senior. The program will end on December 31. Can you give us some advanced report as to how it is coming along, so when we prepare our budget we will know what we are headed for?

Mr. DE LEON. Certainly. The program is currently scheduled to end in December 2000. It has been a very important program and I think we are learning much from it. We have started discussions with HCFA, the Health Care Finance Agency, in terms of how we might continue the demonstration program, because there are some phenomena that we are still studying and trying to understand.

Generally what we are finding is where we have a larger medical facility we are able to bring in additional retirees. They are very satisfied with the health care. We think it is a win-win for our retirees as well as the American taxpayers.

There are two issues with HCFA, business issues, that we need to resolve. One is the rate of reimbursement. HCFA has estab-

lished a ceiling at about 80 percent. That is probably—that is too low for us to completely recover our costs. We have pledged that we can do it less expensive than a Medicare health maintenance organization (HMO), but 80 percent is too low, and we are negotiating that with HCFA.

The second issue is level of effort. Whether there is a Medicare demonstration program or not, we are doing our best, whether it is Space A care or through the subvention program, we are doing our best to see as many retirees as we can. HCFA is looking at this as an existing level of effort: If you are already seeing retirees, then you should receive no reimbursement under Medicare for seeing those retirees.

But we think that there is potential, that we are learning things, and that it is an important test that we are interested in continuing past December 2000.

Senator INOUYE. Thank you.

ANTHRAX

Admiral, as anticipated, we get a lot of letters from military personnel. In the past 6 months, the past year, I would say, one of the heaviest involved anthrax. I gather that DMOC has provided recommendations for DOD. Can you tell us about your recommendations?

Admiral PILLING. Well, actually DMOC has not addressed the anthrax issue. We have been primarily focused on the military health system. On anthrax itself, all of the service chiefs are supportive of the program we have right now and it is a force protection issue for us. But it has not been specifically addressed by the DMOC.

Senator INOUYE. I was under the impression that you were making recommendations, but you haven't.

Admiral PILLING. No, sir.

Senator INOUYE. Are we making any alternative programs for anthrax or are we still going through with the program?

Mr. DE LEON. If there is an issue, the advice is coming from the Joint Chiefs, and then the Surgeon Generals, of which the leading expert is Dr. Blanck, General Blanck of the Army. We are looking at research and development (R&D) dollars for other types of vaccines to deal with the anthrax threat, just as there is an Army program that potentially is looking at creating a stockpile for smallpox vaccine.

Here we have a disease that is eradicated, but we know that it exists in certain labs around the world, and we are working in conjunction with the Department of Health and Human Services (HHS) to make sure that we have a smallpox stockpile of vaccine there.

But I know that the Surgeon Generals and the Joint Chiefs are very much engaged on anthrax vaccine and the immunization program. It is one part of medical force protection. Making sure that our military members have the right biological protective gear, making sure that we improve our ability to detect chemical and biological attack, and the prepositioning of antibiotic drugs in a theater—the highest threat theaters were anthrax is an immediate threat—are also part of our program.

We have an extensive education program that we are continuing on the anthrax immunization. Right now our program is to essentially restrict the vaccine to those troops that are deploying to either the Persian Gulf area or to Korea, and to work with the rest of our troops in terms of education, we know, Senator, that you are receiving a number of letters, and this is one that Secretary Cohen, Dr. Hamre, General Shelton, and all of the other Chiefs, as well as the Surgeon General, stay very, very much engaged in.

Senator INOUYE. I thank you very much. Mr. Chairman, I would like to submit my questions.

Senator STEVENS. Yes, sir. Senator Leahy.

Senator LEAHY. Thank you, Mr. Chairman. I note that the Department of Defense is integrating these so-called—let me make sure I got it right, knowledge couplers into the second phase of the composite health care system to improve their review of patient history and the providers with greater knowledge, move them directly to the point of service. That point of service might be in the hospital, or it could be in the field.

MEDICAL ERRORS

Now, last November there was an Institute of Medicine report that concluded that more people may die from medical errors than from any major diseases, and I mentioned earlier that I hear these things from my wife, I hear these things when I go back home from the medical people, and I am wondering if the civilian sector may have something to learn from the Defense Department in this.

If you integrate the knowledge couplers into the DOD clinical system, would that improve the quality of care, might it reduce medical errors, and I am thinking obviously if the answer is yes to that, of having something that might help out in the civilian area.

Mr. de Leon.

Mr. DE LEON. Absolutely. The state of the art system is being demonstrated right now at Tripler Army Hospital, and that is our Composite Health Care System II (CHCS–2) information technologies. What that allows is the physician to have complete access to a person's medical record. We are making sure that we have all of the privacy protections in place with such a computerized data system, but it would allow a physician, whether it is at the Tripler Hospital in Hawaii, or whether it is in a mobile medical hospital in Bosnia, to have access to a military member's records.

We are also moving in the direction of making sure that pharmacy is bar-coded, so that we are essentially using the information technologies to help us reduce errors. Additionally, the Surgeons have a number of initiatives along this line that they can elaborate more fully than I. We have put a premium on information technologies in this decade of the nineties in terms of integrating our medical system both in terms of health care to beneficiaries, but also the medical readiness piece.

Senator LEAHY. And I hope you keep us posted on this, especially if there are problems in funding or anything else, because I think, Mr. Chairman, this is something that concerns the wide diversity of military medicine. You mentioned the hospital in Hawaii, a field hospital in Bosnia, and training facilities somewhere else.

Mr. DE LEON. Plus the telemedicine, I might add, which is another key element.

Senator LEAHY. Plus the telemedicine. There may well be some significant civilian spin-off in this with the—you talk about large-scale experimentation. The civilian application may be a great deal.

Senator STEVENS. Would the Senator yield right there?

Senator LEAHY. Sure.

Senator STEVENS. This is not new. It is 10 years ago in this room right here that we witnessed a mammogram conducted in Montana and reviewed in Minnesota and Arizona, and within 20 minutes the woman had her diagnosis.

Senator LEAHY. Yes, but I am talking about the couplers that give the doctors the kind of treatment choices that they might have. This builds on what we have already done. You and I have been as strong supporters, I think, of telemedicine as anybody.

Senator STEVENS. Yes.

Senator LEAHY. All three of us have. Now, to add in these in effect a coupler, where a doctor says, okay, I can see what they have got, but now here are a whole lot of the choices that I have, that I can pull up. I find that very exciting.

I also want to say, Mr. Chairman, I do appreciate the support that this subcommittee has given to the Department of Defense for breast cancer research. I do not think any other program could claim the kind of agility and effectiveness that it has, and I appreciate the fact that you have also in a—I was going to say in a bipartisan effort, but actually a nonpartisan effort in that.

Senator STEVENS. This committee started research, basic research on acquired immune deficiency syndrome (AIDS), breast cancer, prostate cancer research on a contract basis, as opposed to in-house, and I think it is a worthwhile project. We intend to continue it. I am not sure we are going to continue to increase it every year, but we are going to continue.

Senator LEAHY. I have always supported that. I appreciate that. Thank you. I will submit my other questions for the record.

Senator STEVENS. Senator Durbin.

Senator DURBIN. Thank you, Mr. Chairman. Thank you to the panel. Let me say at the outset I was so encouraged last week to receive word that the Navy has decided to go forward in a joint effort with the Veterans Administration at the Great Lakes Naval Training Station in the North Chicago Veterans Hospital. This to me could be a big winner not only for the naval personnel and the tens of thousands of veterans in the region, but for taxpayers ultimately. I hope that we can encourage this kind of cooperative effort to utilize existing facilities to the betterment of all that are served, and I thank you for your leadership in that regard.

I have three questions, and I hope to be able to get all three in before Senator Stevens gives me the signal. First, on the anthrax question, in last year's appropriations we included language calling on the military to make certain that all military personnel who are vaccinated with this vaccine for anthrax understand and receive if requested what is characterized as the vaccine adverse events reporting system form, so that we can keep track of actual adverse events, and have reliable information.

There was a feeling at the time that not enough was being done to reach out to the actual military personnel and let them know that if something happened that was worth reporting, there was a way to do it. Can you tell me what has occurred since that bill was passed?

Mr. DE LEON. I believe we have implemented that. I would ask General Blanck on the next panel to respond to you in more detail, but we want to make sure that any person who wants to report has a mechanism to do it.

Senator DURBIN. That will give us the information to understand the dangers that may be associated with this, and I certainly understand your dilemma in trying to protect all the military personnel, but we want to be as fully informed as possible.

Let me also ask you, before I have a question on the TRICARE system, I read this story in The Washington Post about this Atsugi air facility in Japan where some 6,500 or 7,000 of our personnel, our service men and women and naval personnel in particular, are being exposed to dioxin levels from a nearby incinerator 65 times what is considered to be safe and acceptable, and it appears from what I have read that we have really reached in impasse where the Japanese Government cannot even solve this problem.

We certainly do not want our personnel to be subjected to this. What is being done, or what should be done to protect them from this health hazard?

Mr. DE LEON. This is an issue that our Secretary of Defense has engaged with his Japanese counterpart on directly. It is a critical Navy quality-of-life issue. It has been well-documented from Navy reviews as well as the Dacowits panel was asked to go and meet with families so that we have a full record, but I know that the Secretary has raised this directly with his counterpart in Japan.

Senator DURBIN. Well, I do not know what it will take, but I hope during the course of this appropriations process that we will look into this, because to subject our personnel to that sort of a health danger is just absolutely unacceptable, and certainly the family members, innocent people who are there trying to help protect Japan, and in the process having their own lives put at risk because of the failure to deal with this outrageous health hazard.

TRICARE

The third area which I would like to note involves a case that came from Illinois where a naval commander's daughter was struck by a car and was in a coma for a long period of time and needed rehabilitative services, and it turned out under the TRICARE system there were limited opportunities for these rehabilitative services, and we appealed directly to the Secretary of the Navy, and they intervened and had to make a personal intervention so that she was able to be treated, and treated successfully, I might add.

And I just wondered, as you review the TRICARE policy manual, can you tell me whether you are finding similar gaps in service for military personnel, where they frankly need certain medical care but, because of the paucity of providers or the limitation on services, cannot receive it?

Mr. DE LEON. I think there are some cases where TRICARE is very innovative. In doing a focus group down at Norfolk with mili-

tary families, I found that at one end of the spectrum a young child that had a very complicated chromosome problem was getting state-of-the-art treatment at a university medical center. On the other hand, the limitations occur when we get into rehabilitative care, things like that.

You gave us a provision last year dealing with reimbursements on various types of custodial care. We are trying to work through the implementation of that program right now, but we want to make sure that a dependent is covered if there is a medical emergency like that.

Senator DURBIN. Well, this was an outrageous case, where a father and mother came to me, and this man had dedicated his life in service to the country, in the United States Navy, and they came across a true health emergency in their family, and found TRICARE to be unresponsive.

Mr. DE LEON. I would agree that—you know, I view myself as Under Secretary as ultimately the chief case worker on these, and I would agree, Senator Durbin, that there is much too much case work required in terms of adjudicating the financial aspects of this, and that that is part of the TRICARE 3.0 and a number of the other improvements on the business side that we are in the process of trying to make.

Senator DURBIN. Well, I will close by echoing the chairman's comments as well as Senator Inouye about the cost of pharmaceuticals as well, and I hope that we can allow our military personnel to have the same bargaining power as many insurance companies have in this country today, as well as foreign governments have, to make sure that we get these drugs that are developed in the United States available at the most reasonable price to protect our people in uniform.

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

Senator STEVENS. Gentlemen, I did not use all my time, and Mr. Lynn, I have sort of a disagreeable thing to discuss with you. I am not blaming you, but I want you to know, last year, as part of the compromise on the final bill, Congress specifically refused to put up the $10 million for the Justice Department to conduct tobacco litigation, and I am one who happened to vote contrary to that here in the Senate, but the decision of the Congress was, no money for that litigation.

Now I understand that Justice has collected some of that from the Department of Defense, that you have made payments to the Department of Justice to conduct tobacco litigation. Now, how can that be justified in view of the shortfalls we are talking about here in the first place, but second, what is your authority to do that?

Justice was specifically denied that by votes in the House and the Senate. I disagreed with that, as I said, but it was denied, and now we are going to face problems as this bill gets to the floor, because of that action that you have taken, probably some restrictive language we will have to deal with when we get to the floor. Why did you do that?

Mr. LYNN. Mr. Chairman, I think you have stated the facts correctly. We have provided about $2½ million, as has the Veterans Administration (VA) and HHS.

Senator STEVENS. By what authority?

Mr. LYNN. There was a provision I believe in the 1995 Commerce-State-Justice appropriation which allowed Justice to collect funds to support litigation that was supporting the Government generally. In other words, other agencies who had beneficiaries who would be part of the——

Senator STEVENS. Yes, but that was before all of the decisions on the tobacco case, and before the States were allowed to keep their money.

Mr. LYNN. Absolutely true.

Senator STEVENS. And they were—I really think we are going to run into a hailstorm when the people who disagree with—when we, in terms of a back issue, find out what has happened. Not only this bill, the head bill, they are all going to be in trouble. That is a back-door way to reverse a—an agreement was made with the administration. It is bad faith, and you cannot handle bills like this on bad faith, so I urge you to go back and tell them, give you back your money, because if you do not get it back, it is going to cost you a hell of a lot more than that when this bill comes out.

Mr. LYNN. I certainly understand what you are saying, Mr. Chairman. I will take it back and discuss it. I regret I was not familiar with the discussions on the bill last year with regard to that.

Senator STEVENS. I understand you were not involved in that, but we were involved in some of this. I do not know how these guys voted, but I know how I voted, and I do not like the decision of Congress, but we still live by it.

Thank you very much, gentlemen.

We will call the next panel. We appreciate your courtesy and look forward to working with you.

STATEMENT OF LT. GEN. RONALD R. BLANCK, SURGEON GENERAL, U.S. ARMY

Senator STEVENS. Gentlemen, we thank you very much. We are pleased to have the service Surgeon Generals here with us, and we greatly value your views. You are the people who make the programs work. We just heard serious funding concerns with the overall defense health program, and we would like to see you all put that in context. What will the funding shortfalls predicted do to you at the operational level?

General Carlton, this is your first appearance. We welcome you and look forward to a series of appointments during your service. Admiral Nelson, delighted to have you back again, sir, and General Blanck. I think this may be your last time before you go to Fort Worth. You are going to be president of the University of North Texas, we understand, and we honor you for what you have done, sir, and the things that you have worked with this committee on. All of us have very fond memories of our contacts with you, not only here but out at Walter Reed, and we wish you and your family well, and know you will enjoy your future. It is a great university.

Senator STEVENS. Senator Inouye do you have a statement?

Senator INOUYE. Mr. Chairman, I ask that my full statement be made a part of the record

Senator STEVENS. Yes, sir it will be.

[The statement follows:]

PREPARED STATEMENT OF SENATOR DANIEL K. INOUYE

Good morning. I join my Chairman in welcoming General Blanck, General Carleton, and Admiral Nelson to discuss Military Medical Programs.

I would like to take this opportunity to acknowledge General Blanck who is appearing before this Committee for the last time as the Surgeon General of the Army.

I thank you, and commend you, for your long service to the Army, the nation, and your assistance to this committee. Your efforts over the past four years have been especially noteworthy and I wish you success in your future endeavors.

I would also like to welcome General Carleton who is appearing for the first time before this Committee as the Air Force Surgeon General. I hope you find this hearing to be a worthwhile experience and that it will be the first of many productive discussions.

This year Congress has focused on many health care issues including medical errors and patient safety, the expansion of the TRICARE program, and the redesign of the pharmacy benefit. While I have always believed that this nation provides a far superior quality of life for our service members and their families, we must continue to build on our successes.

Our service members and their families deserve the best that we can provide and that certainly includes quality health care and uncomplicated access to it.

During my visits to my home state, one of the enduring concerns of current and former military members is the future of military health care.

Those on active duty are concerned about access to health care services for their family members, while our retired military members often perceive a decline in their medical benefit. We must ensure that the men and women who commit to a career of service to our nation have a health care benefit worthy of their sacrifice.

Our current fiscal environment presents a challenge for all of us to make the best use of our resources while maintaining quality. I am particularly pleased with the continued advancements made in telemedicine. I commend DOD for being a leader on the cutting edge of medical technology.

The Akamai project in Hawaii continues to mature and represents the outstanding talents and creativity of our military and civilian personnel. General Blanck, I thank you for your enduring support of the Akamai project and for our talented nursing leaders like Major General Adams.

Today, as we address many of the issues facing our military health system, I would like to focus on beneficiary access to military health care services, improvements to the TRICARE benefit, new technology initiatives, and the President's fiscal year 2001 budget request. I look forward to hearing your testimony.

Senator STEVENS. We would like to hear your statements before we ask any questions, all of the statements, please. Who would like to go first? Admiral Nelson? Who is senior?

You are senior.

General BLANCK. It is tough to get old. Mr. Chairman, Senator Inouye——

Senator STEVENS. You have got a long way to go, man.

General BLANCK (continuing). Senator Durbin, thank you very, very much. The statements made before I think really capture what I have to say, and so I will be very brief. I have provided a written statement for the record.

Senator STEVENS. Let me clarify that. All of these statements are already in the record. We will put them on the Internet, as a matter of fact, before the day is over, but they are all printed. You do not have to ask that. Thank you.

General BLANCK. Thank you, Mr. Chairman.

I think this is a time of great excitement for military medicine. I personally would like to thank you, Senator Inouye, and all the other distinguished members of this committee with whom we have all worked, for your interest in and support of military medicine. We do have significant challenges, challenges of deployment, challenges of funding, as you have alluded to, force protection aspects that indeed are both frightening and challenging, and rather than take a great deal of time with an opening statement I will just stop there but add one thing, and that is, one of the exciting things, and you have heard from the chairman, is the DMOC, the Defense Medical Oversight Committee. The involvement in the services are line leadership, the civilian leadership, and the Department at all levels has never been greater, and I think that only with that kind of interest, involvement, and support are we going to be able to meet all the challenges that we face.

Thank you, and I look forward to your questions.

[The statement follows:]

PREPARED STATEMENT OF LT. GEN. RONALD R. BLANCK

Mr. Chairman and members of the Committee, I am Lieutenant General Ronald R. Blanck and I appreciate the opportunity to address this committee once again. I consider it an honor to have served as the Army Surgeon General for the past three-and-one-half years and to lead the Army Medical Department into the twenty-first century. I have seen tremendous changes in the delivery of healthcare since my first years of providing care to sick and wounded soldiers some thirty years ago in Vietnam.

It is a privilege to serve with the Army Medical Department team and I am extremely proud of our ability to keep our focus on providing quality healthcare to soldiers, retired and active, and their family members.

The Army Medical Department has demonstrated its capability to support the Army on the battlefield and in garrison. I would like to highlight these capabilities and the challenges that Army Medicine faces today and in the future, in the context of five initiatives I actively promoted during my tenure as the Surgeon General—Readiness, Organization, Valuing people, Technology and TRICARE. Two additional areas I will also discuss in detail are the Quality of healthcare and Congressionally directed research.

Readiness

The Army Medical Department has developed a mission statement that stands on three legs; Protect and sustain a healthy and medically protected force, train, equip and deploy the medical force, and manage and promote the health of the soldier and the military family. These provide a convenient way to organize an overview of our current status and future plans. When not in combat, the Army Medical Department strives to keep soldiers "fit to fight" and to keep medical units and personnel ready for combat and demanding operations other than war, both humanitarian and peacekeeping. These missions mesh seamlessly with the Army Medical Department's day-to-day work.

Hands-on, real-life experiences with a variety of people and with a variety of illnesses and injuries in real patient-care environments enhances our ability to provide our soldiers top-quality care in active operations. On a typical day in the Army Medical Department, we see: 1,764 patient occupied beds; 40,386 clinic visits; 41,400 dental procedures; 476 admissions; 6,012 immunizations; 68 births; 41,693 x-rays exposed; 57,577 laboratory procedures; 5,577 veterinary outpatient visits; 66,942 pharmacy procedures; and $21 million worth of food inspected.

When our field hospitals deploy, most clinical professionals and support personnel come from the Army Medical Department's fixed facilities. Typically, our deployments are not in support of traditional combat scenarios, but rather for humanitarian assistance, peacekeeping and other stability and support operations. All the while, we must maintain day-to-day health care for soldiers, retired soldiers and their families. Under our Professional Officer Filler System, we send up to 26 percent of our physicians and 43 percent of our nurses to field units during a full deployment. To replace Professional Officer Filler System losses, Reserve units and many Individual Mobilization Augmentees (non-unit Reservists) are mobilized to work in our Army Medical Department facilities.

Many National Guard and Army Reserve units deploy in support of the Army Medical Department. The Army depends heavily on its Reserve Components for medical support. About 65 percent of the Army's medical forces are in the Army Reserve. We are truly an integrated healthcare system that deploys to war. Executing and sustaining these complex missions without loss or interruption of service to our soldiers, families and retirees is a challenge we address on a daily basis.

The success of the Active Component to Reserve Component Professional Officer Filler System Program initiative is essential to support deployment of Reserve Medical Units. This initiative provides temporary active component Professional Officer Filler System personnel to fill vacant, critical Reserve Component positions. To alleviate critical Reserve Component personnel shortfalls, the United States Army Medical Command, in conjunction with United States Army Forces Command and United States Army Reserve Command, is in the process of developing and implementing this initiative, which will temporarily sustain Reserve Component units until critical shortages are filled. This initiative will improve the readiness level of more than half Reserve Component units.

Recruiting and retention are my continuing areas of concern. From late 1995 to early 1998, the Army Reserve lost 34.2 percent of physicians assigned to units sent to the Balkans. Two physicians departed for every new one recruited. To augment the excellent work of the Recruiting Command, the Army Medical Department began using Reserve recruiters, under contract, in certain locations to recruit the health professionals we need.

Surveys showed us that 81 percent of physicians could serve up to 90 days without incurring serious harm to their medical practices back home. Beyond 90 days, economic consequences to their practices begin to show a negative impact. Because this caused an erosion of Reserve medical capability, the Army allowed the Army Medical Department to test a 90-day deployment policy for three years. The 90-day policy applies to physicians, dentists and nurse anesthetists who are involuntarily called up under a Presidential Selected Reserve Call-up. This policy does not apply to a partial, total or full mobilization. The first unit deployment under the 90-day plan will occur next September. In September 2002, the Army Medical Department will provide a final report to the Army on the policy's effect on recruiting and retention with recommendations.

Medical readiness tracking was a concern of mine, therefore, I directed the development of a centralized, automated medical readiness tracking system. This hugely successful, Army-wide Medical Protection System, tracks immunization data. The readiness module incorporates the already existing dental readiness classification system and collects all relevant factors of medical readiness identified by commanders and tri-service medical panels. This web-based system, accessible to the Army chain of command, provides commanders and supervisors with an invaluable tool to assess and manage unit medical readiness. No other health service in the world can replicate this capability.

Clearing the battlefield continues to be one of my highest priorities. Rapid transport of injured soldiers to definitive trauma care saves lives. The air and ground platforms designed to evacuate our wounded from the battlefield have not kept pace with the modernized force and can no longer guarantee rapid, modern day, battlefield evacuation. Studies conducted on combat injuries clearly indicate prompt treatment and evacuation significantly reduce mortality rate. Nuclear, biological and chemical weapons on the battlefield significantly delay evacuation and require altering the mix of battlefield evacuation resources. To meet this prospective challenge, we are working to modernize evacuation platforms.

The UH–60Q is the number one near-term medical evacuation modernization issue for the Army Medical Department. It improves the medical, navigation, communication and treatment platform capabilities of our current UH–60A aircraft. With the UH–60Q, we significantly improve our capability to evacuate casualties from as far forward as the tactical situation permits, conduct combat search and rescue, transport medical material and teams on an emergency basis, and perform the shore-to-ship evacuation missions.

The UH–60Q program received partial funding in the 1999 Program Objective Memorandum, with funding starting in 2002. Additionally, we have a coordinated effort with the Army aviation community to align the UH–60Q production with the UH–60 Service Life Extension Program. As a result, we will gain a better performing aircraft; have commonality across the utility fleet; and save Research, Development, Test and Evaluation dollars.

The total objective force requirement is 387 medevac aircraft—357 for the warfight and 30 for the operational readiness float count. Of the warfight 357, 192 go to the active component and 165 to the reserves. Current modernization funding projections for the UH–60Q complete the 132 aircraft requirement for Force Package One by 2010 and the 150 aircraft in Force Package Two by 2020.

Organization

We are continuing to refine our organizational structure to perform our mission in the most efficient and effective manner. The merger of the Medical Command Headquarters and the Office of The Surgeon General, in 1997, to create one staff under the authority and command of The Surgeon General, dual-hatted as the Medical Command Commander, is an undeniable success. It eliminates duplication, streamlines the process, and improves productivity and outcomes.

Our commitment to continuous quality improvement continues as we examine the feasibility of mirroring our Regional Medical Command structure with TRICARE Lead Agents. The Lead Agents are increasingly important organizations for coordinating health care throughout the Army, Navy and Air Force.

One way we are operating more efficiently is through closer cooperation with the Department of Veterans Affairs. The Army and Department of Veterans Affairs are benefiting from more than 130 Resource Sharing Agreements, at least 35 Memoranda of Agreement or Understanding and nine Interagency Support Agreements. These various kinds of agreements have different administrative and funding details, but all involve using resources of both departments more efficiently.

The Army must maintain a number of deployable, fully staffed, combat support hospitals to meet the early bed requirement to support two nearly simultaneous Major Theater Wars as required by the National Military Strategy. Other Combat Support Hospitals are given "Caretaker" status and must be able to rapidly deploy within 30 days to round out the required number of beds needed to support the warfighting force. This helps maintain clinical skills and makes the best use of personnel to meet the daily demand for healthcare. Each Caretaker Hospital, with the staff working in the fixed facility, provides approximately $24 million worth of healthcare per year to our beneficiaries. Reserve personnel will mobilize to staff the fixed hospital when its active personnel deploy with their Caretaker Hospital. Reserve personnel train with the hospital during their annual training period.

In 1998, we organized an array of Special Medical Augmentation Response Teams (SMART) Teams in our regional medical commands and major subordinate commands. These functional teams provide small, rapid-deployment capabilities and

provide global coverage to Department of Defense, local, state and federal agencies responding to Weapons of Mass Destruction, terrorist, natural disaster and other complex emergencies. Special Medical Augmentation Response Teams provide expertise in the areas of trauma, burn injuries, chemical/biological casualties, stress management, communications, telemedicine, preventive medicine, disease surveillance, veterinary care and health facility planning.

Valuing people

The Army Medical Department strives to provide an atmosphere for people to reach their potential, and to have opportunities for personal and professional satisfaction. We endeavor to give our people just rewards and continually promote training challenges for our soldiers and civilians.

Three years ago, the Secretary of the Army approved my request to change restrictive Army regulations pertaining to the command of medical treatment facilities. Although veterinary, dental, aviation, garrison and logistics commands generally remained corps specific, virtually all other commands became Army Medical Department corps immaterial. The implementation of corps immaterial commands within the Army Medical Department presented the first opportunity for Army Medical Department officers to compete for commands designated as corps immaterial. Results of these boards yielded increased command opportunities for highly qualified Medical Service, Army Medical Specialists Corps, and Army Nurse Corps officers. In addition, the Army Medical Department identified and opened appropriate non-command senior leadership positions to the best-qualified officers of each Army Medical Department Corps.

A phased implementation of new standards to train all medical soldiers for combat support began October 1, 1998. These new standards are not intended to revolutionize the substance of training, but rather to ensure wider understanding of requirements and greater consistency in implementation. The eight standards relate to survival skills, weapons training (for selected personnel), collective training, competency-based orientation, Deployable Medical Systems training, job-specific medical training, job-specific readiness training and Medical Force Doctrine.

The Army is the executive agent for the Department of Defense program to immunize all United States military personnel against the grave and urgent threat of "weaponized" anthrax. The Anthrax Vaccine Immunization Program began in March of 1998 for all military personnel assigned, attached or scheduled to deploy to the 10 designated high-threat countries within the Arabian and Korean peninsula. Our Anthrax Vaccine Immunization Program Agency provided execution and management oversight of over 1.4 million immunizations delivered safely to over 391,540 Service Members worldwide. Less than 500 adverse events, mostly local, temporary reactions, have been formally reported since March 1998. This represents a safety profile similar to most common vaccines.

Each adverse event is reviewed by an independent committee of national experts commissioned by our Anthrax Vaccine Immunization Program Agency and represents an unprecedented level of effort to ensure the health of our soldiers is protected.

Through our direct efforts, we successfully coordinated, staffed and synchronized the Federal Strategic Force Health Protection Initiative with the Army, Veterans Affairs, and Department of Health and Human Services. This nationwide network of Department of Defense, Veterans Affairs and Federal Occupational Health clinics allows us to provide not only the anthrax vaccination, but also medical and dental support to the Reserve components within reasonable distances of individual members.

The Army tracks all immunizations, to include the anthrax immunizations, through the Medical Protection System. Medical Protection System is an internet based, automated immunization tracking system allowing the Army to track all immunizations by name, location, dose, route, provider and lot number. There is literally no health organization in the world matching this accomplishment.

We provided numerous tools and media to the Army to meet their Anthrax Vaccine Immunization Program leadership and healthcare provider educational goals. We are confident that every soldier receiving the anthrax immunization receives information materials, has opportunities to ask questions and is informed on the process for reporting adverse reactions. Our comprehensive education initiatives include an internet web site, www.anthrax.osd.mil, a toll-free information hot line; and an effective speakers bureau.

Technology

We are enthusiastically incorporating advanced technology into the way we provide world-class care to our patients. Some of our initiatives are:

—The Medical Personal Information Carrier will store Service Member medical and personal information. It facilitates seamless, permanent recording and transfer of information in peacetime and on the battlefield. A demonstration of the Personal Information Carrier was conducted in a field environment in December 1999. The demonstration clearly showed the ability of the Personal Information Carrier to accept, store, and transfer battlefield medical care information. The next step is to incorporate this technology into our doctrine and practice both in deployed settings as well as home station. Further demonstrations are planned for this year.

—A dry fibrin sealant bandage was developed by the United States Army Medical Research and Materiel Command in cooperation with the American Red Cross. The bandage is made from the last two proteins in the human blood coagulation cascade, and freeze-dried on absorbable packing. The bandage will set a clot within two minutes and research shows it can reduce blood loss by 50 to 85 percent. The United States Army Medical Research and Materiel Command is working multiple protocols, with several potential manufacturers, to determine the ultimate capabilities of this novel product.

—A high-tech litter with resuscitative and life-sustaining capabilities, which allows field surgery and care en route during evacuation. The Life Support for Trauma and Transport prototype was approved for human use by the United States Food and Drug Administration. This approval permits greater evaluation in actual hands-on treatment situations in both a forward deployed environment, such as Kosovo support, as well as civilian trauma centers under the control of patient informed consent guidelines. These evaluations follow Department of Defense acquisition demonstration methodologies to gather user feedback and design considerations early, quickly, and effectively.

—Telemedicine is a technology to efficiently leverage healthcare delivery over long distances. The aims of this technology are to improve quality, improve access, enhance provider and patient satisfaction, and reduce cost. Most of Army Medical Department telemedicine is store-and-forward technology usually sent over the internet; this involves the capture of still images via digital camera attached to a personal computer. Tertiary care physicians can review the images, render a diagnosis and return the diagnosis back to the referring physician via the internet. There are more than 50 projects being done in the Army Medical Department. The majority of projects are in the areas of radiology, dermatology, and psychiatry and teledentistry. The projects can be reviewed at the following website: http://www.tatrc.org/paaes/projects/armypoi.html.

—As I previously mentioned, the Medical Protection System, a Medical Occupational Data System application, has been a highly successful centralized system to record, report, and archive soldier and unit readiness.

—The Ambulatory Data System captures diagnosis and procedure information on outpatient visits. Capturing this more detailed clinical information is critical for decision-making and to support our new costing methodology.

TRICARE

TRICARE, the Department of Defense's managed-care initiative, is now fully operational worldwide. Implementation has been a challenging journey since the first TRICARE contract became operational in March 1995 at Madigan Army Medical Center, in the Northwest Region.

This program is gaining momentum and we want TRICARE Prime to be the number one choice of beneficiaries. To reach that goal, we will continue to stress quality of care, ease of access and customer-focused service.

A study of the Northwest Region, where TRICARE is most mature, revealed increases in the use of preventive care, obtaining care when needed and satisfaction in making an appointment. There was a decrease in use of the emergency room as a walk-in clinic, keeping it free for true emergencies. Most beneficiaries surveyed reported they were satisfied with the quality of their care.

We are forging closer relationships between the services and the TRICARE Lead Agents to ensure issues requiring immediate action are handled without delay. And, as TRICARE continues to mature over the coming years, I am confident it will produce the desired benefits in terms of healthier military beneficiaries.

One excellent example of increased cooperation is the many Veterans Administration (Veterans Affairs) facilities participating as TRICARE providers. Veterans Affairs is treating outpatients in community-based clinics at Fort Belvoir, VA., and Fort Leonard Wood, MO. Tripler Army Medical Center provides care for most veterans in the Pacific region. A Joint Venture there includes a renovated wing for administrative services, an ambulatory care center and a 60-bed "Center for the Aging" facility. Veterans Affairs patients receive easier access to care, and both

agencies benefit by expanding training and research opportunities. This is truly a "win-win" partnership.

Another highlight of 1999 was the full implementation of the TRICARE Senior Prime demonstration (sometimes known as "Medicare subvention"), which began in selected locations throughout the Department of Defense. Army medical treatment facilities participating are at Madigan Army Medical Center, Tacoma, Washington; Brooke Army Medical Center, San Antonio, Texas; Fort Sill, Oklahoma; and Fort Carson, Colorado.

Medical treatment facilities in the six participating TRICARE regional sites phased into the test as each site received Health Care Financing Agency approval as a Medicare+Choice plan. Healthcare delivery for TRICARE Senior Prime, began on September 1, 1998. The last site phased into the program on January 1, 1999. The demonstration is scheduled to end December 31, 2000. The collective target enrollment was 27,800 persons; currently 29,325 persons are enrolled, including some who have "aged" into the program.

The purpose of this three-year program is to deliver accessible, high-quality care to people eligible for both Medicare and military medical benefits, without increasing the total federal cost to either Medicare or the Department of Defense.

The Department of Defense continues to provide the level of care it has historically provided for these "dual-eligible" patients, as a precursor to retention of Medicare interim payments. The General Accounting Office and DOD evaluations will shed more light on the financial methodology and reimbursement mechanisms supporting the demonstration.

The Fiscal Year 1999 National Defense Authorization Act authorized several demonstration projects for the Military Health System. The first is three-year demonstration of Federal Employee Health Benefits Program from 2000–2002. The Department of Defense/Federal Employees Health Benefits Program demonstration will include a maximum of 66,000 Medicare-eligible military retirees and family members in the following geographical areas: Dover, Delaware; Fort Knox, Kentucky; Dallas, Texas; Greensboro-Winston Salem-High Point, North Carolina; Puerto Rico; Camp Pendleton, California; Humboldt County, California area; and New Orleans, Louisiana.

The Fiscal Year 1999 National Defense Authorization Act specifies separate risk pools for Department of Defense/Federal Employees Health Benefits Program demonstration from other Federal Employees Health Benefits programs. Therefore, premiums may be higher for fee-for-service plans and experience-rated Health Maintenance Organizations in the Federal Employees Health Benefits Program demonstration than those in the Federal Employees Health Benefit program. The rates will probably equal that of community-rated Health Maintenance Organizations. Government contributions for demonstration premiums may not exceed the amount of contributions payable if the beneficiary were an employee enrolled in the same Federal Employees Health Benefit Program. Federal Employees Health Benefits Program Demonstration Program Premium Rates for Year 2000 rates can be found at www.tricare.osd.mil/fehbp. Mailings announcing the program were provided to beneficiaries in early October 1999.

Open season for enrollment that opened in November was extended to January 2000. Additional Federal Employees Health Benefits Program enrollment/information fairs will be conducted in demonstration sites. Current enrollment as of February 2000 is approximately 2,200. The Federal Employees Health Benefits Program-Military demonstration began on January 1, 2000. A toll-free call center to answer questions and provide information was activated in September 7, 1999 (1–877–DOD–FEHB).

The minimum period of enrollment in the Department of Defense/Federal Employees Health Benefits Program is three years. Participants need not be enrolled in part B of Medicare. Beneficiaries covered under the Department of Defense/Federal Employees Health Benefits Program demo are not eligible to receive care at a medical treatment facility or through the TRICARE program, including mail-order pharmacy. The National Defense Authorization Act for Fiscal Year 1999 also authorized a three-year demonstration of a TRICARE Senior Supplement Demonstration Program. Medicare will be the first payer for payment of care and services received by the eligible individuals. TRICARE will be the second payer. The pilot program will be located in Cherokee, Texas and Santa Clara, California.

Finally, the National Defense Authorization Act for Fiscal Year 1999 authorized a TRICARE Pilot Pharmacy Benefit. The pharmacy demonstration program will provide Medicare-eligible beneficiaries who enroll in the program access to network retail and mail order pharmacy benefits. The pilot program will be located in two counties: Okeechobee, Florida; and Fleming, Kentucky.

In 1999 there were important improvements in the process of health care delivery for remotely assigned active duty service members within CONUS. The TRICARE Prime Remote program began in October 1999.

TRICARE Prime Remote is the new healthcare delivery program designed to improve access to healthcare for active duty service members who reside and work more than 50 miles, or one-hour drive time, from a military medical treatment facility.

The regional managed care support contractors are currently enrolling remote active duty service members into TRICARE Prime Remote. The enrollment process is not automatic. An enrollment form must be completed by the soldiers and submitted to the managed care support contractors. The regional Lead Agents and unit commanders play a critical role in identifying eligible members, and facilitating the enrollment process.

Enrolled active duty service members are provided access to civilian providers for primary care where contractor primary care networks exist. In places where there are no networks, service members may get primary care services from any TRICARE authorized provider.

Pre-authorization for primary care is not required. Primary care includes services for acute care (for example, colds, sinus infections), management of stable, chronic problems (high blood pressure), preventive care (for example, wellness examinations), and acute injury (for example, cuts, ankle sprains).

Pre-authorization is required for specialty care (for example, referrals for orthopedics, surgery, mental health, obstetrics, etc.). When specialty care is needed, the primary care provider or the service member contacts the managed care support contractor's Health Care Finder via a 1–800 number. Before authorizing the specialty care, the Health Care Finder will contact the Military Medical Support Office. The Military Medical Support Office is a tri-service staffed central office that provides military oversight for all remote active duty service members health care. If the soldier has an illness/condition that has fitness for duty implications, the Military Medical Support Office will direct the Health Care Finder to authorize the care at a medical treatment facility only. If the illness/condition is not a fitness for duty issue, the Health Care Finder is directed to authorize that care be provided locally. Care is automatically authorized if the process takes more than 48 hours. If specialty care is clinically required in less than 48 hours, the active duty service member may proceed with the care and a retrospective review will be done to determine potential fitness for duty implication.

Medical and dental care are covered along with prescription drugs and there are no cost shares or deductibles. In cases where up-front payment is required, the active duty service member submits a claim to the managed care support contractors (for medical claims) or the Military Medical Support Office (for dental claims) for full reimbursement.

A program that includes the family members where network providers exist (the Geographically Separated Unit program) is already in place in Regions 1, 2, 5, and 11. Expansion of the program for family members in the other Regions is projected for late fiscal year 2000 pending enactment of necessary legislative authority. The proposal would provide eligibility for the program and enhanced access, even in areas where there are not network providers. The Administration will present a legislative proposal to this effect this spring.

Better financial decisions will be made with an accurate count of beneficiaries enrolled in TRICARE Prime through each facility, and with the ability of the Corporate Executive Information System to keep "score" of resources expended. However, there is a bottom below which we cannot responsibly go. Our priorities must be to provide quality medical care, to keep faith with our service members and to invest in the future so the quality of our medical program will keep pace with advances in medical science.

In 1999, I whole-heartedly participated in a senior level cooperative effort with my fellow Surgeons General and the Department of Defense to develop a more integrated health services delivery system that emphasizes effective use of medical treatment facilities, focusing on beneficiary expectations and satisfaction. The result was the Military Health System Optimization Plan. We all agreed to implement the critical components of the plan as quickly as possible.

With the first generation of managed care contracts in place and current versions of the managed care support contracts beginning to elapse, the Military Health System Optimization Plan supports the next generation of TRICARE 3.0 support contracts that put in place needed TRICARE improvements. TRICARE 3.0 is a three and one half-year evolution to move away from highly prescriptive government requirements and processes. The beneficiary's satisfaction is at the forefront with mandatory performance outcomes. The contracts will include a more effective mech-

anism for holding contractors to contract terms. The elaborate and complex funding mechanisms of current Military Health System contracts are simplified under TRICARE 3.0.

The goal of TRICARE 3.0 is to migrate to a contract vehicle that has appropriate financial incentives to support the military direct care system in the recapture of purchased care. Specifically, TRICARE 3.0 strives to streamline the funding mechanism to better focus risks and financial incentives between the direct care system and contractor so that overall cost is reduced. TRICARE 3.0 provides the contractor bonus incentives for superior performance linked to beneficiary satisfaction. The new contract vehicle moves away from prescriptive government requirements and allows the use of best business practices.

Although much thought and energy has been invested in TRICARE 3.0 development, there are some key concerns. The objectives-based contract methodology chosen for TRICARE 3.0 works well for building aircraft, but has never been tried in a large medical service contract such as this one. Managed care commercial best practices are not standardized and may produce confusion for beneficiaries as they move from region to region. TRICARE 3.0 is anticipated to live up to the expectation that it will really fix the problems encountered in the execution of past contracts and produce a more cost effective and patient friendly healthcare system.

Quality of health care

I would like to discuss the issue of quality of health care. Two years ago, we collectively agreed to improve healthcare by implementing thirteen quality points. I would like to report that the Army Medical Department continues to make improvements in the delivery of quality health care in the following areas:

Phase out accessions and deployment of general medical officers.—To ensure clarity, a general medical officer was defined as a physician who has completed one year of graduate medical education and is serving in a non-training status. In 1998 there were 476 general medical officers in the Army. In 1999 there are 291. They serve as brigade surgeons, flight surgeons, and in clinics and hospital. At this time about 60 percent of these billets have been converted. A detailed study of all current general medical officer billets will be done, by the Medical Corps Branch at United States Army Personnel Command, to determine by site which positions still require conversion. Changes have also been made in graduate medical education to decrease the number of individuals in nonspecific internships. This decreases the numbers available to serve as general medical officers. A complete elimination of general medical officers is not necessary as long as adequate oversight and opportunity for consultation and continuing education is available.

Establish centers of excellence to provide improved patient outcomes for complicated surgical procedures.—The Assistant Secretary of Defense for Health Affairs established policy in 1995 for the implementation of the Specialized Treatment Program. The goal is to promote the highest standard of care throughout the Military Health System. A medical treatment facility could be designated as a national or regional Specialized Treatment Services facility. Assistant Secretary of Defense for Health Affairs established policy in 1997 that only medical treatment facilities designated as Specialized Treatment Services facility could continue providing health care in one or more 20 designated Diagnostic Related Groups. In 1998, Assistant Secretary of Defense for Health Affairs expanded the Specialized Treatment Services policy to include Center of Excellence designation. This enabled non-Specialized Treatment Services facilities to continue providing clinical care in one or more of the designated Diagnostic Related Groups.

Immediately resolve all malpractice and adverse action cases pending and file complete reports to the National Practitioner Data Bank where required.—The Headquarters, United States Army Medical Command is responsible for the administrative processing of the medical malpractice claims backlog. The Command conducted an analysis of the claims management process. Process design changes specifically identified to eliminate and prevent the case backlog were implemented over the past year. The United States Army Medical Command allows ninety days for processing the case upon receipt of legal settlement/judgment and a standard of care determination by the Consultation Case Review Branch. All cases not processed within that time limit constitute the backlog and are prioritized for completion. There is currently no adverse action backlog. Reports were submitted to the National Practitioner Data Bank in cases where moneys were paid, the standard of care was deemed not met and a provider was identified. Seventy-three were filed during fiscal year 1999. There are currently ninety medical malpractice cases undergoing administrative processing at Quality Management-United States Army Medical Command.

All military providers must have a valid, unrestricted and current license.—The Assistant Secretary of Defense for Health Affairs issued a memorandum dated Jan-

uary 29, 1999 that required all physicians to hold a full-scope license by October 1, 1999. All providers engaged in the independent practice of medicine are now required to possess a current valid and unrestricted license. There are no physicians with an Oklahoma Special license engaged in the independent practice of medicine in the Army. The United States Army Medical Command Quality Management Directorate began site visits to medical treatment facilities in January to assess organizational management of compliance with licensure, and the process for dealing with the impaired practitioner.

Provide Service input for the Annual Quality Management Report.—The Department of Defense Quality Management Report is an annual requirement in which Department of Defense specified service data from each Army medical treatment facility (military treatment facility) is consolidated and provided to the Assistant Secretary of Defense for Health Affairs. This data is integrated with input from the other Services to complete the report. The anticipated date for the most recent draft to be ready for review by the Services is April 2000. When the draft has been approved by the Services the final report will be published.

Fully implement TRICARE by assigning all enrollees a primary care manager or team.—All TRICARE Prime enrollees must be assigned to a specific individual care manager.

Generate a public report card at each facility sharing information concerning our Military Health System.—The minimum elements that are required to be included are waiting times for major services, patient satisfaction at the medical treatment facility (overall satisfaction with clinics and overall satisfaction with medical care), Joint Commission on Accreditation of Healthcare Organizations Summary Grid Score and the selected Joint Commission on Accreditation of Healthcare Organizations Grid Elements in the areas of credentialing, assessing competence, infection control, and nursing. All Army medical treatment facilities have reported that they are in 100 percent compliance with the requirement for the development of and displaying of the report card in their facilities.

Establish a healthcare council at each facility.—The requirements for the healthcare council are that it be chaired by the medical treatment facility commander, include consumers from the military community, solicit and address concerns of the enlisted service member and their families and meet quarterly. The most recent update for the Department of Defense Healthcare Quality Initiatives Report indicated that 100 percent of the Army medical treatment facilities had fully implemented the requirements for the council.

Implement a directory of providers in a medical treatment facility specific patient information handbook that will be updated annually.—The requirements for the directory are that the contents include medical treatment facility providers who are primary care managers as well as providers in specialty referral clinics who are most likely to receive consults from primary care managers. The design must conform to the template created by the TRICARE Marketing Office and be available to all prime enrollees. The most recent report on implementation of Department of Defense Healthcare Quality Initiatives indicated that 100 percent of the Army medical treatment facilities were in total compliance.

Place greater emphasis on the best clinical practices identified through our National Quality Management Program.—National Quality Management Program initiatives to identify best clinical practices continue. The National Quality Management Program completed baseline studies in fiscal year 1999, determining the extent of compliance with Department of Defense/Veterans Affairs and/or other national clinical practice guidelines so that the impact of implementing evidence-based disease management practice guidelines system-wide can be determined. The program will facilitate the benchmarking of Department of Defense facilities against their federal and civilian peer facilities on Department of Defense/Veterans Affairs Practice Guidelines and Department of Defense Putting Prevention into Practice evidence-based process and outcome quality indicators. The Joint Commission on Accreditation of Healthcare Organizations ORYX measurement program, Special Studies and the annual Quality Management Reviews continue to be utilized to benchmark Department of Defense facilities and identify best practices.

Place greater emphasis on direct use of clinical guidelines wherever appropriate.—The Department of Defense's partnership with Veterans Affairs, to adapt and monitor the implementation of practice guidelines, continues to flourish. The Army Medical Department leads in the development of guideline "tool-kits" which facilitate provider implementation of adapted guidelines by "making the best way the easiest way." Tool kits incorporate provider point of care, patient self-management and process/system tools to support guideline utilization. Three tool kits have been developed through the coordinated efforts of Department of Defense/Veterans Affairs providers, with another under development. The tool-kit supported Department of

Defense/Veterans Affairs Acute Low Back Pain Clinical Practice Guidelines have been piloted in two Army Regional Medical Commands. The Army Medical Department implementing a system-wide deployment of the Department of Defense/Veterans Affairs Acute Low Back Pain Guidelines based on preliminary results from a pilot study conducted by the Army Medical Department and the RAND Corporation demonstrating improvements in access and quality. Early results include increased access to care due to efficiencies in Primary Care and Troop Medical Clinics and a decrease in inappropriate referrals to specialty care. From the quality perspective, there has been an increase in the quality of documentation of the care of patients with low back pain and identification of clusters of injuries so that primary preventive efforts can be targeted at identified work sites.

Honestly evaluate our weaknesses and immediately improve them.—There is an ongoing quality improvement/reengineering effort to analyze, review and make recommendations on 29 initiatives that have been identified by Department of Defense for improving the Military Health System. The Reengineering Coordination Team published the Military Health System Optimization Plan to address these initiatives in February 1999. This Plan has been sanctioned by the Surgeons General in a memorandum for the Assistant Secretary of Defense for Health Affairs dated November 1999. The Optimization Plan provides the strategy for improving the efficiencies of the Military Health System and improving the responsiveness to the line and the health of all the beneficiary population. Policy guidelines are being developed to support many of the critical reengineering components, including assignment of primary care manager by name; standardized enrollment, Health Enrollment Assessment Review survey implementation, and appointment processes; and improved data quality and clinic management. Clinical optimization has been addressed specifically in the Reengineering Coordination Team-chartered Population Health Improvement Plan, which is currently under review. The Reengineering Coordination Team has approved the Population Health Improvement Plan. This plan includes process elements covering the reengineering components noted above throughout the spectrum of care. Processes necessary to assure optimal population health and quality of life are addressed beginning with population needs assessment at enrollment, continuing through prevention and education, to efficient and timely intervention strategies. Implementation of the Population Health Improvement Plan in a demonstration project is forthcoming early in 2000. Lessons learned from this demonstration will serve to define a tri-service Military Health System Support Center to sustain optimal strategies, and develop and update relevant strategies and policies over time.

Work to improve our patient satisfaction through communication and education.—This area is a part of TRICARE Operational Performance Statement and is tracked by region, facility and clinic at the Department of Defense level via the annual and monthly Customer Satisfaction Surveys. Initiatives to improve customer satisfaction with quality include increased customer informational efforts and employee hospitality training initiatives. Customer informational handbooks, briefings, computerized presentations and a variety of other media mechanisms are used to inform beneficiaries of available services. Data is also solicited from each beneficiary regarding their satisfaction with services offered and access to care. One product that has been developed as a result of the focus groups is the TRICARE Personal Profile Program, an interactive CD–ROM that simplifies and personalizes the TRICARE message. The prime focus of customer service and thus of patient satisfaction must remain the provision of timely, efficient, high-quality care. These communication processes are also vital because they reassure beneficiaries who are not currently under care and provide specific, detailed, up-to-date guidance on how to use the system when care is needed.

The rate of medical errors has recently gained national attention. The Army Medical Department has implemented a wide variety of initiatives to prevent medical errors:

—The Unit Dose Drug Distribution System automated drug dispensing technologies, and the use of specially trained and certified Registered Pharmacists certified for preparation of IV admixtures and specialty drugs (such as chemotherapy) are safeguards against medication errors. These have long been the standard of care in Army medical treatment facilities.

—All Adverse Drug Events are reviewed locally by the medical treatment facility Pharmacy and Therapeutics Committee with significant drug events reported to the Food and Drug Administration. The Department of Defense is currently working to implement the Pharmacy Data Transaction System, which will integrate all Department of Defense pharmacies, civilian retail pharmacies, and the National Mail Order Pharmacy in an all-out effort to prevent adverse drug events.

—Several "models of excellence" have been studied by the Department of Defense Pharmacy Board of Directors and adapted by the Army Medical Department to safeguard patients against medication errors. The Composite Health Care System provider order entry gets the right drug to the right patient by eliminating the errors inherent in hand-written prescriptions. Barcoding, and robotic technology for drug selection and labeling also decrease human error.

—Many of the safeguards generated by Composite Health Care System order entry system are also applicable in the clinical laboratory. In addition, the bidirectional interface of clinical analyzers (downloads orders from Composite Health Care System to the analyzer and uploads results back to Composite Health Care System) also significantly reduces transcription errors. Presently, the Department of Defense Laboratory Joint Working Group has an initiative to standardize laboratory data and gain interoperability between Composite Health Care System host computers.

—In the Blood Bank arena, the use of barcodes has been one method of improving specimen identification processes. This has been emphasized throughout the entire laboratory. The sites with donor and/or transfusion functions have installed the Defense Blood Standard System supported computers to assist in the issue of blood products.

—Risk management assessment by the Quality Management Division focuses special attention on high volume, high risk, or problem prone procedures. Trends are analyzed for lessons learned and performance improvement. All medical treatment facilities use a systematic process (root cause analysis) to assess and evaluate significant events.

—Peer review process is a mechanism used in all medical treatment facilities to determine if standards of care were met when there is a question about appropriateness of practice. Findings from the process are used to educate staff, improve practice and implement changes to prevent further occurrences.

—A Congressionally funded pilot project to evaluate the MedTeam concept is underway at three medical treatment facilities. The MedTeam concept was modeled after the successful error prevention initiative in the aviator community and uses a team based approach to reduce errors in the Emergency Department. Early results indicate as much as an 84 percent reduction in errors in those Emergency Rooms studied.

Congressionally directed research

The Fiscal Year 2000 Defense Appropriations Act applauded the medical research and development efforts and accomplishments of the Department of Defense. I would like to discuss the highlights of several of these programs.

As you know, the United States Army Medical Research and Materiel Command (USAMRMC) has been entrusted by Congress with the management of congressional special interest research programs. The appropriations have totaled almost $2.5 billion since fiscal year 1990. The Command's vision is to ensure the sponsorship of good science that can also benefit the DOD and fulfill the mission of the USAMRMC. When appropriate, the research results have been mined for application within the DOD as well as the civilian sector. Examples of these programs are the Breast Cancer Research Program, the Prostate Cancer Research Program, and the Volume AngioCAT project.

Since the inception of the Breast Cancer Research Program (BCRP), 1,806 proposals have been awarded with fiscal year 1992–98 funds totaling approximately $629.1 million. The following products have been reported by investigators and represent a measure of the program's success: over 2,300 publications in scientific journals, 1,800 presentations at professional meetings, and 30 patent/license applications. Tangible program accomplishments and outcomes directly resulting from this funding have been in the areas of infrastructure enhancement, training, HER–2/neu oncogene research, angiogenesis, mammographic imaging, environmental carcinogenesis and quality of life. Since the inception of the Prostate Cancer Research Program, the program has received over 1,200 proposals and approximately 300 proposals will be awarded with fiscal year 1997–99 funds. Research funds awarded to date total approximately $105 million. The PCRP is a young program, with the first research proposals beginning research in May, 1998. This funded research is novel and innovative, and is expected to provide exciting outcomes and to provide a solid framework/foundation for contemporary and future scientific discoveries.

The Volume AngioCAT project is envisioned as a newly conceived medical device that could employ, simultaneously and in real time, several imaging technologies that might provide physicians with a new level of anatomic and physiologic data about their patients. Advanced detection, before the onset of symptoms, might be provided for such important disorders as atherosclerotic cardiovascular disease

(which leads to heart attack and stroke), orthopedic disorders (arthritis, osteoporosis affecting a variety of structures), or even infection and cancer. Such information might allow for aggressive new preventive interventions in patients that were "missed" on routine physical examinations, thus maintaining a healthier active duty and retired population. The first prototypes of a Volume AngioCAT will function in fixed facilities, however, the research may be central to the development of units that could function in deployed environments for rapid diagnosis of the injured warfighter.

I would like to close this discussion by expressing my concern that past and future funding challenges facing medical facilities have the potential to contribute to reduced quality of care. The full support of maintenance, repair, renovation and replacement of aging inventory is the only way to avoid systems failures that disrupt the normal delivery of healthcare services and significantly increase future repair requirements and costs. Historical MILCON funding trends have shifted the burden to an already stretched Repair and Maintenance program to maintain facilities.

In conclusion, I believe today's Army Medical Department is more flexible and better prepared to meet diverse missions than ever before. I thank you again for the opportunity to testify today and for your continued support of our efforts to provide the finest quality of medical support to America's Army.

Senator STEVENS. Yes, sir. Admiral.

STATEMENT OF VICE ADM. RICHARD A. NELSON, MEDICAL CORPS, SURGEON GENERAL, U.S. NAVY

Admiral NELSON. Mr. Chairman, thanks for the opportunity to come before you, and I also have a written statement that really talks about the positive issues going on in Navy medicine, and a couple of the issues, problem areas that we have, and I will not dwell on that here.

Senator STEVENS. I like them, Admiral.

HEALTH CARE

Admiral NELSON. Well, these have been an interesting couple of years for me as the Navy's Surgeon General as we wrestle the issues of delivering health care and keeping the promises we have made to our beneficiaries. Health care is very important to our active duty and our retirees. In fact, it is one of the key quality-of-life factors that affects the morale and the retention of our active duty.

But the benefits that we afford the retirees are viewed as an indicator of the extent to which we honor our commitments, and just a couple of days ago I had a letter from a retiree who wrote and talked to me about the health care he had been receiving. I will read to you just the last sentence of what he had to say.

He says, "the health care that I have received in military hospitals during active duty and retirement has been the most outstanding benefit I have received in my military career." This is an individual who is reaching 65. He is having medical problems, and he has the good fortune to have access to our facilities and has appreciated that. Too many do not have that access. That is the crowd that I worry about.

We in the military and in the Navy medical system are working hard to optimize access to our system. We are working to do the things that will make us more capable and allow us to increase the capacity in our own direct care facilities, but we need assets to be able to do that.

Our beneficiary population had some disappointments in the inconsistencies and the cumbersome administrative processes that TRICARE has projected at times. The access problems to our own

direct care systems are the things that we are working to try to overcome.

Several of the health care proposals that are before the Congress this year are a step in the right direction towards correction of some of these issues. Health care is very expensive, and reform is necessary for our active duty members and our retirees. However, one thing that I would like to stress, and that is, as you look at benefits and possible changes and the like, the first thing that I think you must do is fully fund the services' medical treatment facilities. We must be able to do as much in-house and be able to make these facilities as productive as they can be, and we have not been able to do that in recent times.

I thank you for the opportunity to come before you. I look forward to your questions. Thank you, sir.

[The statement follows:]

PREPARED STATEMENT OF VICE ADM. RICHARD A. NELSON

Good morning! I am Vice Admiral Richard A. Nelson, the U.S. Navy Surgeon General. I want to thank you, Mr. Chairman, Senator Stevens, and members of this Subcommittee for the opportunity to appear before you to testify on the status of Navy Medicine. In April 1999, I submitted testimony to this committee on Navy Medicine's strategic plan and goals. I would like to share with you our accomplishments over the last year. As we move into a new century, the Navy Medical Department is well prepared to meet the challenges ahead. We are in an era of unprecedented change for medicine, and the military health system must be flexible enough to embrace new technologies, new clinical practices and new business practices as they evolve. Navy Medicine has been working hard to ensure continued excellence in health services to keep our uniformed services ready.

The past year has been a busy and rewarding one for the Navy Medical Department. One significant milestone is the opening of a new facility at Naval Medical Center Portsmouth, Virginia. The Charette Medical Center, named in honor of a Korean War Hospital Corps Medal of Honor recipient, is a state-of-the-art facility that has significantly improved our ability to serve our beneficiaries in the Tidewater area. The medical center also recently opened two new TRICARE outpatient clinics at Virginia Beach and Chesapeake, which will greatly improve access to military care for beneficiaries.

We've also been providing care in response to natural disasters, such as Hurricanes Dennis and Floyd, Typhoon Bart, earthquakes in Turkey and closer to home at 29 Palms, California. At 29 Palms, Navy Medicine responded superbly in assessing damages in the affected areas, prioritizing concerns and coordinating emergency repairs while ensuring patient care was not compromised.

For the devastating earthquake in Turkey, a Surgical Response Team from U.S. Naval Hospital Naples deployed to support the victims. 22 medical and dental specialists were on the ground setting up camp within 48 hours of the earthquake. Despite extremely hot temperatures and challenges of working in the field, the team performed superbly. The experience provided a valuable opportunity for them to hone their skills and test their readiness while providing relief to people in need.

We are making strides in improving TRICARE and doing so with the full support of the Joint Chiefs of Staff. Our Chief and Vice Chief of Naval Operations (CNO, VCNO) have a great appreciation for Navy Medicine and the need for leadership to be involved in making TRICARE work. The VCNO, Admiral Donald L. Pilling, volunteered to chair the newly created Defense Medical Oversight Committee (DMOC). The DMOC engages senior military and civilian leadership in discussions and review of the health care benefit, Defense Health Program (DHP) funding requirements in the context of other service decisions, and management and reengineering initiatives.

Focus areas

Much of our preparation for the future has required an introspective look at our organization, our people and the way we do business. During my first year as Surgeon General I identified five key focus points for Navy Medicine: Service to the Fleet; Manage Health Not Illness; TRICARE and Readiness are Inseparable; Make TRICARE Work; and Embrace Best Business Practices.

Strategic plan

These focus points complement our corporate strategic plan. The Navy Medical Department's strategic planning process has been evolving continually in an effort to align and increase accountability throughout our worldwide health delivery system. Our aim has been to accomplish two major objectives—reassess the Mission, Vision and Guiding Principles for Navy Medicine and develop true strategic goals that will move us toward sustained, higher levels of performance. These goals must be translated into objectives that are applicable to our commands, activities, and customers on a daily basis. In addition, they must lend themselves to measurement so that we can assess the improvement in Navy Medicine's performance at the local and corporate levels. We are confident that our current plan reflects our organizational growth as well as the changing health care environment.

Our mission—to support the combat readiness of the uniformed services and to promote, protect and maintain the health of all those entrusted to our care, anytime, anywhere—was reworked to resolve the perennial question about our "dual" readiness and peacetime roles. We are trained for our readiness mission through our peacetime health care delivery. Thus, we streamlined our vision statement to "Superior Readiness Through Excellence in Health Services."

Our current strategic plan has four major themes—Force Health Protection, Health Benefit, People, and Best Business Practices. The overarching message of this plan is very simple—our ability to support combat readiness is directly linked to our ability to provide superior health services to our 2.5 million beneficiaries worldwide, every hour of every day.

The challenge for current and future leaders of Navy Medicine is to maintain focus on the accomplishment of these goals and their supporting objectives while simultaneously solving the myriad day-to-day issues they face. Our leadership can and will meet this challenge.

Force Health Protection

As outlined in the DOD Medical Readiness Strategic Plan (MRSP), the military medical departments exist to support the combat forces in war; and in peacetime, to maintain and sustain the well being of the fighting forces. The medical departments must be prepared to respond effectively and rapidly to the entire spectrum of potential military operations—from Major Theater Wars (MTWs) to Military Operations Other Than War (MOOTW).

Readiness to support wartime/contingency operations will require us to successfully accomplish several missions. We must be able to identify the medical threat; develop medical organizations and systems to support potential combat scenarios; and train medical units and personnel for their wartime roles. We must train and educate non-medical personnel; conduct research to discover new techniques and materiel to conserve fighting strength; and provide both preventive and restorative health care to the military force.

Force Health Protection is a strategy that maintains readiness by promoting a system of comprehensive quality health services that ensures our people are fit and healthy; that they are protected from hazards during deployment; and that when illness or injury intervenes, they are afforded state of the art care.

We can protect our people better by emphasizing prevention and health promotion to keep them fit and healthy as opposed to giving them treatment once injuries or illness occurs. Stronger, fitter and healthier military members are less likely to be accidentally injured, heal better and faster, and are more readily able to handle diseases and stress.

In keeping with this culture shift, we have strengthened programs to promote healthy diets, exercise and tobacco cessation as well as prevent and minimize injuries. Our efforts are proving successful and are reducing injuries, curbing attrition and saving money for the Navy and Marine Corps.

The Navy Environmental Health Center runs a training program for health promotion coordinators in conjunction with the Cooper Institute, training both medical and line personnel in methods of changing health behaviors. These coordinators are then qualified to establish programs at their home units. Our surface forces have actively embraced this concept, granting the "Green H" award to ships and other units meeting specified criteria. Areas included in this program are fitness, nutrition, stress management, occupational health issues, hypertension screening, tobacco cessation programs, and STD prevention.

Disease and illness among any population is an unavoidable fact of life despite our emphasis on prevention. To provide further intervention, Navy Medicine initiated a Disease Management program in partnership with Lovelace Health Innovations at our medical centers in Bethesda, San Diego and Portsmouth with a focus on diabetes at the first two facilities and asthma at the latter. All three sites have

made significant inroads in identifying their diabetic or asthmatic population, giving their providers tools to better manage their patients' disease, integrating health care for diabetic and asthmatic patients and developing health promotion programs specifically targeting these diseases.

Musculoskeletal injuries also pose a significant challenge to the readiness and retention of Sailors and Marines and are the number one medical reason for first term separations. The Naval Health Research Center in San Diego has been involved with the Marines and the Naval Training Centers to decrease stress fractures in personnel by adjusting the frequency, intensity and speed of progression of physical training. As a result, fewer Sailors and Marines are seeking costly medical intervention for sprains, stress fractures, shin splints, dislocations and other injuries sustained during training. Lost training days are down and personnel are back on the job sooner, helping to support the Navy's mission-readiness.

Our mission in military medicine is to support warfighters and all our TRICARE beneficiaries. The war fighters support mission is the reason for our existence and drives our requirements, endstrength and mission. Training and sustaining a ready force which has significant operational and peacetime responsibilities and commitments is a major challenge.

During the past several months, we have been working diligently to ensure the readiness of our medical department personnel charged with manning our Fleet Hospitals, Hospital Ships, Casualty Receiving and Treatment Ships, and Marine Force augment. Just as ships of the line returning from deployment enter a lesser readiness phase while receiving needed upkeep and crew training, so do our medical platforms. As units are reconstituted and become more likely to deploy, their readiness status is increased. We are testing this concept with the 84-man augmentation elements assigned to each of our Fleet Surgical Teams on the large deck amphibious ships. So far, we have every indication this model is meeting our readiness requirements while reducing the training demands on our hospital-based medical personnel. We can thus provide the maximum peacetime care possible to our Sailors, Marines, and their family members, and still keep our units in a high readiness status.

By performing priority tiering of medical platforms in line with the Fleet's Inter-Deployment Training Cycle (IDTC), Navy Medicine will have achieved an alignment of our deployable assets with our line constituents. This approach allows some predictability on the operational schedules of deploying platforms, promotes unit integrity by training, deploying and preparing as a cohesive force, and makes the most productive use of our medical manpower in support of both our readiness and peacetime roles.

As you can imagine we are concerned about chemical/biological incidents and have formulated various initiatives to address the threat. Navy Medicine has developed a three-day Chemical, Biological, Radiological and Environmental (CBRE) Casualty Care Management Course. So far over 250 providers have received training in 1999. In addition to providing the necessary CBRE training to medical personnel, our Naval Environmental and Preventive Medicine Units (NEPMUs) have designated specific staff members as primary responders to requirements for CBRE medical surveillance. Deployable biological laboratory equipment is also available in each of our NEPMUs and staff members are developing expertise and protocols for use.

The Anthrax Vaccine Immunization Program (AVIP) is one of our highest priorities for Force Health Protection. Navy Medicine began vaccinating service members in March 1998 and as of 6 December 1999 has completed the immunization series on approximately 78.2 thousand Navy and 67 thousand Marine Corps personnel. The Naval Medical Information Management Center (NMIMC) consolidates DON data for entry into DEERS.

The DON has an ongoing education/training program within the fleet, Marine Forces and MTFs. The Navy Lifelines and the Navy Environmental Health Center Web sites provide links, briefings and forums for both medical and non-medical personnel and a toll-free number staffed by AVIP agency staff is also available. Several messages have been released by Navy Fleet CINCs, and myself reiterating AVIP guidance. Refusals to take the vaccine within DoN have not had an impact on unit effectiveness from the readiness standpoint. Navy and Marine Corps have issued guidance to commanding officers regarding courses of action available to manage refusals.

In order to help us enhance our understanding of the types and magnitude of reactions experienced by our personnel, Navy health care providers are encouraged to submit Vaccine Adverse Event Reporting System (VAERS–1) forms and to assist members desiring to submit VAERS–1 forms for reactions experienced. Submission of a VAERS–1 form does not establish a causal relationship between the reaction and vaccination. The Anthrax Expert Committee, under the auspices of the FDA re-

views each VAERS–1 for determination of causal relationship. As of 21 January 2000, a total of 52 VAERS–1 forms have been submitted on Navy/USMC personnel. All members have returned to duty.

One other important point to mention under the Force Health Protection strategy is that we recently revised our corneal refractive surgery physical standards and waiver policies for the Navy and Marine Corps. Our new policy directly addresses general accessions, as well as active duty personnel currently serving in undersea/diving/special warfare, surface warfare and air warfare communities. The most significant contribution the surgery offers our active duty forces is its ability to enhance human performance in operational environments where glasses or contact lenses may compromise the ability to safely perform required duties. Laser vision correction will be an important contribution to improving operational readiness.

Health Benefit (TRICARE)

The complementary partner to Navy Medicine's readiness mission is the health benefit mission. Fundamental changes are ongoing in the way health services are organized, delivered, and paid for, in both civilian and military sectors. Today, all health plans are competing on the traditional bases of access, quality and cost. An intrinsic element that distinguishes the truly outstanding programs from the rest is the health outcomes the system achieves for its beneficiaries. Thus, just as health and fitness are critical barometers of the readiness of our Navy and Marine Corps forces, so too is the health and fitness of our extended military family. This family includes the spouses and children of our active members, and our retirees, their family members or survivors.

I want to take this opportunity to share with you an update on the state of TRICARE as I see it today. TRICARE is the tangible tool that supports readiness by offering a uniform benefit, with guaranteed access and specialty care when needed whether forward deployed, near an MTF, remotely stationed in CONUS or overseas. Managed health care keeps Sailors and Marines fit for duty and directly contributes to optimal readiness. TRICARE provides that managed health. It's a good program that was fully implemented last year and has already made a very positive impact. However, nationwide implementation also revealed areas for improvement that we will need to address as quickly and aggressively as possible. The initial TRICARE contracts are only partially successful. Difficulties have been experienced in areas of billing and claims payment, telephone access, timely appointing, and provider network development. Stricter requirements have been implemented, and as the contracts begin to expire over the next two years further improvements will need to be made.

We also need to address leadership education and beneficiary education. The TRICARE options while offering a choice, can lead to confusion and indecision on part of some of our beneficiaries. While TRICARE Prime is clearly the most beneficial program for the majority of our population, our efforts to communicate this message have been complicated by numerous program changes as TRICARE has grown and matured.

Along this marketing and education journey, we need to improve on administrative and customer service concerns. Extensive patient satisfaction surveys have shown that patients are very satisfied with the healthcare they receive, but are often frustrated by administrative and customer service issues. In time, the sum total of our education and customer service initiatives will directly contribute to our steadily improving enrollment rates.

Customer satisfaction will be greatly enhanced by the new MHS optimization initiative of "PCM by Name." Linking beneficiaries to a specific Primary Care Manager will not only give them the personal touch they seek in health care, but also improve accountability for the proper management of their health. I'm confident Navy medical treatment facilities will work hard to implement this policy promptly and smoothly.

We may not have reached our goal, but are well on our way to a more solid, dependable system for providing quality health services to our beneficiaries. We must maintain high quality health care, improve customer service and access, while monitoring costs.

TRICARE 3.0 and other TRICARE improvements are designed to address many of current problems, including improved business practices, making regional boundaries transparent and focusing on the MTF as the centerpiece of healthcare delivery. Region 11 has been selected to serve as a demonstration site for TRICARE 3.0 and will provide valuable insight for program improvements.

Senior leadership and I remain concerned that many older military retirees do not have full access to the Military Health Care System. In an effort to better serve the medical needs of military beneficiaries who are 65 and over, DOD is testing several

programs, including TRICARE Senior Prime, a managed care demonstration program, at selected sites across the country. It provides enrollees with all of the benefits available under Medicare, plus additional benefits under TRICARE Prime. I fully support the demonstration programs designed to evaluate the incorporation of these beneficiaries into our system. I am pleased to report that Naval Medical Center San Diego, the single Navy site, has enrolled 95 percent of its capacity of 4,000. Indications are that enrollees have greater access and improved satisfaction with the delivery of their health care.

The implementation of TRICARE Prime Remote for active duty members will significantly enhance healthcare quality and access to our beneficiaries attached to geographically separated units within the regions. This initiative is a great benefit to our active-duty service members—by delivering the uniform benefit through the civilian provider network, and needs to be extended to their family members. An extension of this program to active duty family members is included in the President's Budget proposal for fiscal year 2001. A key component of the MHS Optimization Plan is to initiate a beneficiary shift back to the direct care system to ensure optimal use of our military treatment facilities (MTFs). The optimization plan is designed to change the focus of care from the contract provider network to the direct care system, resulting in additional cost savings. The main aspects of this plan are population health improvements, with additional emphasis on optimal use of the MTF. This plan will shift the emphasis of providing primarily episodic and costly intervention services to better serving our beneficiaries by preventing injuries and illness. Instead of waiting for our beneficiaries to become ill or injured, we will deliver preventive services and anticipate their health care needs. Our beneficiaries will be healthier and operational readiness will improve.

People

Our people are the critical resource in accomplishing Navy Medicine's mission. Their professional needs must be satisfied for Navy Medicine to compete. Their work environment must be challenging and supportive, providing clear objectives and valuing the contributions of all. Their commitment must be reinforced by effective communication, teamwork, respect, and outstanding leadership. Job satisfaction is an essential element in recruiting, retention and development of a professional, career-oriented Medical Department. In addition, Navy Medicine must align and train its military, civilian and contract partners to support the mission.

Over the past year, we have been focusing attention on our General Medical Officer (GMO) Program to see how best to conform to a congressionally supported GMO-conversion plan. GMOs are highly suited to the Navy's operational environment and the benefits are mutual for the line and Navy Medicine. GMO tours help broaden our physicians' perspectives on life in the Navy and Marine Corps. GMOs constitute a significant source of high quality primary, urgent and emergency care in operational and clinical settings around the world. Customer satisfaction surveys rate GMOs equal to specialists. In addition, quality reviews demonstrate that GMOs practice excellent medicine with a very low rate of adverse events.

A Task Force recently convened to conduct a review of our GMO billets and to address which should remain GMOs and which are suited for fully trained specialists, nurse practitioners, physician's assistants or independent duty hospital corpsmen. We need to preserve the GMO where their skills are well matched to patient needs.

We have also placed a renewed emphasis on the health of the Hospital Corpsman (HM) and Dental Technician (DT) enlisted communities. We are looking at new methods and innovations in education, reviewing curricula, and focusing on training to real needs. We have increased the specialty school (C school) quotas in many of our HM schools to improve our community manning. In order to keep our pipeline for career development and the corpsman "C" school seats filled, we have promoted career fairs at many of our medical and dental treatment facilities. Utilizing the Enlisted Technical Leaders and the Detailers, we are able to recruit hospital corpsmen and dental technicians into "C" schools and write orders on the spot.

As the Fleet Marine Force (FMF) corpsman is such an integral part of our enlisted community, a special advocate for the FMF hospital corpsman has been placed on our BUMED staff to better align us to the issues and concerns of those corpsmen and dental technicians serving with the Marine Corps. And in further support of fleet marine force corpsmen, an FMF warfare device is being proposed as an outward recognition of this important and unique duty.

Of course our Reservists also play an integral role in supporting our mission. Our Reserve Utilization Plan will optimize our use of reservists during peacetime and contingencies. At the recent AMSUS meeting Reserve Component (RC) and Active Component (AC) leaders sat down and negotiated the fiscal year 2001 personnel

needs of Navy Medicine to support both operational forces and military treatment facilities. Additionally, they laid out a plan to integrate RC and AC to attain those needs. This will allow long-term budgeting and personnel management. It is another way of saying "The right reservist, at the right place, at the right time" but adding "planned for and funded" to the equation.

Best Business Practices

Navy Medicine must carry out our mission as a business, recognizing the readiness, social, personal, professional and economic impacts of our decisions. The resources required to improve health vary greatly depending upon the environment, beneficiary mix, duration of support, echelon of care and alternatives available.

A key to our long-term success is the employment of sound business practices throughout Navy Medicine. They will cross the entire spectrum of our activities—clinical care, forward-deployed medical care, education and training, research and development. The successful use of business case analyses will provide documentary support in our decision-making. We've published a BUMED Guide to Business Case Analysis (BCA) for use as a reference.

The fundamental base of a BCA is the use of quality data. The guide will help local commands transform the raw data into useful information. It will standardize the analysis process and help identify opportunities that will best benefit the organization.

The integrity of our data and our analytical process has never been more important than right now. Our ability to finance additional programs will continue to be constrained by resources. We must do a better job in Navy Medicine of fostering innovative solutions, managing risk, and anticipating resource requirements.

To this end, BUMED participated in drafting a Memorandum of Agreement (MOA) between the Department of Defense (DOD) and the Department of Veterans Affairs (DVA) combining the strengths and buying power of the DVA with those of the DOD. The objective of the MOA is to combine the contracting requirements from both agencies and leverage that volume to negotiate better pricing. This business initiative will allow the customers of both agencies to select the product and pricing that best meets their needs, thus lower pharmaceutical and medical materiel costs.

Research and Development (R&D) initiatives are another aspect of improving our business practices. In order to prioritize the Science and Technology Account applications, the Department of the Navy has developed an Integrated Product Team (IPT) process for 12 discrete Future Naval Capability (FNC) areas. Navy Medicine's focus is on the FNC "Warfighter Protection". To achieve this FNC, the following enabling capabilities have been developed:

1. Combat Casualty Care and Management: Maximize as far forward as possible with reduced infrastructure and logistics,
2. Enhance Warfighter situation awareness and counter threats from disease, battle and non-battle injuries, and
3. Preserve health and enhance fitness of ready forces.

I feel we have already made significant strides towards achieving some of these capabilities:

Recent tuberculosis (TB) outbreaks among the crew of a Navy ship have underscored the importance of testing operational units for exposure to TB. The skin test for TB may no longer be necessary thanks to the ground breaking work of scientists at the Naval Dental Research Institute (NDRI). NDRI researchers have developed a technology for testing oral fluids for immunogenic proteins, and believe they will be able to develop a rapid, inexpensive, screening test for exposure to tuberculosis. Salivary diagnostics present tremendous readiness possibilities for the military. This technology holds potential for rapid detection of antibodies signaling exposure to diseases and environmental toxins.

Last October, Captain Stephen Hoffman, Medical Corps received the Robert Dexter Conrad Award, the Navy's highest honor for scientific achievement, for his contributions to malaria vaccine research. As Director of the Malaria Program at the Naval Medical Research Center, Hoffman led the effort to sequence the first malaria chromosome (Plasmodium falciparum), thereby elucidating numerous new targets for vaccine and drug development. His work has paved the way for a future multigene DNA vaccine against malaria and other infectious diseases as well as biological threats. Hoffman's other accomplishments involve creating the world's leading malaria vaccine program, internationally acclaimed in the pursuit of one of nature's most challenging biological problems.

One last aspect of best business practices that I would like to touch on is exploiting Information Technology and Information Management. I have already mentioned that information management and data integrity are vital to improving our

business practices. Navy Medicine is also involved in some very innovative ways of utilizing Information Technology to assist us in meeting our mission requirements:

As you are aware, telemedicine has been instrumental in improving medical care fleet wide by increasing patient/provider access to specialized medical facilities and services across time and distance. Shipboard use of this technology has seen a significant decrease in medevacs which is not only keeping our sailors on the job, but according to the Center for Naval Analyses, realizes a cost savings of $4,400 per avoided medevac. Telemedicine is also being utilized by U.S. Forces in locations such as Bosnia, Macedonia, Haiti, and Southwest Asia and has proven useful during exercises involving both land and naval forces. Current telemedicine projects include teledermatology, rapid transmission and receipt of medical data, as well as expanded efforts in teledentistry, teleradiology, and home health care. The technologies and lessons learned from these projects are the foundation for formulating convergent strategies for research, education, and clinical practice. These strategies will ultimately change the way DOD uses information and technology to provide health care.

The use of Smart Card technology is also improving on the way Navy Medicine does business. About the size of a credit card, the Smart Card contains an embedded integrated circuit which contains both memory storage capability and a central processing unit. The cards enable quick expedient tracking and recording of immunizations and episodes of care, which saves time, improves access to health care information by authorized providers, and reduces redundant data entry and transcription errors. Although not fully implemented, the program is a glimpse into the future and has seen success with the recruit population at Great Lakes, Illinois. In the future the card will contain not only medical information, but a Sailor's service record as well.

Conclusion

With a strong viable strategic plan in place, Navy Medicine looks to the future with excitement. As we work together to reach our corporate objectives in our goal areas of force health protection, the health benefit, people, and best business practices, we are confident that the entire Navy and Marine Corps team will reap the benefits. However, a major distraction to our initiatives are budget challenges and unexpected reprogramming events. A stable fiscal environment is essential for planning to be successful. Operating on a mere sustainable budget also limits the amount of reengineering we can undertake and reduces investments in efforts that have long term cost savings and benefits. Our ideas are promising, our people are bright, talented and motivated. I am privileged to be a part of such a vibrant and evolving organization during this historical time.

Senator STEVENS. Yes, sir. Thank you.

General, nice to have you on board.

STATEMENT OF LT. GEN. PAUL K. CARLTON, JR., AIR FORCE SURGEON GENERAL

General CARLTON. Mr. Chairman, Senator Inouye, members of the committee, thank you for this opportunity to address the important issues that are facing the Air Force Medical Service.

The times have never been more exciting for the Air Force Medical Service. We divide our thoughts into our privilege and our pleasure. Our privilege is to serve this great country in the arena that we call readiness. Our pleasure is to take care of the great American patriots who have earned the right to our health care.

Initiatives under our privilege are readiness in support of the Expeditionary Aerospace Force. We have made great strides in ensuring that our medics have state-of-the-art training and readiness capabilities. This is vital as we prepare for our tripartite missions of war-winning, disaster relief, and support for humanitarian operations. We have an international training program for disaster response that allows us to help other countries around the world deal with the challenges of disasters. It premiered in United States Southern Command (SOUTHCOM), and is now headed for other theaters.

We are fielding new expeditionary medical support platforms. They will replace the air transportable hospital with an even more flexible and modular arrangement. We have reduced the lift profile as much as 94 percent, and we can now provide theater commanders medical arrangements within hours instead of weeks. We are working on weapons of mass destruction issues. Project Yorktown, complete with knowledge couplers, is an integrated suite of early warning and identification capabilities for biological and chemical attack, and it has been fielded and is operational. Our National Guard partners are building civilian exercise scenarios in Texas and in Missouri that are templates for the future, and exciting for us to participate in.

In our pleasure, peacetime health care, we remain committed to optimizing our peacetime health care system. Our product is now health instead of medicine or surgery or dentistry. We have established metrics to assure that our game plan is working. We have just finished a comprehensive program called primary care optimization, which teaches our primary care providers around the world leading edge techniques in primary care and population-based health care.

These methods have been successfully utilized in the United States Air Forces in Europe for the last 2 years. We are optimizing Veterans Affairs (VA) relationships with three fully integrated hospitals in Alaska, Nevada, New Mexico, and one in transition in California, win-win in every case.

Our demonstration programs to keep the promise to our over-65's are popular with our enrollees, but we need to carefully examine the lessons learned. The anticipated revenue streams have simply been dry.

The bedrock of our quality care for all beneficiaries is population-based health care. Our most notable achievement among the many population-based health care efforts has been the suicide prevention program. This has dramatically reduced the number of suicides in the Air Force, because it involves the entire community in the process. It is the national benchmark recognized by the White House and the national media. It is being used as a model by the Department of Health and Human Services.

In conclusion, the Air Force is committed to optimizing our entire system with an unrelenting focus on our many different customers in both our privilege and our pleasure. Thank you for your tremendous support in helping us achieve that commitment.

Thank you, sir.

[The statement follows:]

PREPARED STATEMENT OF LT. GEN. PAUL K. CARLTON, JR.

Mr. Chairman and members of the committee, thank you for this opportunity to address the goals and accomplishments of the Air Force Medical Service (AFMS). I consider it a privilege to appear before this committee who has worked so hard on our behalf.

As I begin my tenure as the Air Force Surgeon General, I am honored to lead the finest young health care professionals in the world into the 21st Century. The Air Force Medical Service (AFMS) will continue to execute our successful "Parthenon" strategy, centered on medical readiness, employing TRICARE, tailoring the force, building healthy communities, and customer satisfaction. However, we will expand the horizons of the strategy to focus on population-based health care and global support of the Expeditionary Aerospace Force.

Reengineering Medical Readiness

The AFMS is well positioned to support our new Expeditionary Aerospace Force doctrine. We must be able to respond to major theater wars with a power projection force, while also being able to support small-scale contingency operations. Our nation's commitment to global engagement has meant unprecedented peacekeeping, humanitarian and civic action deployments since the Persian Gulf War. The AFMS has made significant strides in ensuring the 21st Century aerospace warrior will have new, modular, and flexible medical readiness capabilities to support these operations.

The AFMS operational support capability must address three major functional areas: war-winning, disaster relief, and support for humanitarian operations. Each of these functional areas is critical to supporting our National Security Strategy. I have directed my staff to optimize operational health support to provide this full spectrum support. We are working with the Air National Guard to optimize and enable their forces to provide military support to civil authorities. I have also directed my staff, in conjunction with regional CINCs, DOD, and the Department of State, to develop a comprehensive AFMS medical theater engagement support plan. Our reengineering efforts will be vital to achieving these operational goals.

By the end of this fiscal year, we will have replaced our contingency hospitals with Air Force Theater Hospitals (AFTHs), which provide a modular, incrementally deployable capability to provide essential care. They use existing Air Transportable Hospital (ATH) and specialty teams, along with pre-positioned (buildings) and deployable (tents) AFTHs. Future force commanders will dial up or dial down Air Force clinical and technical capability, easily permitting the deployment of hospitals from 10- to 114-bed capability. The Form, Fit, and Function Follow-on Test conducted last February at Nellis AFB proved that our concepts of operations, manpower force listings and allowance standards will meet operational requirements.

Also in fiscal year 2000, we will begin fielding our new Expeditionary Medical Support/Air Force Theater Hospital (EMEDS/AFTH), which will replace the ATH. We will have a very clinically capable, light, flexible, modular package that leverages man-portable assets such as the Mobile Field Surgical Team, Critical Care Air Transport Team, Squadron Medical Element and our specialty sets. The increments are EMEDS Basic, EMEDS + 10-bed AFTH, and EMEDS + 25-bed AFTH. The beauty of this new capability is that we can append specialty sets and wards at the 25-bed level, thereby sustaining up to the 114-bed AFTH, should we require this capability. More importantly, we have reduced the lift profile three-fold (from 55 to an estimated 18 pallets for 25-bed AFTHs). This new field hospital package can provide the theater commander exactly the level and mix of medical services he or she requires in as little as 12 hours post-arrival for the basic increment.

To support EMEDS/AFTH, we are planning field training using clinical, technical and readiness field experts to develop bold and decisive medical leadership to respond to the rigors of Air Expeditionary Forces (AEF) deployments. Beginning in February, and ramping up over two years, training will include all team members and will be prioritized based on the AEF rotation schedule.

The AFMS has answered the call of the CINCs in one other vital area. The Air Force now has a well proven capability to care and manage the critical care patient in the Aeromedical Evacuation (AE) System. Through the use of Critical Care Air Transport Teams—or CCATTs—we augment AE crews to evacuate newly stabilized patients to CONUS for definitive care. We have trained more than 151 CCATTs and have 51 equipment sets on hand, with plans to field 25 sets in fiscal year 2000.

As part of Mirror Force, the AFMS initiative to bring together active duty, Guard and Reserve components into a seamless force, Air Education and Training Command developed the Aeromedical Evacuation Contingency Operations Course to provide critical training for Total Force ground-based AE units. This course became operational in May 1999. In addition, we developed the Top Sustainment Training to Advance Readiness (TopSTAR) course to regionalize refresher training for all components. The first TopSTAR site became operational at the 59th Medical Wing, Lackland AFB, Texas, in February 1998.

Force health protection continues to be on the forefront of our efforts. Though far from completion, we are accomplishing a great deal in response to Weapons of Mass Destruction (WMD) requirements. The Air Force Medical NBC Defense program achievements over the past year have been in identifying requirements, codifying doctrine, approving equipment, and executing training. To support requirements, we added medical-related items as high leverage in the Air Force Counterproliferation Roadmap. To support doctrine, we participated on the team that produced the first-ever joint publication on the care and treatment of biological warfare casualties, and this team is now working on a similar publication on medical operations in an NBC environment, to be completed this year. We also helped to develop a "Response

Guide for Commanders and First Responders," which addresses biological, incendiary, chemical, and explosives threats on Air Force installations.

The rapidly expanding potential for NBC warfare makes necessary the capability to continue medical operations even in toxic environments. The objective of the Chemically Hardened Air Transportable Hospital (CHATH) program is to provide the equipment necessary for such a capability. Our medics at Air Combat Command worked in the true spirit of "jointness" with the Army on this system, and both Army and Air Force requirements are incorporated in the Joint Operational Requirements Document for a CHATH/Chemically Protected Deployable Medical System. The CHATH completed Initial Operational Test and Evaluation in December 1997. The Milestone III production decision was achieved in March 1998, and initial operational capability was declared in October 1998. Fielding should be completed in September. The CHATH represents the culmination of an approximate 10-year joint effort to provide collective protection capability for patients treated in the field in a chemical warfare environment.

To support the warfighters, we recently finalized the Biological Augmentation Team contingency operations (CONOPs), which provides diagnostic identification capability for naturally occurring or induced biologic agents at a deployed location. With this new team, we can now analyze samples and interpret results using complementary microbiological techniques, primarily a nucleic acid-based testing platform. The team deploys based on threat assessments and will usually deploy with the EMEDS/AFTH. We will field several teams in this year.

Further, Air Combat Command's development of "Project Yorktown" will change the way we respond to terrorism forever. Project Yorktown was developed as an integrated suite of early warning and identification capabilities for biological and chemical attack. It is composed of a clinical encounter system that collects standardized medical signs, symptoms, diagnoses and procedures. These are encapsulated and sent immediately to a location in the United States where they are electronically analyzed for abnormalities. If something suspicious is indicated, laboratory identification systems pre-positioned at high threat areas are utilized to determine if a biological or chemical agent was present that may have been covertly introduced to members at the location through food or environmental vectors. Should an incident be confirmed, Yorktown is linked with a sophisticated network of command and control agencies to help mitigate the effects.

Our medics in Europe have also aggressively prepared for WMD. To meet in-place force health protection requirements, United States Air Forces, Europe (USAFE), medical personnel developed a new in-place patient decontamination team for each of their five bases. This team is a non-deployable organic medical asset for patient decon at USAFE medical treatment facilities (MTFs). The approved CONOPs includes capability to decontaminate patients outside the MTF. Fielding will be completed this fiscal year.

Finally, our WMD training focus has been through distance learning. During this past year, 8,000 Air Force medics, including active duty, Guard and Reserve, participated in the NBC Satellite Broadcast Training.

Despite these serious efforts to protect the force, we are not yet fully prepared to counter WMD, specifically chemical and biological weapons, on the battlefield. In all likelihood, our foes will not meet us force on force—asymmetrical attacks, including those on the homeland, represent huge challenges in which the AFMS can be expected to play a crucial role. With the support of our sister services, DOD and our leadership at all levels, the AFMS is committed to helping our nation prepare for this very real and lethal threat.

Employing TRICARE

Another way we protect the troops is by reassuring them that their families are well cared for while they are deployed. TRICARE has been fully operational for more than a year now, and we have come a long way toward resolving problematic issues, such as improving access to care and payment of claims. We recognize that access continues to be a problem, and that, once in the door, our patients are, for the most part, highly satisfied customers.

We are committed to achieving five metrics across the AFMS that will ensure improved patient access to primary care: (1) measured progress toward maximum allowable enrollment; (2) 1,500 patients enrolled per primary care manager (PCM); (3) 25 patients per day per provider (4) 3.5/1 support staff/provider ratio; and (5) two exam rooms per provider. We are closely monitoring how our facilities are meeting these metrics and holding them accountable. Our ultimate goals are that every patient will know his PCM by name and enjoy guaranteed access standards for primary care.

Certainly, a key factor in the success of these five metrics is educating our PCMs to understand, accept, and deliver the expectations of leading edge primary care and population-based health care. We are developing an aggressive, exciting education program to optimize AFMS primary care. The program's objectives are to prepare our primary care teams to deliver the health care benefit effectively and efficiently; develop programs that execute the population health improvement policy; and develop criteria that will assist in the effective distribution of resources. We are implementing the "Quickstart" phase of the program in early 2000, with follow-on sustainment activities through the next year. In the long term, we are seeking a culture change through a primary care course and other formal education programs.

One of our greatest remaining TRICARE challenges across the AFMS is to provide care to those who are not being fully served. For example, we are on the threshold of programs that will provide TRICARE to our geographically separated units, and we're working on solutions for their family members as well.

We are also trying very hard to fulfill the promise made to our older retirees that they would have health care for life. I am happy to say that our participation in the TRICARE Senior Prime demonstrations for the over-65 retiree has been well received. However, the unique needs of this population place some very stringent demands on the Military Health System, such as benefits mandated by Medicare that differ from those provided by DOD. And to put it simply, our older beneficiaries require more health care. We will continue to address those issues.

The good news is that utilization rates and customer satisfaction are high. And with access to the National Mail Order Pharmacy, TRICARE Senior Prime enrollees have better prescription coverage than ever before. This year, we will embark on the Federal Employees Health Benefits Program (FEHBP)-65 demonstrations, giving us insight into another possible means of meeting our beneficiaries' health care needs.

Another way we are working to create viable alternatives for our beneficiaries is through sharing arrangements with the Department of Veterans Affairs (DVA). Today we have more than 100 agreements with the DVA, sharing more than 270 services. Our new $164 million joint venture facility in Alaska at Elmendorf AFB opened in May 1999. The DVA staffs and operates the intensive care unit, saving the Air Force $1.4 million annually in referrals to downtown facilities. The Air Force staffs and operates the multi-service medical/surgical unit. Both organizations staff the emergency room, internal medicine, and surgery sections. Our other two joint ventures continue successfully at Albuquerque, New Mexico, and Las Vegas, Nevada.

We're also pursuing numerous joint initiatives with the DVA to improve mutual efficiencies. For example,

—Clinical guidelines improving the standards of care are being shared across the Services and DVA, enhancing continuity and outcomes
—Discharge physicals are now "one-stop shopping" through one organization
—One computerized patient record for both organizations will be beta tested at the new joint venture facility in Alaska this spring, allowing one computerized record that could be used during and after active duty service
—DVA representatives are participating on the DOD pharmacy redesign working group to establish standardization between agencies where feasible
—Combined purchasing of pharmaceuticals is saving $57 million for both DOD and DVA.

The AFMS is also seeking to improve health care for our beneficiaries by better educating our own. As a large employer providing health care services for their employees, the Air Force has stressed the involvement of line leadership. At our Chief of Staff's urging, we have developed a program we call "Command Champion" that takes TRICARE to the unit commanders, providing tools to help them ensure their people are receiving the best possible care. Personal involvement by senior staff at our MTFs and Major Commands offers clear guidance on how TRICARE works at the local level and where assistance is available. I am delighted with the returns on this effort! Senior MTF representatives met initially with 2,400 commanders; made 1,258 follow-up visits; and hosted more than 1,600 commanders at a culminating Hot Wash. Program success is perhaps best summarized by the 60th Medical Group, who said, "Virtually 100 percent of the commanders expressed appreciation for the caring way in which the medical group presented Operation Command Champion and the outreach provided to them." One commander stated, "The growing pains are over; we're going the right way and getting a good news story." Further, we are pleased that the Army and Navy have adopted our program in educating their own leadership. Our proposed sustainment program is anticipated to begin in May.

We are also encouraged by the efforts of the Defense Medical Oversight Committee (DMOC), which has been formed to ensure optimum Service participation in the military health care agenda. This board consists of the Under Secretary of Defense (Personnel & Readiness), Service undersecretaries, Service vice chiefs, and the Assistant Secretary of Defense (Health Affairs) as voting members. The Service surgeons general participate, but are non-voting members. The main purpose of this board is to define the medical benefits and establish budget priorities.

Tailoring the Force

The focal point of our system remains the military MTF. We're stressing that the care provided in our MTFs be the best available and the most efficiently provided. Toward that end, we are emphasizing performance and optimization of our system. We are sizing our MTF staffs to specifically meet the needs of the local population, including our over-65 beneficiaries. I have asked the MAJCOM surgeons to meet specific staffing levels and arrangements to optimize the health care delivery process.

Our vision of population-based health care management is driving the methods used to plan for and allocate resources to our MTFs, and is therefore vital to our Tailoring the Force pillar. The primary objective of Tailoring the Force is to develop a long-term resourcing process that will optimize overall force size, increase MTF productivity and effectively manage patient care through a focus on health awareness and prevention. We are developing and implementing various tools to properly size and resource our MTFs to meet mission requirements and population health care needs.

One of these tools, Stratified Enrollment-Based Capitation (EBC), allocates funds to each MTF based on the direct health care cost of an enrolled population. We are using EBC as a metric for MTF commanders to build an awareness of all resources used in providing service to TRICARE Prime enrollees. Ultimately, this data will ensure future MTF commanders have the data to know who their TRICARE Prime patients are and the cost of caring for these patients.

Another tool is the Enrollment-Based Reengineering Model (EBRM). The traditional method of using historical workload of an unenrolled population to determine staffing requirements is outmoded. The EBRM determines manpower requirements for a managed care delivery system with an enrolled population. Consistent with changes in the civilian sector's delivery of health care, the model shows more primary care physicians are required than specialists. It also suggests the "ideal" provider/support staff ratios. EBRM is akin to what our line counterparts call "Primary Aircraft Authorized"—PAA—meaning there is consistency in the numbers and specialties of personnel manning comparable units. Unless there is an extenuating requirement, Air Force MTFs with similar patient populations should have the same manning profile.

The ultimate outcome of a system reengineered in these ways is a system in which the MTF's enrolled population drives money and manpower. As noted previously, we have put metrics into place that measure our progress toward this goal, and we're reviewing our progress monthly, base by base. The majority of health services will be delivered through prevention programs and well supported primary care managers. SEBC and EBRM encourage MTF commanders to enroll their beneficiaries and retain them as satisfied customers while emphasizing preventive and primary care as the preferred delivery setting.

Building Healthy Communities

The prevention paradigm of our fourth pillar, Building Healthy Communities, is the cornerstone of the population-based health care management system. Previously we concentrated on individual prevention initiatives through clinical intervention, but now we are using the community-approach, population-based initiatives. The community approach has already been tested and proven by the Air Force. For example, in response to a community problem, suicide, we established an Integrated Product Team (IPT), comprised of members from various functional specialties—such as chaplains, security police, family advocacy, legal services, and mental health—and chaired by the AFMS. As a result of the efforts of the IPT, suicide rates have declined from 16 per 100,000 to 5.6 per 100,000 within the Air Force during the past five years. The suicide prevention program has been applauded as a benchmark for both the public and private sector.

Following this success, the IPT concept was expanded to our Integrated Delivery System (IDS), which links the synergy among base agencies to promote help-seeking behavior and integrate prevention programs. The IDS addresses risk factors through a collaborative, integrated, customer-focused prevention effort designed to offer programs such as stress and anger management, personal financial management, and

effective parenting. These programs support readiness by reducing risk factors and building the performance-enhancing life skills of our Air Force community members.

The concepts of a healthy community involve more than just medical interventions. They include local environmental quality and hazards; quality of housing, education and transportation; spiritual, cultural and recreational opportunities; social support services; diversity and stability of employment opportunities; and effective local government. Impacting these elements requires long-term, dedicated planning and cooperation between local Air Force commanders and civilian community leaders.

Three major areas we have initially targeted at the community level are decreases in tobacco use, alcohol abuse, and injuries. The Under Secretary of Defense for Personnel and Readiness chartered the Prevention, Safety and Health Promotion Council (PSHPC), with the Air Force as executive agent, to address these and other areas. We have now developed additional committees to focus on Putting Prevention Into Practice, which provides tools and training to providers to ensure they use each encounter with a patient as an opportunity for preventive interventions; Joint Preventive Medicine Policy Group; self-reporting tools, such as the Health Enrollment Assessment Review; and Sexually Transmitted Disease Prevention. These efforts are critical, when we consider that more than 70 percent of preventable deaths are due to life-style factors.

We are also stressing prevention at the individual level—readiness begins with each individual, each human weapons system. Our tool to assure individual readiness for any contingency is the Preventive Health Assessment (PHA). The PHA changes the way the Air Force performs periodic physical examinations from a system based on intervention to a system that stresses prevention. The goal is to identify risk factors from a person's life-style—such as whether a person smokes, how frequently he exercises, and his diet—as well as his genetic background, individual health history and occupational exposure. Then, through proper prevention practices, we assist the member to moderate those risks.

PHA data, along with data on medically related lost duty days, immunizations status, dental readiness and fitness status, are available to the unit commander to provide vital information about the readiness of his or her unit. Our line commanders have reported high satisfaction with the PHA, and were especially pleased when their units were prepared to go to the field for deployment exercises without any medical discrepancies.

To support our goals in population health, the Air Force Medical Operations Agency stood up our Population Health Support Office (PHSO) in May 1999. The PHSO will focus on three primary activities. First, they will provide a centralized help desk and resource center, accessible through a toll-free number (1–800–298–0230), e-mail (phso-helpdesk@brooks.af.mil), and a web site (www.phso.brooks.af.mil). Second, they will offer program management assistance for our various prevention programs, such as the HEAR, the PHA, and Put Prevention Into Practice. They will also be available to assist in areas such as condition management, clinical reengineering, patient education, and metrics. Third, the PHSO will be responsible for health data identification, analysis and reporting. We are excited about the PHSO and all our efforts to make population-based health care a reality in the Air Force.

Customer Satisfaction

These are all examples of how we are striving to meet our customers needs, and thus achieve Customer Satisfaction, the capstone of our Parthenon strategy. It all comes down to satisfying our customers. Whether our customers are active duty, family members or retirees, our AFMS stands ready to provide world-class deployed and home-station medical support.

We recognize that, as the AFMS evolves into a worldwide competitive health plan, it is essential that all AFMS personnel adopt a total customer service philosophy that transcends our current business practices. To do this, we have implemented a strategy to create a climate and culture where customer focus and service permeates the AFMS, leading to customer satisfaction and loyalty. Our competitors know that customer satisfaction is the key to retaining and recapturing patients—we know it too. Our customer satisfaction task force, known as the "Skunkworks," has completed its first two phases of development and deployment, and is now well on its way to executing the third phase, sustainment and partnering.

In 1999, we completed five customer satisfaction model site visits, conducted eight deployment roll-outs for all AFMS organizations and higher headquarters, and began the sustainment/partnering phase for AFMS organizations in collaboration with the MAJCOMs through five sustainment summit meetings. We are also working to actively involve our reserve components in the customer satisfaction strategy

as a part of our Mirror Force endeavors to achieve a seamless, ready Air Force health service.

This year, we will continue ongoing sustainment and partnering endeavors with the Major Commands, our AFMS organizations and the reserve components. In addition, we will be inserting customer satisfaction priorities in the TRICARE 3.0 contracts to help ensure contractors are held to the same standard as our AFMS personnel. To monitor and measure our sustainment success, we will use "report card" data and the AFMS customer satisfaction metrics that are part of the AFMS Performance Measurement Tool (PMT).

Quality care continues to be our hallmark. With all of our facilities surveyed by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), the Air Force continues to meet or exceed civilian scores. The average Air Force clinic accreditation score has risen from 97.0 percent in 1998 to 97.4 in 1999, with an impressive 73 percent accredited with Commendation.

Many of our facilities continue to participate in the Maryland Hospital Association (MHA) Quality Indicator Project. Air Force performance has been commendable and is consistently better than the overall MHA national average for several indicators. Our total cesarean section rate has been approximately 20 percent less than the national rate. Air Force rates for returns to the Operating Room and Intensive Care Unit are continually less than the national rate. Also, our mortality rates for overall inpatient, as well as neonates and perioperative patients, are far below the national norm. These rates indicate a sustained quality of care for these areas in AF inpatient facilities.

Air Force personnel are also participating in the Quality Interagency Coordination Task Force's Patient Safety Working Group to improve health care through the prevention of medical errors and enhancement of patient safety. The Air Force is promoting its Medical Incident Investigation review process where an external professional investigation team reviews medical incidents for causes and identified lessons learned for prevention of future similar incidents. The lessons learned are then widely disseminated throughout the medical community as NOTAMs (notes to airmen). The Air Force is also using the Composite Health Care System (CHCS) electronic order entry of prescriptions to eliminate illegibility' as a cause of medication errors. In addition, we are piloting pharmacy robotic technology with excellent initial reports on decreasing dispensing errors. These are all ways we are striving to put our patients first.

Conclusion

The "Parthenon" has been and continues to be an effective strategy for moving the AFMS to a population-based health care system. Our outstanding PMT metrics will continue to monitor successful implementation of necessary changes and ensure we satisfy our customers to the best of our ability. The ultimate goal of our strategy is a healthy, fit fighting force that can effectively support the greatest Expeditionary Aerospace Force in the world.

Senator STEVENS. General, thank you very much.

General, I hope you will be around long enough to go up and participate in the dedication of the new Bassett Memorial Hospital at Fort Wainwright. I am really indebted to you for your consideration of that proposal. It will be a massive new facility for interior Alaska, where it has an enormous retired military presence as well as active duty presence. Now that the national missile defense system appears to be headed for Alaska, it was far-sighted to put it there, so I hope you can join us.

General BLANCK. Thank you.

Senator STEVENS. I have just one general question for all of you for my time. I will submit the rest of them, but I understand that our staffs have met with you and your staffs concerning the exceedingly tight budget. We have unexpected bills, and we have reduced budget for real property maintenance. That is not good in hospitals, and you have reduced travel, and it looks to me like you have reduced the budget for the information technologies vital to reducing future costs.

So I should tell you, right after I became a Senator, as a new Senator I took eight Senators to Alaska to show them the hospitals

in Alaska. When we went into Bethel we found an operating room with mold on the walls. We found that because of the fire codes they had in each patient's rooms back doors to get out of the old buildings, and a series of women had been raped in their hospital beds. You know, that sort of thing gets into your brain and into your soul, and I think it is essential that you really look at the facilities and make sure they are modernized to meet tomorrow's needs, not just today's, so you have done it in Bassett, and I thank you for that.

My questions are these. For each of you, just to go across the table, if you will, what is your budget shortfall for this year, 2000? Does your direct care system need supplemental funds now, and what is the 2001 budget submitted here, as far as your requirements are concerned?

If you want to do some of these things for the record, be my guest, but I think people here ought to know from you, what is the situation as far as these budgets are concerned, 2000 and 2001, and what is that wall that is out there in 2002, okay? General Blanck.

General BLANCK. We have additional moneys that have been provided us based on the analysis you heard Admiral Pilling describe for 2000 and 2001. That gave us the money necessary to do the day-to-day health care with the provision that we are suppressed as far as repair and maintenance, and I worry about that a great deal, because we have been suppressed on and off for the past several years, and even at the 2.4 percent funding that we hope to get to next year, it is inadequate, in my view, to deal with the kinds of issues that you described.

We are suppressing travel and information management/information technology (IMIT) locally this year, which is a problem. It is one of the reasons that we have not been able to do all of the telemedicine that we have talked about nearly as much as we want to, teleradiology, telepathology.

Senator STEVENS. What has that got to do with travel?

General BLANCK. That is the IMIT suppression as opposed to the travel suppression. I beg your pardon.

We also, of course, are waiting for the reprogramming action to give us some of the funds. We do not have them in hand yet, though I believe that we will get them, so that is yet another qualifier.

Finally, we have a serious problem in my estimation with TRICARE Senior Prime, in that—and I believe General Carlton mentioned it—the anticipated funding stream has not materialized as we deal with what our level of effort is in what the reimbursement rate is and try to get the data to Health and Human Services in such a way that we can agree on what that reimbursement should be, so I am short, I believe my colleagues are short in that arena.

Again, we have been plussed-up for pharmaceuticals. We have been plussed-up in other areas. We have the money to do the day to day. We are short in the areas that I described.

Senator STEVENS. Okay. I am going to yield to the others, and then I will come back to you.

On the supplemental, we will take care of that amount that you are talking about, I think, on reprogramming. I would urge you not to pursue that supplement, that reprogram right now, and give us a chance to put the money up. Otherwise, if you reprogram it now, then we will have to figure out where we put the money. We know where that goes, and that is $257 million I think is it not? Yes.

General BLANCK. Excellent. Thank you.

Senator STEVENS. Thank you. Senator Inouye, go ahead, and I will come back.

Senator INOUYE. I would like to join you, Mr. Chairman, in thanking General Blanck for all the years of service to our Nation, and welcome to General Carlton.

General CARLTON. Thank you, sir.

Senator INOUYE. And Admiral Nelson, you will be the senior one next time.

For the past 55 years, Mr. Chairman, I have been a beneficiary of the military medical system and, if I may, through these gentlemen I would like to thank all those who have been helpful and generous to me. I thank you very much.

Mr. Chairman, I have many questions that I would like to submit, and they all relate to quality of life. They relate to the impact the system will have on readiness, retention, and also some of the other concerns on the programs.

I am glad that General Carlton brought up the Air Force's involvement in terrorism. Whenever we pick up the newspaper or listen to radio or television, there is always some report on terrorism today. Manholes explode, and we call them in to check to see if this is a terrorist act. We have called upon the National Guard to be the point agency to set up a system to counter terrorism and to help the populace of the United States.

I am certain that the medical community will be called. I would like to know what, if anything they are doing, because I have the sense that if something should happen tomorrow, we are just not ready.

General.

General BLANCK. We have all participated in a seminar at the American Medical Association, and we will participate in a weapons of mass destruction medical response conference cosponsored by the Department of Defense and the American Medical Association with other health care organizations next month here in Washington. We are all heavily involved in working through our systems with not only other parts of the Government but with our local communities.

And I would make a distinction between the first responders for chemical, which would be police and fire, with whom we work on recognition and decontamination, and bioterrorism, which generally there would be no warning for early, because we have no real time detectors, and so we have to prepare the emergency rooms, the medical communities, the nursing personnel, the doctors, the technicians about this threat, and thus the conference, the working through these other organizations.

Admiral NELSON. I would concur with that. We are working, along with our research folks, on much faster detection, and actually have ability to detect within 15 minutes or less about 15 dif-

ferent agents now, so we are working these, but I think the conference in April will really bring more clarity to our relationship with the communities in the continental United States, within the United States, not just the continental, but I think we are very much tuned to our responsibilities in supporting the private sector in this.

Senator INOUYE. General.

General CARLTON. Yes, sir. I spent the weekend with the National Guard in Missouri, specifically addressing the question, what have we done, show it to me, and I am happy to tell you that the National Guard in Missouri has done a superb job. They combine Army and Air Force National Guard. They have teams on the ground. They are going actively to the first responders. They are actively selling that capability. Senator Inouye, I would suggest that that was a superb choice, and a superb investment.

From the other parts of the military we are pressing aggressively to form partnerships with the American Medical Association (AMA) and the Association of Military Surgeons of the United States (AMSUS) to sponsor education programs, seminars. As General Blanck discussed with you, we have the equivalency that we did for heart called advanced cardiac life support. We now have that course for weapons of mass destruction. Our goal is to give that opportunity to every medical school curriculum in the country.

We are training with the Centers for Disease Control (CDC) all of our Project Yorktown activities where we have a sophisticated net out in Southwest Asia, making sure that our people are protected. We put the knowledge couplers in. We can, as we recently did, stop an outbreak of a dire, real illness, and made it work very, very well, aborted that in a matter of an hour instead of a traditional number of days. We are getting back to the Centers for Disease Control as quickly as we can. We are literally training together, because this is a clear and present danger, and getting that word out is extremely important.

I am happy to tell you that, after looking at that, I am sleeping better at night knowing that our Guard colleagues are doing a superb job.

Senator INOUYE. So you believe that we are moving in the right path?

General CARLTON. Yes, sir. We are moving in the right direction, and we are focused on the first responders. We are doing this with our fire protection agencies, with our emergency medical response, with our police academies. We have wonderful Army training, the programs that are focusing on these first responders, so we are making leaps that are not baby steps. They are leaps into the future.

General BLANCK. If I may even add to that, Senator, we now do twice-yearly distance learning courses for medical response to chemical and biological weapons that has 60,000, 70,000 registrants, goes worldwide, and the estimation is that we may have as many as 2 million viewers throughout many nations.

In addition to the United States we also, by the way, have a group from Japan here as we speak at the Armed Forces Radiobiologic Research Institute training on radiation, the effects of radiation terrorism, how to respond, and of course to accidents

such as they recently suffered. We are doing exchanges with them at Fort Dietrich as well.

Admiral NELSON. One of the things we have done across DOD is take a look, facility by facility, at our capability, and also at our interagency agreements. One of the things that we, the Navy, has, is forward-deployed preventive medicine units that are being equipped to look particularly at biological agents. In fact, one of our units in Hawaii assisted the Federal Bureau of Investigation (FBI) with a particular issue that they had just a few months ago.

Senator INOUYE. Gentlemen, I thank you very much. Mr. Chairman.

Senator STEVENS. Thank you. Senator.

Senator DURBIN. Thank you, Mr. Chairman. General Blanck, you raised a point here in your testimony that I would like each of the members of this panel to respond to. It relates to the recruiting and retention of doctors. You noted that from late 1995 to early 1998 the Army Reserve lost 34.2 percent of physicians assigned to units sent to the Balkans. Two physicians departed for every new one recruited. In the next panel the ladies who represent the nursing profession are going to tell us a similar story about the difficulty in filling their needs for professional medical personnel.

This is not unique to the military. When I spoke to the Administrator of the largest hospital in Springfield, Illinois over the weekend, he tells me, I am facing the same thing when it comes to nurses and therapists and pharmacists and the like.

Is this something that we need to address with new and innovative approaches by legislation or program to attract the men and women, the medical professionals, so that those who are in service to our country have the very best care?

General BLANCK. I will speak only for the Army and respond to that, because I may well ask for your help, and I will tell you how. First, we have put three programs into place that have made a great difference in the issue that you have just raised, that is, the loss of reserve personnel, not active. This has to do with the reserve medical personnel.

The three programs are, first, we have increased the loan repayment program so we have been able to recruit physicians, nurse anesthetists, dentists and others, far more successfully than we have in the past.

Second, we actually have been able to start a scholarship program similar to that that we have for active duty physicians and dentists that allow us to pay medical school costs and then obligate graduate physicians for service in the reserves.

Third, and I think the biggest win, is we have reduced rotation times from the 180 to 270 days down to 90 days for nurse anesthetists, dentists, and physicians. That has made an enormous difference, and I can tell you both anecdotally and looking at the numbers. People come up and tell me, I was going to leave, but now I will stay, because I can take a 90-day rotation. Anything more than that, unless there is a general call-up, I cannot.

Now, where I may ask your help is one that we are actually going through a staffing process right now, and that has to do with a practice plan coverage program. If someone is involuntarily extended past that 90-day point, we would pay a bonus that would

allow them to cover their practice expenses in the case of a physician or a dentist, so that we would not bankrupt them, as we did to many during the gulf war. If it goes through the staffing, and is approved as I anticipate, it will be submitted legislatively next year, and I will certainly be in touch with you or your office.

Senator DURBIN. Thank you, and because I have limited time, I am going to invite the other members of the panel if they will please respond to that general question about the availability of medical professionals and any innovative ways that we might approach this in terms of increasing the supply. I hope we can find ways to help you in doing that.

If I might, if I could ask Admiral Nelson another question, each of you has pointed out some of the amazing breakthroughs that you have found in medical research through each of your services. General Blanck points to a new bandage that can dramatically reduce bleeding from wounds. I believe, Admiral Nelson, that you point to a tuberculosis test that may be a breakthrough that the Navy has come up with.

My basic question to you—I am glad to hear all of these—how is this translated into a commercial undertaking? Once we have discovered this technology, do we retain any rights of licensing or the like, so that the taxpayers receive some benefit from these medical breakthroughs? Admiral Nelson.

Admiral NELSON. Most all these we transition to the private sector, and we also work in collaboration with the private sector to bring them to market, but I think there are a lot of important things that we get involved in that probably have more application to the military, or to communities other than within the United States. One of the ones we are working on is a malaria vaccine, extremely important for the world, but as far as its application within the United States at the current time, there is not the breadth of interest there, but yet we clearly have collaborators to work with.

I think you may want to comment more on that.

Senator DURBIN. But I might say to you that, despite the AIDS epidemic in Africa, which is an overwhelming moral challenge to the world, the number one killer of children under 5 in Africa is malaria, and if we can find something along these lines, believe me, it will leave a legacy which we will be proud of for generations to come.

TOBACCO PROBLEM

Admiral NELSON. I think we are well underway.

Senator DURBIN. General Carlton, you made a point about quality of life and preventive health care, and you made a special note in here of problems with tobacco and alcohol among the military. Can you tell me, I assume that each branch is facing the same sorts of challenge with the uniformed personnel, but have you identified tobacco in particular as a problem cause, a cause of problems, I should say, in terms of the health care of active personnel?

General CARLTON. Yes, sir. We have just completed a study about what does tobacco smoking cost us on the active duty population, not in the future years, not in retired years. The answer is, in lost duty time and lost work, it costs us more than $100 million a year.

Senator DURBIN. I want to make sure that that is a matter of record here. We lose $100 million a year in lost time of active military personnel because of tobacco——

General CARLTON. Yes, sir.

Senator DURBIN (continuing). And smoking.

General CARLTON. Yes, sir.

Senator DURBIN. $100 million a year.

General CARLTON. Yes, sir. It is $101 million to be exact, but it is $100 million in round numbers, and we are targeting that with a tremendous effort on the smoking cessation and preventing people from getting into the habit of smoking, and I believe you can see in the future where we will not support bad habits with our health care, that when we do screens we will say, if you have bad habits, we cannot afford to have you in our service.

ALCOHOL PROBLEMS

Senator DURBIN. And I would like to ask each of you on the panel as a matter of record to report what your service is doing in response to—and I do not want to diminish the concerns over alcohol, which I am sure are equal if not greater in terms of their impact, but if you could share that with me, and I thank you, Mr. Chairman.

[The information follows:]

MEDICAL SERVICE

The information provided by the Air Force Surgeon General regarding the short-term costs of smoking cessation for Air Force personnel was based on a study conducted by: Robbins AS, Chao SY, Goil GA, Fonseca VP. Cost of smoking among active duty U.S. Air Force personnel, 1997. *Morbidity and Mortality Weekly Report,* In press.

This investigation found that among a sample of young Air Force personnel who smoked, there were annual medical costs (directly attributable to smoking) of $20,098,339 and annual productivity costs (directly attributable to smoking) of $87,142,716. This is a total annual cost for smoking alone of $100,724,105. The authors go on to calculate the impact of this additional health care and productivity loss in terms of full time equivalents (FTEs). They determined that every year we lose 3,573 FTEs due to smoking.

DOD is actively engaged in addressing the problems of tobacco use. Mr. Rudy de Leon, Under Secretary of Defense for Personnel and Readiness (USD (P&R)), requested the development of a Department of Defense (DOD) Prevention Plan. We are actively addressing the problems of tobacco use in the DOD.

As part of this prevention initiative a senior level Prevention, Safety and Health Promotion Council was formed to address alcohol abuse, injury prevention, and tobacco use reduction. This council is chartered by the Secretary of Defense and provides an integrated forum for a diverse, multi-functional group of DOD, Service Secretariat and Service leaders. The council approved action plans to reduce the health care and productivity burden of tobacco. These plans target system-wide changes aimed at cultural aspects of tobacco use, availability of tobacco products on military installations, medical issues and effective smoking cessation programs.

Senator STEVENS. Thank you very much. Senator Hutchison. We are on a 5-minute rule, unfortunately.

TRICARE IMPROVEMENTS

Senator HUTCHISON. Thank you, Mr. Chairman. I want to first say I am very pleased that General Blanck is going to be my constituent very soon, and that is a great university that you are going to be associated with, and we look forward to having you there.

I want to ask a general question to any and all of you. Last year, in the bill in which we increased salaries for our military personnel, I included an amendment that would have allowed the Pentagon to go forward with some improvements in TRICARE and medical service that could be done without legislation.

It permitted the increased reimbursement levels for TRICARE, particularly in areas where our military personnel could not get a provider to see them. It would expedite and reduce the cost of the TRICARE claims process, required portability among TRICARE regions, brought the TRICARE fee structure in line with comparable civilian HMO's, and an idea that I got when I visited Brooke Army Medical Center in San Antonio from General Timbo, who was saying that the military hospitals provide services to outsiders and have a hard time getting the payments for that, which they are certainly entitled to, so I added an amendment in my amendment that would provide for standardized reimbursement rates to make it easier to recover third party payments to military hospitals.

My question to you is, have any of those measures been taken by the Pentagon to give the better TRICARE service?

General BLANCK. Every one of them. Every one of them has, and I will take it upon myself to speak for all of us, and everyone in our Departments but all of our patients, to say thank you for wonderful legislation that has allowed us to—now, in many cases we are in the process of implementing it, so we have not begun to fully realize the benefits, but from third party payment to portability to increasing, having the ability to increase payments in Alaska, where health care costs are such that we just were not competitive, nobody would see our patients, and we are able to increase those costs, and in remote areas where there may be few physicians.

Senator HUTCHISON. Even places like Abilene.

General BLANCK. Absolutely.

Senator HUTCHISON. We were having trouble getting our providers to see our military patients, where there would be one heart specialist in town.

General BLANCK. So we have begun doing all of these kinds of innovative ways to improve the ability that we have to provide those services.

Admiral NELSON. I think that you will see a dramatic change in processing claims. The three of us were reviewing that yesterday, along with Dr. Bailey, and it looks like we have made a major turnaround in the rapidity with which claims are dealt with outside the direct care system.

Senator HUTCHISON. Good. General Carlton.

General CARLTON. Yes, ma'am. When we say we have done that, it is exactly true. When you ask a beneficiary, have they seen it, there is a contractual lag that may be several months in length, and so all of the things that you enabled us to do, we have done through the contract or through our direct care system.

Have the customers seen it yet? It may be in some stage of implementation, but we certainly appreciate that support, and we now are in the 95 percent goal for payment within 30 days. We pay first, and if there is some question we chase it down, instead of the converse. Your legislation helped us a great deal.

Senator HUTCHISON. Well, I just want to thank you. I am very pleased to hear that, because, as you know, TRICARE has mixed results. In Corpus Christi they love it. In Abilene and San Antonio there are complaints, and certainly when I learned that we were having a hard time getting the reimbursements to the military hospitals, which do so much in San Antonio for the civilian population, I wanted to get the income in, because that supports the system for everyone.

That is exactly the answer that I wanted to hear, and I, of course, will be visiting and hearing from my constituents in the military, and I hope that I can get those same reports, and I do thank you for making the emphasis be put where it needs to be.

Thank you, Mr. Chairman.

BUDGET SHORTFALL

Senator STEVENS. Thank you. Gentlemen, in just 5 minutes, if you can, Admiral Nelson, General Carlton, could you tell me the answers to my question, what is the budget shortfall this year? What supplemental funds do you think you need to take care of this year, and what about 2001? And I know that you are supposed to defend the budget. I am asking you beyond the budget.

Admiral NELSON. Yes, sir. Last year I thought I had a tight budget. This year I am between $70 and $75 million shy of where I was last year with my budget.

Senator STEVENS. What was your request?

Admiral NELSON. I would have to take the exact request for the record.

[The information follows:]

The fiscal year 2000 President's Budget submission for Navy consisted of the following:

Direct Care	$1,573,938,000
Private Sector Care	1,416,491,000
USUHS	65,461,000

The level of funding for direct care was approximately $72 million below the previous fiscal year funding level of $1.64 billion.

Admiral NELSON. But I can tell you—well, I can tell you what it was.

Senator STEVENS. Put it in the record. It was higher than what you got?

Admiral NELSON. Yes, sir.

Senator STEVENS. I want each of the three of you to tell us what you asked for. Maybe we can go a little bit further to meeting it using the 2000 funds, all right, and what is the shortfall?

Admiral NELSON. I can tell you that as I stand this week I am about $135 million short of being able to do everything you have tasked me to do for 2000.

Senator STEVENS. All right.

Admiral NELSON. Now, how does 2001 look? We at this point feel fairly comfortable about 2001, but 1 year ago I would have told you I felt fairly comfortable with where we were going in agreements on 2000, so I am a little hesitant to tell you, other than at this point 2000—that 2001 looks doable.

Senator STEVENS. Airlines people told us the other day that we should expect to pay $70 more a ticket for a round-trip ticket to

the coast by September. You are going to run into a lot more things coming out of this fuel cost as far as I can see.

Admiral NELSON. Yes, sir.

Senator STEVENS. But give us that for the record. General, have you got any?

General CARLTON. Yes, sir. We are executable for 2000 and 2001, but you must define your terms. Executable in terms of the law, we are certainly executable, but in terms of saving the taxpayer money, because we are not getting money for the 65's and over, we are having to buy that at full rate downtown.

And so I think we could save a tremendous amount of money as taxpayers if we forged a better partnership with our Medicare partners, because for lack of the operations and maintenance costs, which is traditionally regarded as 20 to 25 percent of a total health care cost, we are turning that great group of American patriots away that we call the over-65 group, and instead Medicare is having to pay full price, both part A and part B.

When we talk about a participated rate at 82 percent, that is of part A. In a traditional medical experience, in a hospital, half the cost will be part B, and so it is 82 percent of half the cost. It is a great deal for Medicare, and that partnership is critical for us.

Senator STEVENS. Thank you very much. Senator Inouye has got a question that, you know, I was visiting with people about rural health care the other day, and the lack of doctors. We used to have a pretty good supply of doctors when we had an incentive because of the draft, and then we had another one that was an incentive because of the assistance we were giving to some people to go to medical school.

We need something else now. We need something that gets a commitment from young doctors to go spend a year or two in rural America. I wish the three of you would think about that. What kind of incentive would it be? I do not know. Maybe we would expand the Montgomery program, or replace it with an Inouye program of some kind, but he is Mr. Defense Medical Man. I am just his—I am Charlie McCarthy, you know.

But I do hope that you will give us some help on that.

My last comment to you, General Blanck, would be, we know where you are. We hope we will hear from you. You helped us get started on that AIDS research. Some day we ought to have an update of what is going on. I still think it holds the best promise of all the research in the country, if not the world. Your research in AIDS has got the best promise. We ought to have a hearing on that alone.

Senator Inouye.

NURSING STANDARDS

Senator INOUYE. In preparation for the next panel, I would just like to express some concern to this panel here. I have been hearing rumbles that a recommendation may be made to lower the standards for our military nurses. If the nurses are going to be considered to be professional, as they are, then I do not think you should lower the standard below baccalaureate, and I gather that some of you are suggesting maybe we should lower it below the baccalaureate, the grade.

Second, I have been told that there are some who are suggesting that certified registered nurse-anesthetists should always have physician supervision. Over the years, over 85 percent of all anesthesia administered is done so by nurse-anesthetists. In fact, you know, I have been on the table countless times now. I know that on some occasions the anesthesia was administered by a nurse-anesthetist, and I have got no squawks. They have done a good job. They are professional.

I hope that we will not lower the standards. Are you thinking of lowering the standards, gentlemen?

General CARLTON. Sir, we are specifically looking at how to optimize so we can get more of our retirees in our system. It is not a lowering of standards. It is doing things in different ways. Our sister service, the Army, for example, civilianized half of their nursing force almost 10 years ago, at a considerable cost savings. Likewise, they have a licensed vocational nurse that provides superb health care on the ward as a separate enlisted military operating specialty.

And so what we are trying to do is say, how can we do the best for our people, given our dollar limitations, and pull more of our retirees back in by looking at ourselves in the mirror and saying, have we optimized our system? It has nothing to do with lowering our standards. You are correct, that would be an error to do.

Admiral NELSON. We are not contemplating any changes in our nurse educational level at this point. We did that several years ago and had difficulties with it and we reversed our position at that time, but I would address the CRNA issue. You, Senator, sent us a letter 1½ years ago. It was one of the first that I received as Surgeon General, that asked the question about how we dealt with the CRNA, not issue, but rather their privileges, and I assure you at that time that we had a requirement, that we had a set of expectations, directives that clearly defined their role and did not require specific oversight by a physician.

I found that one activity I had still practiced that way. We have since changed that. We are in line with what I told you 1½ years ago, and I think it works quite well.

The only surgery that I have ever had, the anesthesia was given by a nurse. My wife is in surgery this morning, as we speak, and for all I know she has a nurse giving that.

So we are in line, I think, with what you expect, and it is not a quality issue at all. The quality is excellent.

General BLANCK. We are contemplating no changes in the standards as you describe. We are looking to remove the requirement for the direct or immediate supervision of certified registered nurse anesthetist (CRNA's). It seems to be unnecessary. Clearly, complicated cases require anesthesiologists. Those that are not, do not.

Senator INOUYE. One last question. Are you all in favor of continuing USUHS (Uniformed Services University of Health Services)?

General BLANCK. Yes, sir.

Admiral NELSON. Yes, sir.

General CARLTON. Yes, sir.

Senator INOUYE. Thank you very much.

Senator STEVENS. Thank you very much. We will now transition to the nurses' panel. Thank you very much, and we look forward to hearing from you.

General, we would like to continue to ride herd on that. Maybe before you leave we can talk about that.

General BLANCK. Certainly. Perhaps on the trip to Alaska maybe we can get together.

Senator STEVENS. Good. Good. Thank you.

NURSE CORPS

STATEMENT OF REAR ADM. KAREN A. HARMEYER, DEPUTY DIRECTOR, NAVY NURSE CORPS, RESERVE COMPONENT, AND DIRECTOR, NAVAL RESERVE MEDICAL PROGRAM 32, BUREAU OF MEDICINE AND SURGERY

Senator STEVENS. We are going to hear from the chiefs of the Nursing Corps. We all know that you are very vital to the success of the military medical system. General Brannon, Admiral Harmeyer, Colonel Gustke, this is your first appearance before the committee, I understand, each of you. Perhaps you have been in the audience before, but I want to turn to my friend, and I also want to apologize. I am scheduled to speak to a meeting conducted under the auspices of the Office of Naval Research in another building in just 7 minutes, so I will leave before you probably have completed your statements, but I know that Senator Inouye will be your godfather, as always. Senator Inouye.

Senator INOUYE. Let's hear those statements while you are here.

Senator STEVENS. All right, fine. Go ahead and give your opening statements, and I will remain, and Senator Inouye will take over from there.

Senator INOUYE. I want to hear, I want the chairman to hear your statements.

Senator STEVENS. Admiral.

Admiral HARMEYER. I will start. Good morning, Mr. Chairman, Senator Inouye, distinguished members of the committee. I am Rear Admiral Karen Harmeyer, Deputy Director of Navy Nurse Corps Reserve Component. On behalf of Rear Admiral Kathleen Martin, I am honored to attend, and appreciate this opportunity. I will focus my remarks on four key areas that serve as a framework for accomplishing our mission: leadership, TRICARE, reserve support, and nursing research.

NURSE CORPS

The number of nurses in commanding officer and executive officer billets has tripled in recent years. Nurse Corps officers are in command at two of the Navy's residency treatment facilities, two active duty fleet hospitals, and three of the eight large Naval Reserve hospital augment units.

Nurses hold critical positions at health affairs, OPNAV, and lead agent offices. Navy nurses play key roles in the implementation of TRICARE, to include direct health care delivery, triage, utilization and quality management, marketing, education, case management, and policy development.

Nurse practitioners, midwives, and nurse anesthetists provide services to the fullest extent of their scope of practice and competency. By increasing the enrollment capabilities at all MTF's, we

maximize our provider assets while maintaining critical competencies needed for wartime roles.

Through nurse-managed clinics, numerous commands have improved patient compliance, decreased outpatient and emergency department visits, and reduced hospitalization rates. Nurses assess patients for health promotion and maintenance needs, thus allowing the MTF to tailor health care delivery to the user population.

Total force integration allows us to meet our mission, and make the strides that I have mentioned. We are one force, active, reserve, civilian, contractor, all pulling together to accomplish the work of Navy medicine.

Nursing research is central to our practice. Research is key to establishing and keeping a scientific basis for professional nursing. We must continually evaluate our actions to ensure that advances in the health sciences are translated into cost-effective, high-quality health care. The tri-service nursing research program assists these efforts through funding of both short and long-term studies. We greatly appreciate your support in our research efforts.

Having focused on our accomplishments, I will mention two of our challenges, the predicted nursing shortage, and our commitment to a bachelor's degree education. Indicators point to a developing nursing shortage. We are working with our recruiting commands to attract both new graduate and experienced nurses. The competition is keen, with signing bonuses and higher salaries in the civilian sector. For these reasons, Nurse Corps accession bonuses and stipend programs are crucial to our recruiting efforts.

Second, as with other officers, all commissioned officers in the military service, nurses need to have a baccalaureate degree. Despite the growing nursing shortage, the answer is not to lower our accession requirements, but to remain steadfast to our entry standards.

In conclusion, as we collaborate with our military and civilian colleagues to achieve high-quality, cost-effective care, the health and safety of all our beneficiaries are our highest priorities.

On behalf of Admiral Martin, I sincerely appreciate your support and the opportunity to address you today. Thank you.

[The statement follows:]

PREPARED STATEMENT OF REAR ADM. KAREN HARMEYER

Good morning Mr. Chairman and distinguished members of the Committee, I am Rear Admiral Karen Harmeyer, Deputy Director, Navy Nurse Corps, Reserve Component and Director, Naval Reserve Medical Program 32. On behalf of Rear Admiral Kathleen Martin, who regretfully could not be here today, I am honored to attend and excited about this opportunity. I am immensely proud of the Navy health care team and the Navy Nurse Corps. It is a pleasure to be with you this morning representing the Director of a group of incredibly talented Nurse Corps officers. The opportunities that face us in Navy Medicine are challenging ones, but the Navy Nurse Corps, with our focus on creating teams and developing partnerships for optimal health promotion and organizational performance is ready for the challenge.

I would like to center my remarks on several key areas that shall serve as a framework on which to describe our mission accomplishment and future challenges. These focus areas are leadership roles and responsibilities, Navy nurses' role in support of TRICARE initiatives, population health and health promotion, and nursing research.

LEADERSHIP ROLES AND RESPONSIBILITIES

Leadership is one of the strongest attributes of the Navy Nurse Corps. There is both an implicit and explicit expectation that Navy nurses apply their experience, education and training to be both military and healthcare leaders. When commissioned, they assume an additional role as Naval officers, which mandates the successful integration of compassion with discipline, individuality with conformity, and wellness with wartime readiness. Our charge is to develop recognized leaders in the health care arena who create best business and clinical practices through partnership, collaboration, and teamwork.

This vital importance of leadership is truly exemplified in the Surgeon General's support of the concept that leadership positions in Navy Medicine should go to the "best qualified" officer regardless of corps specialty. Doors are open to nurses that have never been open before. In recent years, the number of nurses in commanding officer and executive officer positions has tripled and we placed nurses in critical positions at Health Affairs, OPNAV, and Lead Agent staffs. For the first time, we have Nurse Corps officers serving as commanding officers of two of the Navy's residency training facilities: National Naval Medical Center (NNMC), Bethesda and Naval Hospital (NH) Jacksonville. Their expertise as superior senior healthcare executives transcends traditional Nurse Corps roles. Additionally there are 24 active and reserve component nurses serving in command, executive officer roles, or as deputies or chiefs of staff at military medical treatment facilities, lead agent staffs, or education commands. Nurse Corps officers command two of our active duty Fleet Hospitals; Reserve Nurse Corps officers command three of the eight casualty receiving hospital units. Reserve and active duty officers also serve throughout the entire breadth of headquarters commands.

Some of the most exciting leadership initiatives are occurring as we continue major organizational changes within our hospitals and at commands around the world. In numerous hospitals, nurses are assuming roles as department heads or directors of clinical services and product lines. Nurse anesthetists and nurse practitioners at USNH Yokosuka, NH Cherry Point, NH Corpus Christi, Naval Medical Clinic (NMCL) Pearl Harbor, USNH Naples, Branch Medical Clinic Sasebo, USNS Mercy, and NH Beaufort are serving in dual roles as health care administrators, while maintaining an active clinical practice.

In addition to leadership roles in traditional fixed treatment facilities, we have over 70 active duty and many reserve nurses serving in a broad range of operational assignments that include:

—shipboard assignments on aircraft carriers, hospital ships, and with the fleet surgical teams;
—assignments with the Marine Corps Medical Battalions;
—flight nurse assignments at Diego Garcia and Scott Air Force Base;
—operational staff assignments with Commander, Amphibious Group 2 & 3 and Marine Forces Pacific; and
—training assignments at Fleet Hospital Operations/Training Command, Field Medical Service Schools, Marine Corps Combat Development Command, Naval Operational Medicine Institute, Surface Warfare Medicine Institute, C–4 Staff, Academy of Health Sciences Fort Sam Houston, Camp Lejeune Chem-Bio Response Force, and the Joint Trauma Training Center.

I see multiple examples of strong nursing leadership at every command I visit. I see our vision of being the leaders in creating teams and developing partnerships for optimal health promotion and organizational performance becoming reality.

NAVY NURSES ROLE IN SUPPORT OF TRICARE INITIATIVES

As highlighted by our senior leadership, TRICARE and Readiness are inseparable. As we work to improve TRICARE, so we are maintaining our readiness skills. Navy Nurse Corps officers are valued and active members of the TRICARE team. They serve in a variety of roles; direct health care provider and triage nurse, utilization/quality management, marketing & education roles, and policy development roles at every level of the organization. We are proud to serve in many TRICARE leadership positions including Lead Agent Director, Heads of Managed Care Departments and business case analysts. There are four nurses serving at the TRICARE Management Activity, two of them in director roles.

At the Military Treatment Facility level (MTF), active and reserve Navy nurses are uniquely positioned to ensure TRICARE is meeting the needs of our beneficiaries by focusing on prevention, health promotion, case management, education and serving as leaders of special demonstration projects. Our Navy Nurse Corps strategic plan focuses on the professional development of all Nurse Corps officers, with specific strategies for educating nurses on the TRICARE program and man-

aged care practices. I would like to highlight just a few of the specific TRICARE initiatives in which Navy nurses play a pivotal role.

Navy nursing has been instrumental in the successful implementation of the TRICARE Senior Prime (TSP) demonstration project at NMC San Diego. As project manager, a Navy nurse led the planning, implementation, and administration of the program. He and his staff partnered with the managed care support contractor, Foundation Health Federal Services (FHFS), and developed a comprehensive plan to effectively include San Diego as a TRICARE Senior Prime Demonstration site. Based on historical MTF utilization data (number of admissions, average lengths of stay, occupied bed days, etc), it was determined that 4,000 beneficiaries could be enrolled without unduly affecting the quality of care and TRICARE Prime beneficiary access to NMC San Diego. Health care delivery for TSP began 1 November 1999 and the external reviews of the program to date by the RAND Corporation and the Government Accounting Office found a high degree of satisfaction in the quality of, and access to, care provided by both beneficiary and provider focus groups. Monitoring of utilization data has resulted in practice patterns that are beginning to mirror the "best practices" of health plans in the civilian community.

Another San Diego nurse performs the pivotal role of Compliance Officer and MTF Liaison for the TRICARE Senior program. In this role, she ensures compliance with HCFA regulations, performs audits, and develops provider and beneficiary training programs. She developed relationships with other MTF TSP/Compliance Officers across all demonstration sites to help ensure uniformity in how business is conducted. Furthermore, Navy Nurse Corps case managers interact with FHFS case managers to track and monitor TSP beneficiaries that are referred to skilled nursing or rehabilitation facilities.

Case management of administratively, medically, or socially complex patients has been identified as a major asset in controlling costs and improving the quality of care these patients receive. Nurse Corps officers with in-depth clinical and military system knowledge guide providers and patients through the complex processes and connect them to vital community resources. Coordinating the multiple care needs of these patients is a major contributor to the satisfaction of patients and providers with TRICARE. Nurses at numerous Navy treatment facilities perform utilization and quality management oversight of both ambulatory visits and inpatient admissions.

Our advanced practice nurses—nurse practitioners, certified nurse midwives and certified nurse anesthetists—all practice to the fullest extent of their competency and practice scope to ensure the right care provider delivers care to the right patient based on their health requirements. In this manner, we maximize our provider assets while allowing them to maintain those critical practice competencies needed for wartime roles. As integral members of provider teams, nurse practitioners and certified nurse midwives greatly increase the enrollment capabilities at all MTFs.

Nurse-managed clinics are operating at numerous commands around the country. The primary aim of these clinics is to encourage patients' involvement in their care and provide individualized education to patients regarding their diseases or complications. The goals are to improve patient compliance with medical regimens, decrease the number of outpatient visits to emergency departments and primary care managers, and decrease inpatient hospitalization rates.

An example of this is Naval Ambulatory Care Clinic, Groton, where the nurses can manage beneficiaries requiring education or initial screening for conditions such as sore throats, chicken pox, or pregnancy. Additionally, nurses begin preliminary screening for school physicals. Nurses see approximately 20 to 25 patients per day, enhancing access to care and increasing the number of patients enrolled to providers.

In the mental health arena, NH Great Lakes provides critical programs to screen all incoming recruits, and triage recruits with psychopathology and alcohol related disorders. Acute care and stabilization is provided and case management is rendered for high-risk recruits pending separation. The NH Great Lakes staff members also provide an outreach program focusing on life skills support to sailors in the service schools. Similarly, at NMC Portsmouth, the nurse-run outpatient case management program provides stabilization and transition support for service members with severe mental illness who are pending separation and are too symptomatic to maintain self care in a transition barracks. NMC Portsmouth also has a nurse managed outpatient crisis intervention program that replaced services that were previously provided by a five to ten day inpatient stay.

NNMC Bethesda has started a "Parents Expecting Multiples" birth support program that addresses concerns unique to those who will soon be parents of twins, triplets or more. A Nurse Corps reservist who is the mother of triplets started the program to help new parents with issues such as preterm labor, breastfeeding, prop-

er nutrition and delivery. As an added support gesture, the soon-to-be mothers of multiple births gladly exchanged names and phone numbers creating an informal parent support group.

POPULATION HEALTH AND HEALTH PROMOTION

As we educate our patients regarding healthcare services, access and referral we must also assess the healthcare needs of our various populations and provide specific health prevention and promotion initiatives. Patients with diseases that generate high utilization and/or costly services can be best managed if needs are identified and coordinated over the entire continuum of care. At NMC San Diego, Nurse Corps officers have taken the lead in managing this process in the Diabetes and Asthma Disease Management projects begun with Lovelace Health Innovations, Inc. By systematic patient population identification and numerous process improvement initiatives, patients are showing greater compliance with established medical practice. Future return-on-investment strategies, such as health promotion programs targeted specifically to these diseases are being developed with systematic data retrieval to ensure the long-term success of these programs.

Health promotion activities provide a medical benefit to the non-ill population, as well as to those already diagnosed with a medical condition. Nurse Corps officers have provided the leadership and coordination in these departments that focus on programs to reinforce beneficiary healthy life-style behaviors, which should lead to reduction of demand for more invasive procedures. Additionally, through patient education programs and nurse triage services, patients are taught appropriate self-care measures and better uses of the health care available.

One example of this is the new Putting Prevention into Practice (PPIP) Center, which opened last September in Yokosuka, Japan. The center is a first in that it is a joint comprehensive hospital and dental partnership which focuses on pre and post-deployment medical examinations for active duty members as well as a joint, integrated medical surveillance system to collect, analyze and disseminate data related to military preventive medicine support. At a myriad of other sites, including NMCL Pearl Harbor and USNH Rota, the nurses have been very successful in implementing PPIP initiatives by interviewing each family as they report aboard; conducting these health-screening interviews allows the nurse to assess the family's specific health care needs such as immunizations, screening mammograms, well-baby physicals, stress management and tobacco cessation interventions. This further assists the MTF in planning for their resource requirements and tailoring their healthcare delivery to the needs of their user population.

In an effort to address one of the fastest growing drug problems in the United States, USNH Okinawa and the Armed Forces Network Okinawa produced a video titled "Last Breath." The documentary provides an unsettling look at the allure and popularity of inhalant abuse as well as its potentially lethal effects. A nurse and physician led the project that promotes awareness of "huffing," the deadly practice of inhaling fumes from household chemicals such as edge dressing, solvents and aerosol room deodorizers. The documentary was researched, written and produced by a multidisciplinary team of nurses, physicians, corpsmen and military public affairs specialists, and will be distributed throughout Okinawa to the Department of Defense Dependent Schools and Navy and Marine Corps commands.

NURSING RESEARCH

Central to our practice is our commitment to nursing research. As stated in our strategic plan, Nurse Corps officers will use research strategies to promote and develop evidenced-based practice, and conduct and disseminate research. This dedication to research is key to establishing a scientific basis for professional nursing practice. Much of our current nursing practice is based on historical and anecdotal information that has not been scientifically validated. Our profession has the obligation to continually evaluate our practice to ensure that advances in the health sciences are translated into cost-effective, high-quality health care. This focus on research is manifested in multiple ways. Clinical staff nurses at a MTF, seeking ways to improve patient outcomes, conduct studies that seek to answer the "why" of a particular care modality. In more extensive studies, active and reserve component Nurse Corps officers do qualitative and quantitative studies as part of their doctoral dissertations. The TriService Nursing Research Program (TSNRP) provides funding for both short and long term studies, all seeking to base nursing practice on solid research. Let me describe a few of the many studies in which nurses are involved:

Nurses in San Diego initiated several research studies on methods to decrease patient anxiety. They validated the effectiveness of non-invasive techniques such as distraction and music therapy as proven methods to reduce pain and decrease anx-

iety. With such validation of the success of these interventions, they can be incorporated as discrete steps in a protocol, thus changing practice based on research. Such seemingly simple interventions directly affect patients' quality of life and reduce costs by reducing medication needs.

At NNMC Bethesda, nurses initiated a research project that evaluated the effects of patient positioning on discharge readiness following diagnostic laparoscopies. This procedure is the most common gynecological procedure performed in an ambulatory setting. The research revealed that women who recovered in recliner-chairs following this type of laparoscopic surgery were ready for discharge faster and experienced greater comfort levels than women who recovered in traditional hospital beds. This led to an increase in patient satisfaction, improved outcomes and shorter length of stays. In addition, there is a measurable cost savings attributed to the faster recovery period and more timely discharge associated with women who recovered in the recliner-chairs.

Nurses at NH Camp Pendleton, evaluated the functions of the Patient and Family Education Program in relation to other program offerings and the Joint Commission on Accreditation of Healthcare Organizations' patient and family education program standards. This study resulted in the formation of a Department of Population Health, which will start operations this month. The department will be multidisciplinary in structure and will take a proactive, evidence-based, collaborative approach to continuously assessing, improving and documenting the general health and well being of NH Camp Pendleton's population. This will be done in conjunction with the hospital's healthcare team, by utilizing population-based and prevention-oriented strategies, measures and outcomes.

Utilizing TSNRP funding, another Nurse Corps researcher scientifically validated the safe use of resistance exercise training in patients with advanced heart failure. As a result, the use of hand-held weights may be incorporated into the cardiac rehabilitation program for these patients.

Without a doubt as a group, the nurse anesthesia community is in the forefront in terms of the numbers and types of research conducted and application of results to direct anesthesia practice. Research conducted by nurses in the Navy Nurse Corps Anesthesia Program (NCAP) is the backbone of the "Research in Action" presentations presented annually at the national meeting of the American Association of Nurse Anesthetists (AANA). Over one-half of all the 1999 presentations were from Navy NCAP students. Together with their clinical instructors and research directors at the school headquarters in Bethesda and at the three clinical sites at NMC Portsmouth, NMC San Diego and NH Jacksonville, the students look at all facets of nurse anesthesia practice. Studies include topics such as validating the need for certain types of anesthetic agents, determining the best doses for a desired patient outcome, testing equipment to be used in a new way, nurse anesthetist productivity, how a given type of anesthesia contributes to a patient's quality of life and ability to return to their normal state of health after release from the hospital. NCAP students also received FDA approval and funding for a study in which a specific drug was evaluated for a new use. In recognition of their superlative program, the NCAP program became one of the first nurse anesthesia programs in the country to attain 10-year accreditation status.

RESERVE SUPPORT

Our current accomplishments would not be possible without the dedicated, educated, and motivated Nurse Corps officers who demonstrate excellence in nursing practice on a daily basis and the Reserve Nurse Corps officers who bring their civilian experiences to military medical facilities during drills and annual training. At the Naval Reserve 84th Birthday Ball, Secretary Danzig said that reservists "bring something precious that frequently (active duty members) do not have, that you cannot get simply by being a Sailor; but you can get by being a citizen and a Sailor and engaged in civilian occupations." We could not meet our mission nor make the strides that I have mentioned were it not for the concept of Total Force Integration. This concept, endorsed at all levels of our organization, envisions us as one force—active component, reserve component, civilians, contractors, and others—pulling together to accomplish the work of Navy Medicine. Reserve nurses have become fully integrated into the daily activities in many of our commands and likewise have key roles on operational platforms.

Reserve medical support plays a vital role each year at NH Great Lakes during "summer surge" when thousands of new recruits process through boot camp. The flawless integration of active and reserve components during these peak times allows this training command to process and provide healthcare to three times the usual recruit throughput. Total Force Integration is achieved through collaborative

relationships between active and reserve components to effectively utilize all resources and maximize readiness. This synergistic approach allows reservists to keep their medical and military skills sharp and fulfill their drill requirements, while the hospital benefits from much needed medical support from July to October.

NMC Portsmouth recently opened a "state of the art" Pediatric Intensive Care Unit (PICU). This would have not been accomplished without the support of several PICU qualified reserve nurses from San Diego as well as the local Portsmouth area. Their presence was critical and due to their educational and professional support the NMC Portsmouth PICU opened on schedule.

Furthermore, while serving on the National Naval Reserve Policy Board, my efforts focused on ferreting out the impediments and barriers to full integration of our reserve and active components. The personification of these efforts is the collaboration our reserve nurses share with active component Nurse Corps officers at every level of Navy Medicine. I am seeing this at medical treatment facilities, BUMED headquarters, and all other activities where Navy nurses perform their duties. Our Nurse Corps strategic plan, with leadership, operational readiness and professional practice goals, is a road map for all Navy nurses. I see total force integration daily. We have come a long way and must continue to work together as one successful team.

CHALLENGES

Having focused on our accomplishments in leadership, TRICARE, population health and research, I would also like to briefly mention two of our challenges. The nation-wide developing nursing shortage has been well publicized in numerous professional journals, the press and at national conferences. Two of the major factors continue to be an aging RN workforce and a drop in enrollment numbers at nursing schools around the country. According to a new survey by the American Association of Colleges of Nursing, the overall enrollment in entry-level bachelor's degree programs dropped 4.6 percent last year—the fifth consecutive decrease in as many years. The overall enrollment in master's and doctoral programs also fell. Of note in this survey is the strong emphasis on current trends such as increasing technology, an aging population, and an increasing breadth and scope of nursing practice that is demanding a need for well-educated nurses. Specifically, demand is high for baccalaureate prepared nurses, from programs that give them leadership, case management training and experience in a variety of care settings. This is exactly the same preparation we require as an entry level for our Navy nurses. We are working with our recruiting command to attract both new graduate and experienced nurses. The Navy Recruiting Command must compete with large "signing bonuses" from civilian healthcare organizations and pay that exceeds beginning Navy salaries. For these reasons, our Nurse Corps accession bonuses and our pipeline stipend programs continue to be critically important to us; we are extremely appreciative of your support for them.

Secondly, the broad scope of professional practice expected of a Navy nurse in a variety of practice settings, hopefully borne out in my testimony today, requires that our Nurse Corps officers be educated to meet patient care needs in our increasingly complex healthcare delivery system. Nurses must have critical thinking skills, effective communication skills, and proficient clinical talents. As with all other officers commissioned for military service, nurses need to have a baccalaureate degree. As nurses work with various healthcare providers and line officers to meet the numerous and unique needs of active duty members and their families, they must have the educational preparation to meet these challenges. Despite the growing nursing shortage, the answer is not to lower our baseline entry requirements, but to remain steadfast in our entry standards. We truly are most appreciative of your support in this area.

I would like to close on a positive note: the following excerpt is taken form the web-site of the Gallup Poll, in December 1999.

> A century and a half after Florence Nightingale's heroic efforts in the Crimean War first brought attention, and adulation, to the nursing profession, public esteem for this profession is extremely high. In Gallup's annual Honesty and Ethics poll, expanded this year to include nurses and 19 additional occupations not previously rated, nearly three-quarters of Americans, 73 percent, deem nurses' honesty and ethics as either very high or high, putting them at the top of the list.

In an article given to me on the same subject, much was written about how much the public trusts nurses. In many cases, the person they prefer to get their healthcare advice from is the nurse. This trust of the American public is something

we should cherish and carefully nurture. In a time when there is so much mistrust of the healthcare system, we should continue to capitalize on this trust and continue to provide caring, honest and trustworthy care to all that come to us for help. The Navy Nurse Corps is committed to the success of the military health care system, and we are extremely proud to be part of the Navy Medicine team.

As we collaborate with our colleagues in all the services to achieve high quality, cost effective care, we will continue to keep the health and safety of our beneficiaries as our highest priority. On behalf of Admiral Martin, I sincerely thank you for your support and for the opportunity to address you today; I know she looks forward to your continued association during her tenure as Director.

Senator STEVENS. General.

STATEMENT OF BRIG. GEN. BARBARA C. BRANNON, DIRECTOR OF MEDICAL READINESS AND NURSING SERVICES, OFFICE OF THE SURGEON GENERAL, DEPARTMENT OF THE AIR FORCE

General BRANNON. Mr. Chairman, Senator Inouye, it is an honor to present my first testimony on the achievements of Air Force Nursing Services. Let me begin by saying thank you for your continued advocacy and support, and for the opportunity to highlight some of our challenges and our successes.

COMMAND OPPORTUNITIES

Command opportunities for nurses have grown tremendously over the past several years. Each year, nurses have been selected for group command in ever-increasing numbers, peaking at 14 in 1998. On the 1999 Medical Group Commanders Screening Board, for the first time, we saw a decrease in the number of nurses selected, 28 percent fewer than the previous year. This is the first decrease, and I have no reason to expect that this represents a trend.

RECRUITING

I am very concerned about Air Force nurse recruiting. Last year, for the first time in many years, we had a recruiting shortfall of 85 nurses, which was nearly 30 percent of our requirement. One of the biggest recruiting challenges is our need for fully qualified nurses, those who have 1 year of basic medical-surgical experience. I believe experienced nurses are necessary because Air Force right-sizing efforts have decreased our clinical training opportunities. Our remaining in-patient facilities cannot absorb larger numbers of new, inexperienced accessions.

We are using many incentives to attract experienced nurses, such as bonuses, and additional constructive service credit. We have also proposed loan repayment programs and shorter initial active duty service commitments, and we will continue to explore other options to ensure Recruiting Services has the tools they need to achieve our accession goals.

As we sculpt our nursing force, it is also imperative that we optimize the contributions of our enlisted nursing personnel. An initiative is underway to train and license enlisted medics at the licensed practical nurse level. We are also examining the feasibility of expanding our nursing skill mix to include civilian or enlisted associate degree nurses.

READINESS

The primary mission of Air Force Nursing Service is readiness. Our active duty, Reserve, and Guard nursing personnel continue to be heavily engaged in global contingency operations, humanitarian support, and also in disaster relief. As examples, this past year we deployed to the Balkans, we continued our Hurricane Mitch disaster relief, and we provided medical support to Native Americans in Alaska.

Advances in telemedicine continue, and have specific applications for Air Force nursing. The use of in-flight e-mail to transfer patient information has brought a new dimension to nursing care in the air. Army and Air Force nursing personnel in Hawaii are also testing and evaluating a telemedicine program that is aimed at improving DOD patient access and the quality of care. An Air Force nurse will be the next Deputy Director of this $40 million project.

Air Force nursing continues to partner with our sister services to achieve professional goals. The Federal nursing chiefs were successful this year in establishing a Federal Nurses Association as a constituency of the American Nurses Association. This landmark means that Federal nurses now have a place at the table where national standards of care and practice are made for nursing.

Congressional funding has provided vital support to Air Force nursing research, and we are exploring measures to fund our triservice nursing research program through the DOD. Active duty, Reserve, and Guard nursing personnel currently have 60 research projects underway. Our topics range from post deployment nursing care needs to air medical evacuation nursing procedures, and to other issues that are specific to military nursing.

Air Force nursing plays a major role as we transition to population health. Nurse triage and nurse-managed clinics address two areas where nurses are providing critical professional support and improving the health care to our people. Facilities that have implemented these programs have seen a significant increase in both access and patient satisfaction, with a decrease in cost, and the focus squarely on prevention, as it should be.

In closing, I thank you for the opportunity to share the challenges and the tremendous accomplishments of Air Force Nursing Services. Mr. Chairman, Senator Inouye, and other members present, on behalf of the patients we serve, the Air Force Medical Service, and the Department of Defense, we appreciate your strong continuing support of military nursing.

[The statement follows:]

PREPARED STATEMENT OF BRIG. GEN. BARBARA C. BRANNON

Mister Chairman and members of the committee, it is an honor to present my first testimony on the achievements and challenges of Air Force Nursing Services. Let me begin by thanking you for your continued advocacy and support of our many endeavors.

COMMAND OPPORTUNITIES

Leadership and command opportunities for Air Force Nurse Corps (AFNC) officers have increased steadily over the past 13 years. Our nurses, because of their superb blend of educational preparation, clinical expertise, and management experience, have been very successful in leadership positions within the Air Force Medical Service (AFMS).

I proudly report that nurses have made steady progress in selection for command; active duty nurses currently command 32 percent of our medical groups and 18 percent of our squadrons. The first nurse to serve as a Command Surgeon, a Reserve nurse at the Air Force Reserve Personnel Center, was appointed last year. Nurses also command 29 percent of the Air Reserve medical squadrons and 15 percent of Air National Guard medical squadrons.

However, the number of nurses commanding medical groups will decline in the future. The selection rate for the CY 1999 Medical Commander Selection Board was only 30 percent for nurses, and of those candidates, only 54 percent were assigned to group commander positions. In comparison, 50 percent of nurses eligible for command were selected as candidates in CY 1998 with 82 percent of the selects assigned to medical group command positions. The CY 1999 nurse selection and subsequent placement rates were lower than the percentages for the Medical, Dental, and Medical Service Corps.

READINESS ACCOMPLISHMENTS

The primary mission of the Air Force Medical Service, and hence Nursing Services, is readiness. To meet readiness requirements, we must ensure that we are appropriately staffed, trained, and equipped to respond to wartime contingencies, humanitarian and civic assistance missions, and disaster relief operations.

The Expeditionary Medical Support (EMEDS) concept was fully developed this past year to support the Air Expeditionary Force. EMEDS units are mobile and modular and can be tailored to support any type or size of military operation. The most basic unit consists of small, surgical and intensive care teams of physicians, nurses, and enlisted specialists who can respond quickly to contingencies around the world. Nursing resources assigned to each team were revised to provide the right combination of general and specialty nursing staff and equipment.

As the AFMS continues to rightsize, the number of clinical training platforms is steadily decreasing, making maintenance of clinical skills and meeting readiness training requirements a significant challenge. Air Force Nursing Services is committed to creating efficient and effective programs for nursing personnel to gain and maintain critical readiness skills. Air Force nursing consultants recently revised Readiness Competency Skills lists to reflect tasks nurses perform in contingency environments. Active duty, reserve, and guard nursing personnel will use these lists to assess their clinical capabilities and training requirements. Programs are already being developed to meet identified needs.

TopSTAR, Sustainment Training to Advance Readiness, expanded to a second location last year. Travis Air Force Base opened a TopSTAR unit in addition to the original site at Wilford Hall Medical Center. TopSTAR is currently used to validate clinical skills and it is also being evaluated as a training platform for nursing personnel to update their skills prior to assignment overseas.

Exceptional training opportunities also occur during medical exercises and real-world contingencies. Medical exercises in Asia and within the Continental United States, and contingency operations in Central America, Asia, and Europe, allowed active duty, reserve, and guard personnel to test their skills. These deployments were also particularly helpful in identifying tasks that required follow-on training.

Two other training success stories were the Joint Military Trauma Training program at Ben Taub General Hospital in Houston, Texas, and the Jefferson Barracks Trauma Training pilot program in St. Louis, Missouri. The Ben Taub clinical rotation for military teams provided four times the patient admissions, blunt trauma cases, and penetrating trauma cases than experienced by teams at Wilford Hall Medical Center during the same time frame. At the Jefferson Barracks pilot program, similar training opportunities are potentially available to provide our medics excellent experience in trauma management.

All readiness training is focused on ensuring our nursing personnel can provide care under highly stressful conditions in deployed locations. Nursing personnel have had many opportunities to support contingency operations this past year and demonstrate their capability.

Operation Southern Watch/Joint Guard.—The ongoing support to Southwest Asia (SWA) is a total force commitment. There are currently 47 nursing personnel serving at Prince Sultan Air Base and Riyadh, Kingdom of Saudi Arabia; Kuwait; United Arab Emirates; and Oman. Nursing personnel on 120-day rotational deployments work in clinics, small hospitals, and aeromedical evacuation (AE) settings in support of the continued SWA mission.

Operation Joint Forge/Noble Anvil.—Nine nursing personnel are assigned in Bosnia, Kosovo, Macedonia, Italy, Hungary, and Germany where AE liaison teams, mobile aeromedical staging flights, aeromedical evacuation control centers, and

aeromedical evacuation support cells provide medical support to the theater of operation.

Operation Northern Watch.—Currently six nursing personnel are deployed to Incirlik, Turkey, to augment nursing care available for deployed forces.

In addition to the sustainment operations already listed, nursing personnel were also primary responders to several humanitarian operations and disaster relief actions. For example, active, reserve, and guard nurses and technicians provided humanitarian assistance in South America and continued recovery efforts following Hurricane Mitch which devastated Central America in 1998. We also provided nursing care in Alaska to Native Americans, where medical teams were able to test their ability to care for cold-weather injuries.

In addition to nursing's total force engagement in readiness training and actual deployments, senior nursing personnel also have a strong presence in leading readiness programs at command level. Nurses currently hold the senior readiness position at the Air National Guard, Air Mobility Command, and Pacific Air Forces Command. Several nurses are also assigned to the readiness staffs at the major command, Air Staff, and Joint Staff levels. Nursing Services personnel are clearly at the tip of the spear in medical readiness.

To meet our medical readiness support requirements, the Air Force Medical Service continues to pursue the insertion of telemedicine into the aeromedical environment—a concept critical to providing nursing "care in the air." The success of transmitting patient and operational data via e-mail on "live" AE missions within Europe has already been validated. A similar advanced telemedicine demonstration is currently underway in the Pacific.

Another great accomplishment in telemedicine is a joint venture at Tripler Army Medical Center in Hawaii. Nursing personnel assigned to this program test, validate, and evaluate new technology to improve DOD patient access and quality of care. An Air Force nurse will be the next deputy director of this $40 million project.

PEACETIME ACCOMPLISHMENTS

While readiness remains our priority, Nursing Services has had numerous successes in the peacetime healthcare arena as well. As mentioned earlier, the Air Force Medical Service is transitioning to a population health model of care delivery. Population health standardizes beneficiary healthcare management, promotes effective prevention and clinical intervention, and, in the long run, drives down costs. It also facilitates using clinical nurses in expanded roles such as nurse triage, nurse-managed clinics, condition management, demand management, case management, and informatics. Our nurses have the broad knowledge base and right qualifications to fulfill these crucial functions.

Air Force Nursing Services has been instrumental in the transition to population health. Nurses and medical technicians assisted in planning the "Primary Care Optimization" course attended by 861 AFMS members over a four-week period. As key faculty for the training sessions, nursing personnel taught primary care management teams composed of physicians, nurses, and technicians the principles and practice of demand management, case management, nurse triage, and new roles and responsibilities.

Nursing also supports population health by ensuring services are provided at the right time, in the right place, and by the right member of the healthcare team. Aviano Air Base provides a wonderful example of a nurse triage program that enhanced patient access and dramatically decreased the need for primary care appointments. Triage nurses at Aviano successfully determine the appropriate level of care based on the patients' symptoms and then, using triage principles and protocols, refer them for routine, acute, or emergency appointments, or provide self-care options. The patients report a high degree of satisfaction, and it was found that eighty percent of the patients triaged by nurses did not require a medical appointment. Scott and Keesler Air Force Bases have similar success stories using nurse triage to greatly streamline patient access to care.

Nurse-managed clinics have also proven highly effective in achieving the goals of population health. Using clinical guidelines or approved nursing protocols, nurses manage patients with chronic conditions, conduct follow-up visits, provide patient education, and coordinate care among the primary care managers, referral services, and specialists. Nurses provide patients and family members the long-term support needed to promote life-style changes that enhance their ability to manage their health and healthcare.

Little Rock, Hill, and Keesler Air Force Base hospitals have very successful nurse-managed clinics. Nurses educate the patient and family, assist the patients in setting their own realistic goals, encourage optimal use of local resources such as the

base health and wellness center, and monitor long-term progress. Implementation of nurse-managed clinics has decreased readmissions and length of hospital stays. As a result of these nursing initiatives, we have also seen a significant increase in customer satisfaction, a decrease in cost, and a focus squarely on prevention, as it should be.

A new role for military nurses under population health is the health care integrator (HCI), a liaison between primary care team members, our beneficiaries, and the local community. The HCI collects and analyzes data to assess individual and group characteristics and health practices. With definitive information about the population served, the HCI is better able to match and coordinate the needs of the patients with the capabilities of the military and civilian healthcare system.

The increased emphasis on clinical nursing in the transition to population health prompted a review of our AF nursing career path. In the past, promotion to lieutenant colonel and colonel was more easily achieved by nurses in administrative roles. Senior nursing leadership recently began emphasizing the the importance of the clinical nursing career path to ensure we have the clinical focus needed in our company grade and junior field grade nurses. The recently revised NC career path clearly delineates both a clinical and administrative career track through the rank of lieutenant colonel for most Air Force specialty codes (AFSC) and to colonel for a few specialty AFSCs. We will continue to stress the importance of the clinical nursing career path to our nurses and our non-nursing colleagues. In addition, the Secretary of the Air Force's instructions to promotion boards charge board members to "consider clinical proficiency and skill as a health professional." This helps to emphasize the importance of a strong clinical presence in our field grade ranks.

The sustainment of Air Force Nursing Services is dependent on successful accession programs. The Nurse Corps has three sources of accessions: direct commissioning, Reserve Officer Training Corps (ROTC), and the Enlisted Commissioning Program. We had a recruiting shortfall of almost 30 percent, or 83 "fully qualified" nurses, last year. This problem stems from the decreasing pool of fully qualified nurses in the civilian sector and the decline in nursing school enrollments on a national level. Recruiting Service is finding it increasingly difficult to attract the "fully qualified" nurses we need to sustain our nursing force.

A "fully qualified" nurse is one who has one year of experience in medical-surgical nursing. Basic inpatient medical-surgical nursing is the foundation for our readiness skill competencies. Since the majority of Air Force medical facilities now provide only ambulatory care services, training opportunities for novice nurses in basic inpatient care have decreased. Our remaining inpatient facilities cannot absorb a large volume of new, inexperienced nurses. Because of our concern over the degree of preparation of our new nurses, the AFNC is exploring new training programs at our larger facilities, which, in turn, would potentially allow an increase in recruitment of new nurse graduates.

To attract the right nurses with the right skills, recruiting incentives are essential. Up to 12 months additional constructive credit has been authorized for nurses in critical specialties, providing them earlier promotion opportunities. The bonus for nurses with one-year experience is now $5,000 for a four-year commitment. Prior to 1999, only nurses with three years of experience qualified for the bonus.

Another potential incentive is a specialty bonus, in addition to the accession bonus, for nurses with critically needed skills. We are also investigating a two-year active duty service commitment option in addition to the current three-year and four-year options. Furthermore, we are studying the feasibility of a delayed entry program in which nurses would be commissioned after completing their baccalaureate degree. As a commissioned officer without pay, the novice nurse would be required to gain one year of civilian experience and then would enter the Air Force with one year time in grade for pay purposes.

Air Force nurses are also accessed through ROTC and enlisted commissioning programs. The ROTC goal for fiscal year 2003–04 was doubled from 25 to 50. To facilitate the commissioning of enlisted members, the accession cap on those programs has been lifted. For prior active duty enlisted personnel currently enrolled in baccalaureate nursing programs, the one-year experience requirement was recently waived.

As we take action to address the recruiting shortfalls, the Nurse Corps must continue to sculpt our force in support of the fiscal year 2001 drawdown requirements. The AFNC, currently 4,335 nurses strong, initiated several measures in an effort to reach our fiscal year 2001 targeted end strength of 3,978 nurses. Almost three hundred nurses voluntarily separated from the Air Force during the last 18 months through temporary early retirement authority, voluntary separation incentives, special separation benefits, and waiver programs. However, continued authorization for

and funding of these drawdown incentives are required to achieve our targeted end strength.

As mentioned earlier, Air Force Nursing Services must have the "right size" and "right mix" of nursing personnel as the AFMS transitions from inpatient to ambulatory care. We are reviewing the efficacy of several models of nursing care delivery. Most healthcare organizations employ a blend of skill levels in their nursing workforce that includes unlicensed nursing assistants, licensed practical/vocational nurses (LPN/LVN), and registered nurses (RN) prepared at the associate degree, diploma, or bachelors degree level. Using an appropriate mix of skilled healthcare workers provides a more cost-effective system without adversely impacting the quality of services. The Army has adopted a nursing force model that includes a robust number of LPN/LVNs. The majority of these are active duty personnel who are trained in an Army program. Our goal is to balance the size, mix, and skills of nursing personnel to meet our peacetime and readiness requirements while ensuring high quality care to our beneficiaries.

An important strategy to obtain this goal is to optimize the skills and practice of our enlisted force. The scope of practice for our enlisted members is defined in the career field education and training plan (CFETP). The CFETP permits our medical technicians to practice at a level equivalent to the civilian LPN model, with minor exceptions. Despite their educational preparation, our enlisted medics presently function, for the most part, at the unlicensed assistive personnel, or nurses' aide, level. Our goal is to implement a program that will provide selected enlisted members licensure as practical nurses.

Another skill mix initiative revolves around the associate degree nurse (ADN). The AFNC is currently examining options to add the ADN nurse to our inventory. One alternative is to contract or hire civilian ADN nurses. Another is to educate our enlisted LPNs to the ADN level. Currently, our research indicates that it might be more fiscally advantageous to hire civilian ADNs rather than to "grow our own." However, we will proceed in contacting educational institutions for ADN program criteria and costs to use in our planning.

The Tri-Service Nursing Research Program continues to provide important benefits to the practice of Air Force nursing. Congressional funding has been pivotal to the implementation of many vital nursing research projects. We are currently exploring funding for this program within the DOD budget.

There are 34 Air Force nursing research projects in progress sponsored by the Tri-Service Program. Air Force nursing personnel are investigating topics targeted at clinical practice and readiness. Subjects range from post-deployment nursing care and aeromedical evacuation nursing procedures to other issues specific to military nursing. Many completed studies were published in professional journals and presented at federal, national, and specialty meetings this past year. I firmly believe that nursing research will continue to improve health care in the inpatient, outpatient, and contingency environment. Again, the AFNC thanks you for your continued support.

As in tri-service research, we frequently partner with our sister services to achieve our professional goals. For the past four years, the federal nursing chiefs collaborated with the American Nurses Association (ANA) to establish a federal constituency within that organization. In June 1999, the Federal Nursing Association, or FedNA, became a reality. This landmark achievement means federal nurses now have a place at the table where decisions on national nursing standards of care and practice are made.

CONCLUSION

In closing, I thank you for the opportunity to share the many challenges and tremendous accomplishments of Air Force Nursing Services. Mr. Chairman and committee members, on behalf of the Department of Defense, the Air Force Medical Service, and the patients we serve, we appreciate your strong and continuing support of military nursing.

Senator INOUYE (presiding). Thank you very much, General Brannon. Now may I call upon Colonel Gustke.

STATEMENT OF COL. DEBORAH GUSTKE, ASSISTANT CHIEF, ARMY NURSE CORPS, U.S. ARMY

Colonel GUSTKE. Yes, sir. Senator Inouye, distinguished members of the committee, I am Colonel Deborah Gustke, Assistant Chief of the Army Nurse Corps. It is indeed an honor and a privilege to

speak to you today, this being my first time before the committee. I would like to tell you a few stories about how Army nurses are making a difference for America's soldiers and their families. I would like to highlight three primary areas, deployments, TRICARE, nursing research, and then I will conclude with some of the challenges we are facing today.

With regard to deployments, when the First Med Group started the Bosnia support mission in September of 1998, at Eagle Base in Tuzla, Bosnia, Army nurses have been critical to the success of these deployments and the multiple deployments thereafter. Not only have they done their health care mission well, but they have expended significant energy in being ambassadors in the region and providing valuable training opportunities to multinational personnel.

Some examples are when the 212th Mobile Surgical Army Hospital designed a contingency medical force package that was both air-deployable, compact, and could provide surgical resuscitative care to patients for 72 hours without requiring resupply. When nursing was given the word to go, they were able to pack, palletize, and be ready to go in less than 14 hours, but most importantly, when they hit the ground running they were able to set up the facility in less than 6 hours.

Again, when the 212th had to move to Macedonia to support operations there, they were able to be fully operational and accepting casualties again under 6 hours.

Nurses at Task Force Med Falcon at Kosovo packed mil vans, trained medics, and cared for patients ranging in ages from 2 to 75 years of age.

Still another initiative was the development of a program called Fit Eagle Wellness, which provided chaplain support, psychiatric nursing services, nutrition services, physical therapy, to all the soldiers at all the base camps. As a matter of fact, twice a month these nurses made the rounds to assess the soldiers' needs.

Deployed Army nurses have the skills, the training and, most importantly, the critical thinking skills to do whatever is necessary at hand to provide soldier care without compromising quality in any environment. Captain Teresa Duquette, head nurse of the 212th emergency medical team, sums it best when she says, this is what Army nursing is all about. Working in austere conditions, setting up field hospitals, training young troops to step up a level in any situation, and building systems which are the foundation for medical care.

In the area of TRICARE, Army nurses continue to develop and implement initiatives that are driving down health care costs, expanding access, and improving quality. I would like to cite two of these initiatives.

The first is a nurse at Fort Drum Hospital in New York noticed that there was a shortage in obstetrics and gynecology facilities at Fort Drum. She took the initiative and enlisted the aid of the Corps of Engineers, who contracted for a civilian space at a local hospital.

As a result of this initiative, Fort Drum was able to see 800 additional gynecology appointments per year, and saw an increase in deliveries from 30 to 45. We are planning on assigning an addi-

tional midwife to Fort Drum, which will bring an additional 15 deliveries to the facility. This move will save an estimated $383,000 per year, but most importantly it provides care to 120 additional families to the Tenth Mountain Division.

In regards to TRICARE, the nurse-managed central triage center located at Martin Army Hospital in Fort Benning, Georgia, combined an advice line for hospital beneficiaries with a 24-hour emergency authorization service. This was instrumental in allowing patients who travel to access emergency authorization care 24 hours a day, and a secondary effect was that it helped decrease unnecessary emergency room visits. As you can see, today's Army nurses have responded with creativity and results in the TRICARE environment.

In the area of nursing research, we definitely appreciate your support in the funding of the TRISERVICE nursing research program. Our researchers have responded to the challenge by examining ways to optimize nursing care by leveraging technology and the best business practices that are in our facilities today. Army nursing research studies funded by the triservice nursing research program this year run the gamut from a study examining ways to prevent the hospitalization of older military retirees, to studies that incorporate the latest exercise and diet strategies to improve soldier readiness.

A previously funded study that will be completed this fall found significant links between levels of stress and delayed wound healing. Results of the study will be used to develop methods for alleviating soldiers' stress to accelerate wound healing.

ARMY NURSE CORPS

Senator Inouye, the main challenge to us in the Army Nurse Corps today, in the coming months, is the projected national nursing shortage. According to a Sigma Theta Tau report that was issued in July of last year, there are three factors that are causing this problem. During the Nation's economic slump, many patients have neglected their care because of the cost. With the robust economy, now there is even greater demand for nurses, and especially nursing specialties.

Second, registered nurse enrollments are decreasing for the third year in a row. Of particular concern is the baccalaureate enrollment, at a 6.6 reduction rate for this year.

Third, due to higher hospital census and greater patient acuities, there is an increased demand for specialized nurses. Nationally, the baccalaureate of science nurse is in huge demand, based on their ability to contribute to the health care team as they lead multidisciplinary teams, function as patient educators, and manage patients across the age continuum.

Similarly, Army nursing requires officers who can combine these skills, the right knowledge base, to deploy and rapidly adapt to any environment, and we are very much pleased with your position on maintaining the baccalaureate level as our entry level, just as our Surgeon General supports that initiative and is steadfast and states that it is a nonnegotiable issue. We again appreciate your support.

We thank you for your support for the nurse accession bonus. Currently, we are using this bonus to recruit top-notch nurses from the Nation's talent pool, a very difficult task. We will need your continued support of this bonus to guarantee that we maintain the right number in the right specialty.

Your continued support for the nurse specialty pay has been most helpful in both recruiting and retaining practitioners as well as nurse-anesthetists in this competitive hiring environment. Again, we thank you.

In conclusion, sir, next year, February 2, Army nurses worldwide will celebrate 100 years of maintaining the highest standards of professionalism in nursing in the military service. As we meet to honor and reflect on our achievements, we also renew our commitment to meet the challenge of change and our efforts to support the health needs of soldiers and the beneficiary population. Our past has prepared us to meet the challenges of today, and ensures our ability to meet those of tomorrow.

Senator Inouye, Army nurses remain, now and always, ready, caring, and proud. Thank you for this opportunity to tell you about Army nursing, and we will be happy to entertain your questions.

[The statement follows:]

PREPARED STATEMENT OF COL. DEBORAH GUSTKE

Mr. Chairman and distinguished members of the committee, I am Colonel Deborah Gustke, Assistant Chief, Army Nurse Corps. This morning I'd like to highlight three areas where Army nurses are making a difference for America's soldiers and their families. These three areas are deployments, TRICARE and nursing research. I'll conclude with the challenges facing the Army Nurse Corps in the next few years.

Deployments.—Beginning in September 1998 when the 1st Medical Group started the Bosnia support mission at Eagle Base in Tuzla, Bosnia, Army nurses have been critical in the success of these deployments. Not only have they done their health care mission well, but they have put significant time and energy into being United States "ambassadors" in the region and providing valuable training opportunities to multi-national medical personnel. Army nurses are adept at combining expert knowledge with care and concern in unstructured deployed environments to provide the very best care to our soldiers. For example; nurses of the 212th Mobile Army Surgical Hospital, the last remaining Mobile Army Surgical Hospital in the Army, designed a Contingency Medical Force package that is air-deployable, compact and can provide surgical resuscitative care to 36 major surgical patients for 72 hours before requiring re-supply. The system was battle-tested when components of the 212th were deployed to support initial entry operations in the Balkans. The Contingency Medical Force was packed, palletized and ready to go in less than 14 hours. After landing in the Balkans, the hospital staff set up the hospital and were treating patients in less than 6 hours. Three months later, the 212th moved to Macedonia to support operations there and again, had the hospital set up in under 6 hours when they received four gunshot victims a few hours later. Even with the rapid re-deployments and austere conditions, the compassionate care that highlights Army nursing is never left behind. Captain Mike Rizzo of the 212th intensive care unit says, "Even a lifetime of television reruns of Mobile Army Surgical Hospital could never prepare me for facing an injured fellow United States soldier lying on a litter. I continually returned to the thought that the patient lying in front of me has a family that has entrusted him to my care and they are depending on me to keep him from making the ultimate sacrifice for his country." Nurses at Eagle Base in Bosnia saw over 700 patients in their first month there—the majority of the patients requiring immediate surgical intervention. During Operation Forge, emergency room nurses at Eagle Base implemented an emergency support line. Anyone on Eagle Base could call "2-HELP" and be connected to emergency care 24 hours a day. Nurses at Task Force Med Falcon in Kosovo packed milvans, trained medics and cared for patients ranging in age from 2–75 years old. Nurses remembered to pack crucial life-saving equipment not standard to the field packs such as electorcardiogram machines, blood infusors and cardiac defibrillators. They cross-leveled supplies from different hospital sections to stay afloat when supply channels

into Kosovo were cut due to security restrictions. Army nurses implemented cross-training programs so nurses could assist on different units when increases in patient acuities occurred. Another nurse developed a program called "Fit Eagle Wellness Program" that provided chaplain support, psychiatric nursing support, nutrition services and physical therapy to soldiers at all the base camps. Twice a month, they convoyed as a team to address soldiers' individual healthcare needs. Nurses deployed with Operation Provide Hope in the Ukraine. One of these nurses, Captain Pabliot Gahol was sent to provide training on intensive care unit equipment but found he spent most of his time training the nurses on simple skills such as how to use a stethoscope to listen to a patient's heart and lungs.

Deployed Army nurses have the skills, the training and most importantly, the critical thinking skills to use whatever resources are at hand to provide soldier care without compromising quality. Captain Teresa Duquette, Head Nurse of the 212th Emergency Medical Team says it best; "This is what Army nursing is all about—working in austere conditions, setting up field hospitals, training young troops to step up a level in any situation and building systems which are the foundation for the medical care. Deployment allows me to make a difference in the lives of my patients."

TRICARE.—Army nurses continue to develop and implement initiatives that are driving down healthcare costs, expanding access and improving quality.

After co-implementing a "MedTeams" concept at the Madigan Army Hospital emergency room in Fort Lewis, Washington, the Army nursing Emergency Consultant found there was a 94 percent reduction in observed clinical errors, 80 percent reduction in risk management cases and a 5 percent improvement in the quality of preparation for patients admitted through the emergency department. The MedTeams concept, developed in the civilian sector, is a medical error reduction tool that uses principles learned in Army Aviation Safety to improve performance, decrease errors and decrease costs. The highly successful program is being tested with the 47th Combat Support Hospital and the 44th Medical Brigade.

A nurse at the Fort Drum hospital facilitated the first Army satellite Obstetrics and Gynecology Clinic at a civilian hospital. In response to a shortage of Obstetrics and Gynecology facilities at Fort Drum, New York, she enlisted the aid of the Corps of Engineers who contracted space from a local civilian hospital. This initiative allows an additional 1,800 Gynecology appointments per year and an increase in deliveries from 30 to 45 per month. The move will save $382,797 per year while providing military medical care to an additional 120 families of the 10 Mountain Division (Light Infantry).

A nurse-managed Central Triage Center recently instituted at Martin Army Hospital in Fort Benning, Georgia serves as an advice line for the hospital's beneficiaries, a triage area for the emergency room and a 24 hour contact for soldiers and their families such that they can receive emergency authorization to seek care at civilian facilities while traveling. The Center maximizes access while decreasing unnecessary emergency room visits.

Today's military healthcare system mandates quality, efficiency and cost effective care that promotes patient satisfaction. Army nurses are responding by implementing innovative solutions that remove barriers to quality care.

Nursing Research.—Thanks to your support of the Triservice Nursing Research Program, our nurse researchers are pioneering new technology and new concepts that promise better outcomes for our patients. Nursing practice has changed dramatically with the need to examine current delivery models and to re-engineer delivery of nursing services. Our researchers have responded to this challenge by examining ways to optimize nursing care by leveraging technology and best practices. Army nursing research studies funded by the Triservice Nursing Research Program this year run the gamut from a study examining ways to prevent hospitalization of older military retirees to a study that incorporates the latest exercise and diet science into strategies to improve soldier readiness. A previously funded study that will be completed this Fall found significant links between levels of stress and delayed wound healing. Results of this study will be used to develop methods for alleviating soldier stress to accelerate and improve wound healing.

The Triservice Nursing Research Program continues to evolve and we are getting better and better at using nursing research to address issues of quality, access and cost in the military healthcare system. Your continued advocacy and support for this program will insure military nurses can harness technology and science to improve care for our patients.

A major challenge for quality healthcare in the coming months is a projected national nursing shortage. According to a Sigma Theta Tau nursing report released in July of last year, the shortage is being driven by three factors: (1) During the nation's economic slump, many people neglected their health care—now that the

economy is up, so is the demand for healthcare; (2) Registered Nurses enrollments in schools of nursing are down; and (3) higher hospital census and greater patient acuity are causing a demand for experienced Registered Nurses in specialized areas such as intensive care unit, emergency room or the operating room. Nationally, the baccalaureate of science nurse is in huge demand based on their ability to contribute to healthcare by leading multi-disciplinary teams, serving as patient educators and managing care across the age continuum. Similarly, Army nursing requires officers who can combine expert skills with the right knowledge base to deploy and rapidly adapt to any global healthcare mission; nurses who can integrate multi-faceted problems in a managed care environment and keep doors to healthcare access open; nurses who have the research skills to build better patient outcomes from hypotheses and "what-if" ideas; in short—nurses who have the depth and breadth of experience and education that a Bachelor's of Science degree in nursing provides. This standard has helped Army medicine maintain its edge as a world class healthcare system. The baccalaureate prepares nurses who can manage and lead the delivery of healthcare in a wellness model. In fact, how we are able to contribute as nurses is tied to our educational preparation. Our education enables us to see the possibilities in science and use those possibilities to improve care for our patients. The proven success of military nurses, to a great extent, is linked to the commitment of the military healthcare system to require and maintain the highest standards for military nursing. As cost-cutting methods are sought to reduce the price tag associated with military health care, our use of the Bachelor of Science prepared nurse continues to be scrutinized. We appreciate your continued support of the Bachelor's of Science degree in nursing criterion for entry into active duty nursing.

Thank you for your support of the nurse accession bonus. Currently, we are using the bonus to recruit top-notch nurses from the nation's talent pool. We'll need your continued support of this bonus to guarantee the right nurses for future deployments, humanitarian missions and beneficiary care. Your support of nursing specialty pay is enabling us to recruit specialty nurses in a competitive hiring environment. Thank you.

Next year, on the second of February, Army nurses will celebrate 100 years of maintaining the highest standards for professionalism in nursing and in military service. While meeting the challenge of change we have maintained our commitment of supporting the health care needs of soldiers and our beneficiary population. Our past has prepared us to meet the challenges of today and ensures our ability to meet tomorrow's challenges. Army nurses remain Ready, Caring and Proud. Thank you for this opportunity to tell you about Army nursing.

Senator INOUYE. Thank you very much, Colonel Gustke.

Before I proceed, I would like to note that for the past 12 years the Defense Appropriations Subcommittee has been privileged to have the services of an executive nurse intern from the three services. This year, we are assisted by Commander Cathy Wilson of the Navy, and we rotate among the services, as you know. We are very fortunate to have Commander Wilson with us, and if anything is wrong with my questions or statements—no, seriously, we are very fortunate.

Colonel Gustke, I gather that you are here speaking on behalf of Brigadier General Promotable Bester.

Colonel GUSTKE. Yes, sir, I am.

Senator INOUYE. He is the first male nurse to become Chief of the Army Nurse Corps, is that correct?

General GUSTKE. Yes, sir, that is correct.

Senator INOUYE. Well, it is about time, I think.

Where is Colonel Bester?

Colonel GUSTKE. Sir, Colonel Bester is right behind me.

Senator INOUYE. Oh, please. Congratulations, sir.

Colonel BESTER. Thank you, sir. I appreciate it.

Senator INOUYE. We look forward to your services, and one of these days you will be sitting here.

Anyway, as I noted to the panel that appeared before you, I have been a beneficiary of the military medical system for 55 years, and during that period it became very clear to me that nurses were professionals, that they were capable of being autonomous, independent health providers, and accordingly I have tried my best to convince my colleagues of that conclusion, and I am glad that my colleagues have agreed.

I am concerned about what I indicated to the panel, and I am pleased that your service chiefs have indicated that they were bad rumors. I hope they continue to be bad rumors.

NURSE ANESTHETISTS

I have a few questions, if I may. What would be the implication if the certified registered nurse anesthetists were required to have direct physician supervision on all surgical cases? What would be the effect?

Admiral HARMEYER. Sir, I will start with that question. We rely on our certified, registered nurse anesthetists to function in a broad scope of operational as well as health benefit arenas, and because of that, they need to have critical thinking ability. They need to have advanced decision-making skills.

Those tools in their tool bag are accomplished by making decisions that are sometimes hard, and to impose supervision of that process would degrade their ability in those areas of critical thinking and decision-making, and also if a direct supervisor were required to be with them during things that would definitely make a big impact on their productivity and the productivity of the organization overall. It would not be a good thing.

General BRANNON. We currently have 25 certified registered nurse anesthetists practicing at facilities where there is no anesthesiologist, and were that requirement to be levied that they have one there over their shoulder, we would either need to recruit more anesthesiologists, or we would probably need to close some of those surgical units at the smaller facilities.

Senator INOUYE. Colonel.

Colonel GUSTKE. Sir, I will preface my remarks by saying that we, too, in the military have several facilities where nurse-anesthetists are practicing without direct supervision. Problems would arise if we had to have that supervision. Like the Air Force, we would have to procure an inordinate amount of anesthesiologists for that supervision.

It would have a severe impact of our recruitment and retention of our nurse-anesthetists today. They came into the Army and they applied to the nurse-anesthetist program because it is the best in the country, number 1. Number 2, it provides autonomous practice, and by using this intensive supervision it would definitely affect our numbers and then, of course, impact on all the services provided to our beneficiaries.

Senator INOUYE. Thank you. I have been told that whenever a very important person (VIP) gets surgery the anesthesia is administered by an anesthesiologist. Is there any truth to that, because unless I am not a VIP, I have had a nurse do the work.

Admiral HARMEYER. Sir, I will jump right in here. Again, VIP's do not receive a different standard of care. There is one standard

of care in our facilities, and that is the very, very best that we possibly can provide. All patients in our facilities are assigned based upon the patient's medical history and the complexity of the anesthesiology plan.

General BRANNON. It would only be based on the patient's condition, sir, not on their VIP status. If they required a higher level of skill, it would potentially be an anesthesiologist.

Senator INOUYE. I am glad to know that.

Colonel GUSTKE. Sir, I would echo those comments and say it is a resounding no. As a matter of fact, yesterday at Madigan Army Medical Center a Navy admiral underwent anesthesia for a procedure, and it was provided by a nurse anesthetist and he recovered very well.

Senator INOUYE. Was he aware of that?

Colonel GUSTKE. Yes, sir, and proud of it.

Senator INOUYE. What would be the impact if we did not have a permanently funded triservice nursing research program?

General, let us start with you.

TRISERVICE NURSING RESEARCH PROGRAM

General BRANNON. Fine. Thank you. I think, frankly, we would be decreasing the amount of nursing research that was going to be conducted in our facilities. Research dollars are very competitive, and were we to seek dollars in the civilian sector, since many of the issues we want to explore in nursing research in the military are military-specific, they may not rate as high with our civilian counterparts.

We have about six full-time nurse researchers in the Air Force, with the grant proposal-writing, and conducting of research, I think it would overwhelm them if we did not have those dollars more readily available.

Senator INOUYE. Colonel.

Colonel GUSTKE. Sir, I would say that having the funds to continue the triservice research program has enabled us in the military to prioritize into military-unique research. It has been very instrumental in us looking at cost-effective ways to provide care, as well as to provide the most efficient means to access care and make our soldiers well.

We have done considerable research in lung injuries, wound healing, diet, and exercise, which are critical for our soldiers, and eliminating this funding would impact our ability to address these critical issues that are related to soldier readiness and beneficiary care, and I would echo General Brannon's comments that it is extremely important, because many times civilian institutions do not understand the military uniqueness of much of our research, so it is imperative that we continue this.

Senator INOUYE. Does it make sense to have a School of Nursing in USUHS?

Colonel GUSTKE. Sir, I would say that USUHS has been very supportive to the Army Nurse Corps in three venues. One is, we do educate some of our nurse-anesthetists in USUHS, and it is very important, because we only have a limited number of slots in our other military programs, and because they have been very vital in family nurse practitioner completion programs, because in the last

few years we have seen the need for family nurse practitioners to be involved in primary care, and third, we now have full-time programs for our family nurse practitioners in USUSH, so it is very critical to us in primary care and in providing nursing anesthesia.

General BRANNON. I agree, but I would also add that having it at USUHS enables us to have some military-specific things in the curriculum, and we work very closely with the faculty there to make sure that the current needs are addressed.

Admiral HARMEYER. And I agree, sir, that the military health care environment, as the actual practice area for them, is very, very important, and getting the operational picture at the same time is crucial.

Senator INOUYE. I think at this juncture I should note that the graduates of USUHS have a greater retention record than graduates of West Point, Annapolis, or Colorado Springs. I believe that 90 percent of the graduates of USUHS are still in the service. That is much, much higher than the Air Force, Navy, or Army special schools.

I have a couple of other questions, if I may ask.

NURSE SHORTAGES

Colonel Gustke noted that there is a shortage of nurses in the United States, and that has been a concern to all of us on this committee. Do you have any suggestions you can make as to how we can cope with that problem in the military? What do we need to recruit or retain nurses now? Are we doing the right thing? Should we do something else?

Colonel GUSTKE. Senator Inouye, I would say we are doing the right thing, but I think we have to continue the accession bonuses. It is very necessary that we continue the specialty pay. It is the accession bonuses that allow us to attract nurses in the specialty areas and, coupled with that, in the Army we are engaging our new nurses in sending them into specialty courses, which is what they want to do, so we have a very robust program, but without that accession bonus it is very difficult to attract them away from some high-paying jobs in the civilian community.

Our specialty pay is extremely important, especially for our nurse anesthetists, and I would say that for the first time in many years we have gotten near 100 percent to fill all of our positions in nursing anesthesia, and it is the specialty bonus that has done that.

When you look at the pay for a nurse anesthetist coming out of a civilian program, their pay in the civilian community is $85,000 a year, very hard to equate that with a captain's pay, but the specialty pay goes a long way in doing that, so we have to have a need to continue those programs and I would say, if anything, that would be what we would ask this committee.

Senator INOUYE. Admiral.

Admiral HARMEYER. I agree that having the incentive programs and those in place are very important. What is also an advantage for us has been our Reserve Officers' Training Corps (ROTC) graduates, our medical enlisted commissioning programs. Those are very effective in preparing for good nurses to come into our organization, and the interest in those areas has been very high.

General BRANNON. I would echo the comments of both my colleagues. We have a couple—one unique challenge in Air Force nursing, in that the majority of our new recruits need to have some experience, so they are much more difficult to attract. Oftentimes new nurses coming out of school have difficulty with their first placement because they do not have experience, and if they come into the military for that, it is an advantage.

So I do not know that there is any one answer. We have several initiatives, very flexible things, working to try to attract those nurses. We are looking at loan repayment programs. We wrote the program objective memorandum (POM) for that in 2002. We are looking potentially at an early commissioning program where we could actually sign them up while they were still in school, still with that requirement for them to get the year's experience, but then give them credit for that year of service while they are in their educational program. Recruiting is a complicated issue.

I also agree that one of the best ways I think we can get nurses for our active forces is by sending our enlisted members back for baccalaureate training. I think that is a wonderful source of good experience; people who are dedicated, committed, and know the ways of the military. I would like to see opportunities to robust that.

Senator INOUYE. Thank you very much, General.

When I became a member of this committee, I do not believe there were any flag rank officers among the nurses. I still think that we do not have enough in the Nurse Corps. They are still fussing around and not giving you proper recognition.

For example, your nurses do a good job. Recently, an Army nurse, Major General Nancy Adams, was given the assignment of being commander of Tripler. In her first year, in the certification tests, Tripler got 100 percent. Now, you cannot go beyond 100, and before then all commanders were men, and they never achieved 100. Once again, she is getting another 100, so I hope you men will note that, please.

Finally, as I call this hearing to a recess, some of my physician friends hate to hear this, but during my time in the military I think I saw a physician at the most twice a week. The rest of the time I was helped by nurses that did minor surgery, IV's, everything, and so when people tell me that nurses are not professional, I tell them to join the military and get injured, and you will find out.

ADDITIONAL COMMITTEE QUESTIONS

But once again, I thank you all for your testimony this morning.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED TO SECRETARY RUDY DE LEON

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

Question. Do you have a Defense Health Program (DHP) budget shortfall in fiscal year 2000? What is the magnitude of the shortfall? What caused the shortfall?

Answer. Yes. In addition to the fiscal year 2000 $228 million reprogramming included in the President's Budget, there is an additional requirement of approxi-

mately $626 million for contractor claims that the Department was not able to validate in time for the President's Budget submission. These include the pharmacy bid price adjustment directed by the Fiscal Year 2000 Defense Authorization Act and additional contractor claims that will require funding in fiscal years 1998–2001.

Question. Did you adequately budget for fiscal year 2000? Were these shortfalls avoidable?

Answer. The Department adequately budgeted for known requirements. However, increased contractor costs have significantly impacted the DHP. The primary reason for several of the most recent contractor claims is that contractor costs are higher than expected. Additionally, the costs of pharmaceuticals have been rising in both the private sector (as reflected in part by increased contractor costs) and in the medical treatment facilities. Additionally, the DHP cannot react to cost increases by reducing benefits or raising costs, thus leaving no way, other than increased funding, to respond to changing market conditions. If all of the Managed Care Support Contract (MCSC) claims are adjudicated in favor of the contractor, the DHP would most likely exceed its appropriation for prior years. The amounts cannot be determined until the claims are adjudicated.

Question. Do you need supplemental funds to fully execute the fiscal year 2000 Defense Health Program?

Answer. Yes. As indicated in the President's budget, the Department requires additional funding to execute fiscal year 2000. This includes $228.2 million reprogrammed from the Services and $8.5 million reprogrammed from DHP, procurement to DHP, O&M. The reprogramming will fund additional requirements including pharmacy, validated contractor costs, and custodial care. In addition to these reprogramming actions, there is an additional requirement of approximately $626 million for contractor claims that the Department was not able to validate in time for the President's Budget submission. These include the pharmacy bid price adjustment directed by the Fiscal Year 2000 Defense Authorization Act and additional contractor claims that will require funding in fiscal years 1998–2001.

Question. Is your fiscal year 2001 medical request fully funded?

Answer. Yes. The Department addressed all requirements for fiscal year 2001 in the President's Budget except those that would be included in a potential fiscal year 2001 budget amendment. The potential fiscal year 2001 budget amendment would include requirements for $626.5 million to cover the pharmacy bid price adjustment directed by the Fiscal Year 2000 Defense Authorization Act and additional contract claims from fiscal year 1998 through fiscal year 2001. The amount may change as a result of on going negotiations and validations of additional contract claims by the Department over the next few months.

Question. When he testified before this Subcommittee, Deputy Secretary Hamre said the medical budget was an area of great concern to him. If you are confirmed as Deputy Secretary of Defense, will defense health care issues continue to be at the top of your priorities?

Answer. Yes, improving military health care will continue to be among my highest priorities, since it is critical to improving the quality of life for our service men and women.

Question. Some have advanced proposals to greatly expand defense medical benefits at a cost up to $6 billion per year. Can DOD afford these proposals?

Clearly, some of the more expensive ideas, did not make it in our budget request. Why were they not included?

Some would say that we should fully fund the current benefit and medical program first, before we greatly expand the benefit. Do you agree?

Answer. To help improve access and affordability of care for our beneficiaries, the fiscal year 2001 President's Budget adds two new funded initiatives proposed by the JCS for Active Duty Family members: (1) expansion of TRICARE Prime Remote to include family member coverage, which will improve access to health care and lower out-of-pocket costs for active duty families who do not live near military treatment facilities; and (2) the elimination of co-pays for all active duty family members enrolled in TRICARE Prime. The Department has provided $30 million and $50 million, respectively, in fiscal year 2001 for these new initiatives. Additionally, the Department is committed to working closely with Congress on its efforts to review the health care benefits for retirees 65 and over to determine what, if any, new benefits can be accommodated within the Department's topline.

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

Question. Mr. De Leon, although we have discussed healthcare challenges with respect to beneficiaries, there has been little discussion of the challenges with respect

to health care providers. I am particularly concerned by reports of projected personnel shortages. Certainly, the socioeconomic factors outlined in Colonel Gustke's statement apply to the physician population as well. I am also concerned by reports that our military providers are getting frustrated with the new constraints imposed by managed care and that they are subsequently opting out of patient care into alternative specialties, such as Occupational Medicine and Preventive Medicine. Although you outlined the effects that various factors have had on beneficiaries, we have had little discussion of the effects on our health care providers.

Please comment on the recruiting and retention of military physicians and nurses inpatient care arenas.

As you know, Congress worked hard to include the Federal Employees Health Benefit Program-65 (FEHBP–65) in the Fiscal Year 1999 Defense Authorization Act. However, we were disappointed to learn that of the 66,000 potential candidates, fewer than 2,000 signed up for the test. I have heard various explanations for this low enrollment figure, including a lack of education and high enrollment costs.

What are the reasons for this low initial enrollment in the FEHBP test program and what is being done to enhance enrollment?

Answer. Based on past estimates from the Congressional Budget Office, the General Accounting Office, and others, the Department expected many more responses. As of mid-March, about 2,500 of the 70,000 eligible beneficiaries have enrolled. This represents an enrollment rate of about 3.5 percent.

GAO is surveying eligible individuals to determine why they enrolled or not. There are several possibilities why enrollment has been so low. First, some beneficiaries may have had inadequate information, or not enough time to decide on whether to enroll. This possibility was the principal factor in our decision to work with OPM to mail additional information to all beneficiaries in late December, and conduct additional marketing activities in each site in early January. The number of additional enrollees since January 1 (nearly 1,000) suggests that time and information may have played some part in the low participation. However, most of the more recent enrollees are from Puerto Rico, where we are aware of communications problems, rather than from all the sites. On balance, it does not appear that lack of information or time is the main reason for low participation.

Second, there are clear patterns of enrollment response across the sites. Enrollment response has been best in those sites with very limited access to military health care—Puerto Rico, Greensboro, and Northern California. In locations with a military facility, or where beneficiaries have access to military pharmacy coverage, enrollment has been much lower—suggesting that access to military health care services may play a big role in beneficiary decision making.

Third, beneficiaries may have made their health care arrangements, and be unwilling to change them for a limited-term demonstration. The Department's experience with the TRICARE Senior (Medicare Subvention) demonstration was similar, in that initial enrollment demand was considerably below early projections. In part, this can be attributed to the beneficiary education and marketing process, but beneficiary resistance to disrupting their lives to enroll in a temporary program is likely a factor also. GAO's review should shed light on the significance of this.

Fourth, there may be a variety of other factors at work, and GAO's survey and evaluation may help uncover them. For example, age, health status, existing insurance coverage, financial status, and retired rank are some of the variables that may affect an individual's decision to enroll.

The Department did four separate direct mailings to all eligible beneficiaries, providing a postcard, brochure, a guide to health plans in the program, and additional information after initial enrollment response was low. In addition, the Department conducted two waves of health fairs and town meetings in the demonstration sites, to educate beneficiaries about the program, and operated a toll-free call center to answer their question about the program.

We undertook a very extensive educational effort, but acknowledge that this is a complicated subject. The information that the Department provided was clear and accurate, but the decision facing the beneficiary is complicated. In large measure, this is because of the complexity of FEHB and its relationship to a beneficiary's Medicare coverage: rather than a single benefit plan, FEHB is made up of numerous individual plans, each with its own benefit package, cost sharing requirements, and Medicare interaction. GAO is surveying beneficiaries to determine how well they understand the program. The temporary nature of a demonstration program, and the ability to reacquire former coverage may have had an effect on enrollment levels. Part of the problem is the complexity of this coverage issue—beneficiaries are protected if they have Medigap, but many have supplemental coverage that predates or is otherwise not under the Medigap rules, and thus they lack repurchase protections.

QUESTIONS SUBMITTED TO WILLIAM LYNN

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

Question. I've read reports that your fiscal year 2000 shortfall is up to $500 million. Will you have a shortfall even after you reprogram funds?

Answer. Yes. In addition to the fiscal year 2000 $228 million reprogramming included in the President's Budget, there is an additional requirement of approximately $626 million for contractor claims that the Department was not able to validate in time for the President's Budget submission. These include the pharmacy bid price adjustment directed by the Fiscal Year 2000 Defense Authorization Act and additional contractor claims that will require funding in fiscal years 1998–2001.

Question. You have stated that the Defense Health Program is "the biggest trouble area in the budget, in my view." That is an alarming statement. Please fully explain.

Answer. The Defense Health Program presents a unique challenge in providing health care to the eight million eligible beneficiaries and six million users. Due to the unique dynamics of a number of factors such as: the rising cost of health care, estimating inflation in advance of actual execution, increasing non-active duty population, an aging population, and escalating retiree health care requirements all contribute to create a very difficult process of budgeting for the Military Health System. This concern has led to the effort to improving military health care as the Department's highest priority in fiscal year 2000.

Question. Do you have large TRICARE liabilities without sufficient appropriated funds to pay them?

If so, what is the total amount of the liability? How will you pay these bills?

Answer. There is no shortfall for validated contractor claims in the fiscal year 2001 President's Budget. However, we anticipate that once new contractor claims are validated, the Department will submit an amended budget totaling an estimated $626.5 million for fiscal year 1998–2001.

The Department addressed all requirements for fiscal year 2001 in the President's Budget except those that would be included in a potential fiscal year 2001 budget amendment. The potential fiscal year 2001 budget amendment would include requirements for $626.5 million to cover the pharmacy bid price adjustment directed by the Fiscal Year 2000 Defense Authorization Act and additional contractor claims from fiscal year 1998 through fiscal year 2001. This amount may change as a result of ongoing negotiations and validations of additional contract claims by the Department over the next few months.

Question. How did you get into this situation? Do you face a possible "Anti-Deficiency Act" violation?

Answer. The primary reason for several of the most recent contractor claims is that contractor costs are higher than expected. Additionally, the costs of pharmaceuticals have been rising in both the private sector (as reflected in part by increased contractor costs) and in the medical treatment facilities. Additionally, the DHP cannot react to cost increases by reducing benefits or raising costs, thus leaving no way, other than increased funding, to respond to changing market conditions. If all of the Managed Care Support Contract (MCSC) claims are adjudicated in favor of the contractor, the DHP would most likely exceed its appropriation for prior years. The amounts cannot be determined until the claims are adjudicated.

Question. I understand that DOD is making payments to Justice to pay for tobacco litigation, contrary to the expressed will of this Congress. Can you explain?

Answer. The Department of Defense provided funds to the Department of Justice to support the tobacco litigation in response to a request from the Office of Management and Budget at the end of February. On March 8, the Department of Defense completed action to reimburse the Department of Justice $2.65 million from the Defense Health Program.

The authority used by the Department of Defense to provide funds to the Department of Justice to support the tobacco litigation was Public Law 103–317, Title I, section 109 (August 26, 1994) which provides: "Notwithstanding 31 U.S.C. 3302 or any other law, in litigation involving unusually high costs, the Department of Justice may receive and retain reimbursement for salaries and expenses, for fiscal year 1995 and thereafter, from any other governmental component being represented in the litigation [28 U.S.C. 509 note]." The Department of Defense has incurred large health care costs attributable to tobacco use. The litigation will attempt to recover these costs.

Question. How do you justify making this payment from Defense Health Program funds and taking away from medical readiness for troops?

Answer. The Department of Defense strongly supports the Federal government's effort—similar to the successful efforts of State governments—to recover enormous government health care costs attributable to use of tobacco products. In addition, from a strictly budgetary standpoint, if funds are recovered based on DOD health care costs attributable to tobacco use, we expect such recoveries to be credited to the Defense Health Program, under the Medical Care Recovery Act (42 U.S.C. 2651), one of the statutory bases for this litigation, and 10 U.S.C. 1095(g). The investment by the Defense Health Program in this litigation is quite reasonable in relation to the potential recovery for that program account. Finally, this expenditure will not adversely affect medical readiness for military personnel.

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

Question. As you may know, the costs of some of the proposed legislation intended to address serious problems in the DOD health care system is quite expensive: Senator Johnson's S. 2003 will be estimated by CBO to cost $9 billion per year, or more over 10 years; Senator McCain's S. 2013 is variously estimated to cost between $2 billion and $5 billion per year; Senator Warner's S. 2087 is estimated to cost about $1 billion per year.

What is your position on each of these bills?

Answer. While the Department is committed to improving access to health care for our beneficiaries the benefit expansions proposed in these bills are not affordable within the Department's current funding. We generally agree with the estimated costs provided by CBO. For example, no cost FEHBP for retirees who enlisted prior to July 1956 is estimated to cost $4.5 billion per year. FEHBP for all other retirees is estimated to cost $5 billion, expansion of TRICARE Senior Prime is estimated to cost $350 million per year. The one-year extension of FEHBP–65 demonstration and indefinite continuation for demonstration enrollees is estimated to cost $75 million per year. The expansion of the pharmacy benefit is estimated to cost $455 million annually. Reduction in Catastrophic cap costs $40 million per year. Nonetheless, we are willing to work with the Congress and the Administration to find solutions to improving access to health care for all eligible DOD beneficiaries.

Question. If enacted what would be their impact on other defense programs in the DOD budget?

Answer. It is impossible to predict specific impacts but with estimated costs of these magnitudes and the current DOD budget there would most likely be a negative effect on readiness capabilities.

Question. Are these bills affordable?

Answer. Not within the DOD's current budget.

Question. When will DOD submit a health care plan that addresses current problems and that you consider both comprehensive and affordable?

Answer. We believe the current benefit we offer is a very comprehensive benefit that is a better deal with less out of pocket costs for our beneficiaries than many other options. It is necessarily constrained as the principal mission of the DOD is readiness and there is a limited amount of funding available.

Question. Some have suggested that the Defense Health Program should be moved out of the DOD budget. What is your position on such proposals? Who in the Executive Branch would exercise oversight over a Defense Health Program not in the Department of Defense or its budget?

Answer. The inextricable linkage of health care and combat readiness would strongly argue against placing the Defense Health Program outside the DOD. The majority of DHP manpower assets are related to the readiness mission. It would not be feasible to efficiently manage this program from outside the DOD.

Question. Some have suggested that major parts of the Defense Health Program (DHP) should be moved to mandatory spending. How would this alleviate cost issues, either in the DHP or the overall DOD budget?

Answer. If the mandatory spending portion remained in the DOD it would not alleviate cost issues. If the funding were to come from outside the DOD, it would still be subject to the upward pressures of health care in general but impact on the DOD would be reduced. A number of bills this year propose evaluating accrual funding for retiree health care to address the longer term funding issues for retiree health care.

Question. Why should the Congress put the Defense Health Program on "Automatic Pilot" where cost growth would inevitably come out of other defense programs—when the on-budget surplus is limited?

Answer. As a health program, the Defense Health Program is subject to many of the same pressures that are causing rapid rises in costs of private health plans and

the FEHBP program. The Department is working closely with the Military Departments to determine how to fund the medical benefit, and the sources of such funding, in order to ensure that our Service men and women are provided the high quality health care they deserve.

Question. Accrual financing for the Defense health program has also been suggested. How would this work? Would part of the costs be shifted to other parts of the federal government, as in the case of the military retirement system? What would be the costs to DOD and to the rest of the government?

Answer. The health care liability for current retirees and the portion related to service completed by current active duty would be assumed by an agency outside of DOD. This would be similar to Treasury taking over responsibility for the retired pay accrual beginning in 1985. The DOD would make periodic payments for current and future active duty based similarly to the retired pay contributions currently being made. Specific cost estimates are under development, but the liability currently is about $200 billion. The required future annual cost to DOD of active duty currently serving would be about $5 billion per year.

Question. To exercise oversight, to control costs, and to maintain DOD jurisdiction over its own programs, why should the Defense Heath Program not continue to be paid for by annual appropriations in the DOD budget as overseen by this subcommittee and the Armed Services committee?

Answer. Even with the accrual funding mentioned in the previous question, a major portion of the Defense Health Program Appropriation (related to Active Duty and Active Duty Family member care), would still be derived from annual appropriation through the DOD budget.

Question. Will the Department of Defense prepare a plan for its own health care programs that comprehensively addresses the problems we have discussed today and that is affordable? When will such a plan be submitted under the current Administration?

Answer. We believe the current benefit offered is a very comprehensive benefit that is a better deal for our beneficiaries than many other options. It is necessarily constrained as the principal mission of the DOD is readiness and there is a limited amount of funding available. Within the President's Budget there is a proposal to reduce out-of-pocket costs for Active Duty family members and to reduce the cost of care for family members assigned to remote locations.

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

MEDICARE SUBVENTION

Question. From a finance perspective, what is your opinion about expanding the TRICARE Senior Program to our teaching facilities that support Graduate Medical and Nursing Education programs?

Answer. TRICARE Senior Prime provides an opportunity to meet our commitment to beneficiaries while also supporting our graduate medical education programs in conjunction with comprehensive medical readiness training missions. Medical centers are also well positioned to provide both comprehensive and multidisciplinary specialty health care, important for an aging population. However, the Department believes that evaluating the existing demonstration, capturing the lessons learned and identifying the financial implications of expansion are crucial steps prior to recommending expansion.

Question. Mr. Secretary, today we have current and former military members unhappy with the status of DOD medical programs. What, if any, actions do you see as affordable in the current budget environment?

Answer. The fiscal year 2001 budget request essentially represents the same level of service as provided in fiscal year 2000. The fiscal year 2001 President's Budget restores some deferrals made in fiscal year 2000, adjusts for inflation, and adds new benefit additions for expansion of the TRICARE Prime Remote for active duty family members and the elimination of co-pays for active duty family members enrolled in TRICARE Prime. These proposals are intended to help improve access and affordability of care for our beneficiaries. The Department is committed to working closely with Congress on their efforts to review the health care benefits for retirees over 65 to determine what, if any, new benefits can be accommodated within the Department's topline.

QUESTIONS SUBMITTED BY SENATOR FRANK R. LAUTENBERG

PATIENT MEDICAL INFORMATION

Question. There has been a lot in the news recently about medical treatment errors. Would not an electronic data system, capable of sharing patient medical information among DOD, the Veterans Affairs Department (VA), and their contractors help reduce medical errors?

Answer. Implementation of the Military Computerized Patient Record (CPR) (CHCS II) will provide more accurate patient data through the use of standardized terminology, data sets and structure and will implement decision support; alerts, reminders, and access to knowledge bases. All orders entered will be checked for interactions or contraindications (drug—drug interactions, allergies, etc.). These alerts will be fed back to the provider during the ordering process. The Government Computerized Patient Record (GCPR), used as a translation and exchange mechanism, could provide more complete information by bringing together information residing in multiple agencies computer-based patient records.

Question. It is my understanding that the primary rationale for the Government Computer-Based Patient Record (GCPR) program is to allow information to flow among DOD's health information systems, those of the (VA) Department and various private contractors. When are you projecting that you will achieve the capacity for this information exchange?

Answer. Phase I, the development of a prototype framework that would facilitate access to information residing within each agency's computer-based patient record, will be complete in April 2000. Phase II (beginning in April) will pilot test this framework. The results of Phase II will influence the date that information exchange occurs.

Question. How much has DOD included in its budget request for the Government Computer-Based Patient Record (GCPR) program?

Answer. The fiscal year 2000 Defense Appropriations bill report language (p 253) identified "Computer based patient records (Note: $4,200,000 is only for the further development of the Government Computer-based Patient Record)." Congress also mandated a 0.38 percent reduction to all fiscal year 2000 appropriations. To protect patient care, a 1.752 percent reduction was applied to all non-patient care DHP programs, including GCPR which reduced its funding to $4.126 million.

Question. In December 1999, President Clinton signed into law the Veterans Millennium Health Care Act allowing DOD health care beneficiaries to use VA facilities and VA patients to use DOD facilities. Has DOD begun negotiations to implement that law? Do those negotiations assume sharing patient medical data via GCPR?

Answer. The Veterans Millennium Health Care Act (Public Law 106–117) requires DOD to enter into a reimbursement agreement with VA for medical care provided to VA Priority Seven (the lowest priority) veterans who are TRICARE-eligible and who enroll for care with the VA. In fact the two Departments have had initial meetings on the Act. The VA/DOD Executive Council has included it as an initiative to monitor and is creating a work group to manage its development. OMB is also involved in the agreement development.

Because the reimbursement model, fee-for-service or capitation, has not yet been determined there is no assumption being made concerning the use of the Government-Computerized Patient Record (GCPR) in the agreement. If the reimbursement model selected were a fee-for-service option, the GCPR might be a valuable source of patient-level information.

QUESTIONS SUBMITTED TO ADM. DONALD L. PILLING

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

Question. Why was the Defense Medical Oversight Committee formed? How does it function?

Answer. The Department of Defense senior leadership strongly believes maximizing the health and wellness of our service members—and their families—is vital to readiness. DOD is acutely aware of the problems our medical system and our beneficiaries face, and is committed to working with Congress to improve the Military Health System. The Deputy Secretary of Defense convened a Medical Summit to discuss the Military Health System (MHS) and concluded that greater Service oversight was required in the operation of the health program and establishment of health care benefits and budget priorities.

The Defense Medical Oversight Committee (DMOC) was formed in August 1999, with membership consisting of the Under Secretary of Defense (Personnel and Read-

iness), the Assistant Secretary of Defense for Health Affairs, the military department Under Secretaries, the Under Secretary of Defense (Comptroller), the four service Vice Chiefs, the Director for Logistics from the Joint Staff and the Surgeons General.

Since its inception, the DMOC has engaged senior military and civilian leadership in discussions and review of the health care benefit, Defense Health Program (DHP) funding requirements in the context of other service decisions, and management and reengineering initiatives. The group is committed to ensuring the MHS delivers a consistent, equitable benefit for all beneficiaries.

The DMOC has two primary responsibilities: ensuring adequate funding for a high quality MHS, and strengthening the benefit offered our military families.

Question. Explain the role of the DMOC in identifying and resourcing fiscal year 2000 and fiscal year 2001 DHP shortfalls.

Answer. Since its inception, the DMOC has engaged senior military and civilian leadership in discussions and review of the health care benefit, Defense Health Program (DHP) funding requirements in the context of other service decisions, and management and reengineering initiatives. The group is committed to ensuring the Military Health System delivers a consistent, equitable benefit for all beneficiaries.

In the past few months, the DMOC directed a thorough Budget Review of the DHP to determine the scope of current and projected funding requirements. Based on this analysis, the Department has reprogrammed funds in fiscal year 2000, reallocated resources to medical care in fiscal year 2001, and has made future years defense plan (FYDP) adjustments to increase medical support.

Question. The Subcommittee is aware of alarming reports about shortfalls of $6 billion in the Defense Health Program across fiscal year 2002-fiscal year 2005; or about $1.5 billion per year. Is the Defense Health Program seriously underfunded in the outyears? Are these reports true?

Answer. The DMOC is committed to improving access, satisfaction and health care delivery in the Military Health System (MHS), and keeping the promise of providing quality medical care to our retiree population. As such, last year we directed a thorough Budget Review of the health program to determine the scope of current and projected funding requirements. The results of this review highlighted a significant shortfall in the Defense Health Program.

The DMOC responded by adding to the health program approximately $250 million in the President's Budget proposal for fiscal year 2001, and another $6 billion across the Future Years Defense Plan (FYDP).

The DMOC has also taken actions to ensure that the MHS is not only on sound financial footing, but is structured to deliver care in an efficient manner. We have endorsed the MHS Optimization Plan, which will increase utilization of Military Treatment Facilities and improve access to care. To provide the necessary oversight of this plan, we will establish and regularly monitor metrics for the plan's implementation and the overall performance of the MHS.

We also recognize that our current Managed Care Support contracts do not work as well as they should. Since it is critical that the next generation contract, the TRICARE 3.0 version, represents an improvement over the current system, we have arranged for an independent evaluation of the contract to ensure we achieve the most cost effective and efficient vehicle for health care delivery—especially from the standpoint of our beneficiaries.

The DMOC believes it is essential for the MHS to have consistent and predictable funding, in order to effectively plan for and operate the health program. One means of achieving greater stability in the health program's funding could be to convert retired military healthcare from a pay-as-you-go system to an accrual financing system. We support the study of accrual financing of retiree health care.

In summary, we are aware of the problems facing the health program and we are committed to solving them to improve health care for our beneficiaries.

Question. What would be the benefits of using a full enrollment system?

Answer. First and foremost, a full enrollment system enhances the quality of clinical services to the patient; it is truly good medicine. Only through enrollment can a patient have an ongoing relationship with a primary care manager (PCM), a provider who is familiar with the patient's history and treatment and who provides all routine care and referrals. Important, current issues in medicine, such as health and wellness promotion, disease management and population health, require consistent patient-provider relationships for success, and are attainable only through enrollment. Without enrolled populations, healthcare delivery risks becoming fragmented, episodic, and interventional rather than focused on prevention and wellness.

Secondly, enrollment reduces health care costs for both the beneficiaries and the health care system. The patients enjoy lower out-of-pocket costs as opposed to the

potential for annual deductible costs and significant cost-sharing requirements for non-enrolled beneficiaries. The overall cost to the system is decreased with an enrolled population due to better management of disease and the focus on wellness, as well as an increased ability to plan and structure the health care delivery system for a known number of enrollees.

Question. In addition to improved access, better claims processing and a stronger network, what changes in the Military Health System could be implemented to improve the health benefit?

Answer. The DMOC believes it is essential for the MHS to have consistent and predictable funding, in order to effectively plan for and operate the health program. Stable funding would allow facilities to invest in programs and technology to improve health care access and delivery. One means of achieving greater stability in the health program's funding could be to convert retired military healthcare from a pay-as-you-go system to an accrual financing system. We support the study of accrual financing of retiree health care.

A full enrollment system would also contribute to stabilization of the benefit. If the population served by an MTF could be defined by enrollment, resources could be directed more effectively and efficiently. The population and its health status would be a known entity and facilities and providers could plan appropriate services. This would allow for true population health management, including timely preventive services to reduce the morbidity and cost of disease and injury.

Question. What changes do you recommend to increase retiree enrollment in TRICARE Prime?

Answer. Reduction or elimination of the enrollment fee would provide an incentive for increased enrollment in TRICARE Prime. Expansion of TRICARE Prime eligibility to those retirees over 65 would create an added enrollment incentive.

The annual TRICARE prime enrollment fee of $230 for a single retired member or $460 for a retiree's family is seen as cost prohibitive to some retirees who spent much less on health care while on active duty. Findings in a 1999 congressionally mandated study of TRICARE by the Center for Naval Analyses have also indicated that out of pocket health care costs for retired members have increased since the implementation of TRICARE.

The costs associated with reduced enrollment fees must be offset either by increased appropriations or by increased cost sharing by beneficiaries who chose to remain in TRICARE Standard. This restructured fee schedule would more closely mirror private insurance plans in which HMO options are the least costly for the beneficiary and fee for service plans are priced higher.

Question. What initiatives has the DMOC undertaken to support the health care optimization plan?

Answer. Since its formation last August, the DMOC has taken a critical look at the Department's strategy for improving TRICARE, focusing efforts in the following three areas: (1) optimizing the direct care system, (2) improving the Managed Care Support Contracts (MCSCs), and (3) appropriately shaping the benefit. The consensus of the DMOC membership is that optimizing the capacity of our military hospitals and clinics will decrease costs if workload shifts from the managed care support contracts back to the direct care system. Given existing medical manpower and facility resources required to support the Department's readiness mission, the direct care system is positioned to deliver additional care at a marginal cost rather than buying health care at full cost through the contracts.

The DMOC has taken a number of specific actions designed to support optimization.

First, to be effective, the military health system requires a stable funding stream. OSD (Comptroller) staff, at the request of the DMOC, completed a bottom up review of MHS requirements late last year. Based on their analysis, the Department has reprogrammed funds in fiscal year 2000, reallocated resources to medical care in fiscal year 2001, and has made future year defense plan (FYDP) adjustments to increase medical support.

Second, the contractual relationship between the Department and the managed care support contractors must be structured in such a way as to optimize care provided in our military facilities. To ensure that the new managed care support contracts, known as TRICARE 3.0, contained the appropriate incentives the DMOC directed two contract reviews. The initial review, conducted by the Center for Naval Analyses in, concluded that TRICARE 3.0 has the necessary financial incentives to support the in-house system in the recapture of purchased care. Based on that analysis, the Request for Proposal was issued on 18 February 2000 for TRICARE Region 11, which is serving as the Department's prototype for the optimization plan. The DMOC has also directed a second TRICARE 3.0 contract review by an independent

contractor to determine if additional refinements are needed. The contractor's report to the DMOC is scheduled for late-spring.

Third, the DMOC is investigating the feasibility of accrual financing to pay for the costs of retired care in the future. We envision a program similar to the accrual financing system put in place in 1984 for military retirement pay, with payment through revised manpower programming rates in the Services. Stable financing for retiree medical care will support optimization by providing a predictable health care benefit for our beneficiaries as well as our health care providers. The DMOC plans to oversee the MHS progress towards optimization through regular briefings and metrics review.

Question. Has the DMOC considered any alternatives for financing retiree medical health care?

Answer. Yes, finding a long-term financial solution to Defense Health Program funding shortfalls will provide a strong foundation to meeting future challenges. One option discussed by the DMOC for financing retired military healthcare involves conversion from a pay-as-you-go system to an accrual financing system. In our current pay-as-you-go system, funding for retiree health care must compete with other Departmental priorities. Greater stability in the health program's funding could be achieved by converting to an accrual financing system. It is especially important to address this issue now, as retiree health care costs will continue to increase due to changes in life expectancy, a growing retiree population and medical inflation.

In an accrual system, the healthcare costs for retirees would be funded in a fashion similar to that which the Department of Defense uses to fund retirement pensions. An accrued military health benefit liability recognizes the Department of Defense has an obligation to current and future military retirees to provide for their health care. In an accrual based accounting system, the post-retirement liability is an estimate of the total future costs of the health benefits earned during a member's service. Recognizing these costs in advance provides greater benefit security over the long term.

The future healthcare cost for retirees would be included in active duty programming rates based on actuarial estimates and would accrue to a new trust fund.

QUESTION SUBMITTED BY SENATOR DANIEL K. INOUYE

Question. I understand that the Defense Medical Oversight Committee directed an analysis of the TRICARE 3.0 Request for Proposal (RFP) and that another more rigorous study is to be conducted. What is your opinion of testing TRICARE 3.0 in Region 11 prior to implementation world-wide?

Answer. TRICARE 3.0 is significantly different from current managed care support contracts. We are shifting from prescriptive detailed requirements to outcomes based requirements with the bidders determining the best business practices to meet our goals.

The financing and risk sharing are also different in 3.0, and it is believed these new mechanisms give greater opportunity to manage our resources. The TRICARE 3.0 demonstration has been started in Region 11. Timelines are tight, but lessons learned from both the demonstration and in-depth contract review can be incorporated into the RFPs for subsequent regions.

QUESTIONS SUBMITTED TO LT. GEN. RONALD R. BLANCK

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

FISCAL YEAR 2000 BUDGET SHORTFALL

Question. Do you have a budget shortfall in fiscal year 2000? How much?

Answer. Yes. The Army Defense Health Program (DHP) has a total projected shortfall in fiscal year 2000 of $174.1 million. The shortfall can be broken down into two distinctive groups. They are items that we will not do this year (suppressed) and items, which must be funded, which are not funded in the base. Suppressed items include equipment purchases, IM/IT investment, and Repair and Maintenance and total approximately $76 million. Must fund items include TRICARE Senior Prime demonstration project, base operations, restore government wide rescission and a pharmacy efficiency decrement and total $98.1 million. The above shortfall is in addition to any shortfall identified by Health Affairs related to the Managed Care Support Contract and in addition to $228 million required to preclude a reprogramming action currently pending at DOD level.

SUPPLEMENTAL FUNDING FOR FISCAL YEAR 2000

Question. Does your "direct care" system need supplemental funds to be fully funded in fiscal year 2000?

Answer. Yes. The $174.1 million shortfall identified above is for the "direct care" shortfall. TRICARE Management Activity is addressing the shortfall associated with private sector care.

FISCAL YEAR 2001 BUDGET

Question. Does the fiscal year 2001 budget as submitted reflect your full requirements?

Answer. No. The Army Defense Health Program has a total projected shortfall in fiscal year 2001 of $85.9 million. The shortfall can be broken down into two distinctive groups. They are items that we will not do next year (suppressed) and items, which must be funded that are not funded in the base. In addition to these two critical areas, two additional areas, though not included in the above figure, should be considered to address our full requirements. The first is a long-standing backlog of Real Property Maintenance (RPM/MRP) projects that total $200 million. The second has been the annual erosion of our base funding predicated on a failed efficiency for anticipated Utilization Management (UM) "savings". Similar to the experience in the civilian health care environment, our annual, anticipated savings in UM have not materialized to the extent that dollars have been decremented in years past ($283 million). Some reinvestment of these dollars would enhance the productivity of the existing MTF infrastructure. The immediate shortfall includes: Suppressed for fiscal year 2001 (Equipment Purchases and RPM (restoration to 3 percent))—$25.2 million; and Must Fund—not in base (TRICARE Senior Prime and BASOPS)—$60.7 million.

FISCAL YEAR 2000 AND FISCAL YEAR 2001 UNFUNDED REQUIREMENTS

Question. Please provide a list of your fiscal year 2000 and fiscal year 2001 "unfunded requirements."

Answer.

	In millions
Fiscal year 2000:	
Suppressed Equipment Purchases	$4.086
Suppressed Travel	5.200
Suppressed IM/IT	11.000
Suppressed RPM	17.838
Restore RPM to 3 percent	37.900
Restore PDM Pharmacy Decrement	4.015
TRICARE Senior Prime Network	16.800
TRICARE Senior Prime MTF	25.200
Restore government wide rescission	21.242
Base Operations:	
AFIP	10.000
Womack Army Medical Center	3.000
Walter Reed Army Institute of Research	1.605
Newborn Claims (estimate as of 27 Mar 00) (final amount yet to be determined)	16.200
Fiscal year 2001:	
Suppressed Equipment Purchases	10.600
Suppressed RPM to 2.63 percent	9.400
Restore RPM to 3 percent	7.700
TRICARE Senior Prime	45.000
BASOPS (new mission)	7.900
BASOPS (suppressed)	5.300

COST OF MEDICARE SUBVENTION

Question. Regarding the Medicare subvention demonstrations, the Subcommittee is aware that the current negotiation with HCFA may actually cost DOD money. Can you please explain?

Answer. Four issues have combined to create this situation. First, Health Care Financing Agency (HCFA) reimbursement is not dollar for dollar but only 95 percent of DOD expenditures; secondly, level of effort was based upon fiscal year 1996 funding level, which was prior to utilization management reductions to the Defense Health Program (most robust funding levels); third, HCFA requires the provision of services not previously offered or available from DOD facilities, such as home health

care and rehabilitation services; fourth, since Medicare eligibles were seen on only a space available basis, DOD was not providing the full spectrum of care that is now being required. This last point highlights the point that Medicare previously paid for the more resource intensive portions of over-65 healthcare.

Based on the joint agreement between DOD and HCFA, the Department receives monthly interim payments from HCFA's Medicare Trust Fund based on the enrollment level at each demonstration site. However, DOD is not entitled to keep these HCFA payments until DOD shows that its "level-of-effort" funding in the direct budget has exceeded the historical LOE, in accordance with the terms of the joint agreement. A reconciliation process is conducted annually (after completion of each calendar year demonstration period) to assess (1) if DOD is entitled to receive funding from HCFA and (2) how much of the interim payments received during the demonstration period DOD can retain.

A preliminary calculation of CY 1999 reconciliation indicates DOD is entitled to receive HCFA reimbursement, but will only be able to retain an estimated 14 percent of interim payments received. The joint agreement terms requires DOD to exceed historic LOE spending for both its enrolled and non-enrolled Medicare-eligible beneficiaries. While the Department is exceeding its historic LOE spending to the total Medicare-eligible population, it is not meeting the historical LOE spending on its non-enrolled-Medicare-eligible beneficiaries.

Based on this calculation, the Medicare Senior Prime (TSP) Demonstration is running at a loss. The capitation rates HCFA provide DOD do not cover the incremental costs of providing care. The payments DOD will be entitled to retain after the CY 1999 reconciliation will not even cover the cost of care purchased from civilian providers for its TSP enrollees. As a result, the funding received as interim payments does not augment the sites' budgets enough to break even. It is estimated the Army will require $42 million in fiscal year 2000 above its current funding level to cover the costs for civilian purchased care and incremental costs at our demonstration sites.

BREAST AND PROSTATE CANCER RESEARCH PROGRAMS

Question. Can you give the Subcommittee a brief update on the breast cancer and prostate cancer research programs?

Answer. The Fiscal Year 2000 Defense Appropriations Act provides $175 million to the BCRP to support innovative research directed toward the eradication of breast cancer. Additional funds are anticipated as a result of the Stamp Out Breast Cancer Act. A Program Announcement was released March 10, 2000 soliciting proposals in three categories: Research, Infrastructure, and Training/Recruitment. Submissions are due April 19, June 7, and August 2, 2000, depending upon the award category. Peer Review is scheduled for August and September 2000, and Programmatic Review is scheduled for early November 2000. Investigators will be notified in December regarding the status of their funding.

The fiscal year 1999 Prostate Cancer Research Program (PCRP) Congressional appropriation of $50 million has enabled 106 proposals to be recommended for funding. Through this appropriation, the PCRP initiated four new Prostate Cancer Research Centers, each consisting of experts from multiple disciplines engaged in an integrated effort to study prostate cancer and to develop treatments. The PCRP also recruited 23 new trainees into prostate cancer research through 2 different training award categories and supported 79 new research projects through 2 different research award categories. Negotiations are currently in progress for all awards.

The Fiscal Year 2000 Defense Appropriations Act provides $75 million to the PCRP to support innovative research directed toward the eradication of prostate cancer. The Program Announcement was released February 23, 2000 soliciting proposals for two mechanisms in the Research category, New Investigator and Idea Development awards and three mechanisms in the Training/Recruitment category, Postdoctoral Traineeships, Minority Population Focused Collaborative Training Awards, and Historically Black Colleges and Universities/Minority Institutions Academic Development Awards. In addition, Phase II of the Dual Phase mechanism, first introduced in the fiscal year 1997 program, will be executed using the fiscal year 2000 appropriation. Dual Phase Awards are intended to invigorate the prostate cancer research community by providing continued support to the most productive research identified in fiscal year 1997 Phase I awards. A total of 168 investigators were invited to compete for Phase II funds. Proposals are due April 5 and May 17, 2000, depending upon the award group. Peer Review is scheduled for May and July 2000. Programmatic Review is scheduled for June and October 2000. Investigators will be notified of their funding status in July and November, and award negotiations will begin immediately.

OVERHEAD OF RESEARCH PROGRAMS

Question. How much overhead is required to carry out these research programs?

Answer. The costs of the United States Army Medical Research and Material Command (USAMRMC) Breast Cancer Research Program (BCRP, fiscal year 1992–2000) and Prostate Cancer Research Program (PCRP, fiscal year 1997–2000) consist of the following:

1. Congressional and DOD Withholds (mean of 4.9 percent and 5.5 percent of original appropriation, respectively): SBIR, STTR, inflation, etc., withheld prior to release of funds to the USAMRMC.

2. USAMRMC HQ and Command Support (mean of 1.8 percent and 3.7 percent of funds released to the USAMRMC, respectively): Personnel actions, budget management, legal services, contracting, logistics services, regulatory compliance (animal use, human use, environmental compliance, safety, etc.), building space and associated costs (water, electricity, upkeep, etc.), frequent information requests, and frequent visitors and requests for visits by key leadership and staff, including the Commanding General.

3. Program Costs (100 percent of funds provided to managing office):

3a. Management Costs (mean of 7.7 percent and 8.8 percent of funds released to management office, respectively): Expenses for the daily administration of the programs, to include building space and associated costs not covered by HQ, civil service personnel, other Government personnel, support contracts, proposal review and approval, contracting, regulatory compliance (animal use, human use, environmental compliance, safety, etc. not covered by HQ), travel, supplies, automation equipment, information management, etc.

3b. Research Awards (mean of 89.6 percent and 88.8 percent of funds released to management office, respectively): Funds provided to award recipients.

Item 1 is an overhead cost subtracted prior to release of funds to the USAMRMC. Items 2 and 3a are the USAMRMC overhead costs.

Question. How does this overhead figure compare to other research programs?

Answer. For the funds released to the sponsoring agency, the USAMRMC overhead is less than half that of the National Institutes of Health (NIH). The NIH uses the "Taps" Program whereby every Institute is "tapped" a percentage of its budget to pay for central services.

1. Central Services (minimum of 20 percent of funds for Institutes):

The Management Fund.—This fund, which was established June 29, 1957 by Public Law 85–67, pays for the Office of the Director, the Clinical Center, the Center for Scientific Review, as well as for computer sciences support, security, vehicles, maintenance, utilities, engineering maintenance, space management, safety and environmental protection, housekeeping, mail, sanitation and general administrative support services. Each Institute is "tapped" for funds ranging upward from 20 percent of their budget according to a formula developed for that Institute. With the exception of the Clinical Center and its Center for Scientific Review, the services provided by this fund are analogous to the USAMRMC HQ and Command Support services.

Service and Supply Fund.—This fund charges each Institute according to its usage of the services or need for special purchases. Examples are the purchase of special glassware, the repair of scientific equipment, and special library searches or translations. Services provided are charged according to an established hourly rate based on an activity based cost accounting system.

Membership Fees.—These fees are for shared services such as basic services from the NIH Library.

2. Institute Costs (100 percent of funds provided to Institutes): In addition to the minimum of 20 percent NIH withholds for central services, each Institute has its own management costs. For example, NCI published its budget in "The Nation's Investment in Cancer Research—A Budget Proposal for Fiscal Year 2000", as follows:

2a. Management Costs (4 percent of funds released to management office): 4 percent for administration and management.

2b. Public Service (3 percent of funds released to management office): 3 percent for communications regarding cancer issues.

2c. Research Awards (93 percent of funds released to management office): 4 percent for training and education; 16 percent for intramural research; and 73 percent for extramural research.

The NIH overhead consists of items 1, 2a and 2b.

For the funds released to each agency, the USAMRMC BCRP overhead is a mean of 10.4 percent, the USAMRMC PCRP overhead is a mean of 11.2 percent, and the NIH overhead is a minimum of 23.2 percent (more than double the USAMRMC rate).

Question. Have they become more efficient over time?

Answer. The overhead costs have increased since inception of the programs but is now stabilizing. Since fiscal year 1990, the USAMRMC has received almost $2.5 billion in special appropriations to fund research programs specified by Congress. The early requests from Congress were few and of low dollar value; therefore, they could be accommodated under the existing USAMRMC infrastructure and managed by existing USAMRMC personnel. The number of requests and the dollar value have escalated significantly—in fiscal year 2000, the USAMRMC received over $540 million in special appropriations for 73 special programs. This dollar amount more than triples the research being sponsored by the USAMRMC. Although the Command has the expertise to execute and manage these special programs, the significant and increasing workload has necessitated the use of a portion of the special appropriations to cover the headquarters support and program management costs, as is done with the other Defense and Army appropriations managed by the USAMRMC.

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

QUALITY OF CARE

Question. We are all concerned over the quality of care our military beneficiaries receive. As we move to ensure greater access, we must balance this with quality of care. For example Lieutenant General Carlton mentioned in his statement that the Air Force is committed to 25 patients per day per provider. This metric seems overly optimistic and will force physicians to see approximately 3 patients per hour. This severely reduces the doctors' time for completing administrative requirements, and, more important, it eliminates critical time for building the doctor-patient relationship. How will you maintain quality while increasing access?

Answer. The imperative to maintain quality while increasing access will indeed be a challenge, but a challenge that can be met. We will continue to adhere to our quality improvement, quality assurance, and risk management policies and procedures irrespective of the number of patients seen per provider.

The key to increasing access while maintaining quality is to ensure that we remove all the obstacles providers face which contribute to inefficient practice. Our basic assumption is that our providers desire an efficient practice environment in which they can maximize the number of patients they care for each day! In order to create an efficient practice environment we will remove the current impediments to efficiency. Some of these impediments include inadequate numbers of exam rooms per provider, insufficient support personnel per provider, cumbersome computerized medical information systems, and lack of standardization of practice patterns.

We fully support Dr. Bailey's recent policy memorandum setting forth guidelines for the number of exam rooms and support personnel per provider and mandating by name enrollment of patients to primary care providers. We are drafting a battle plan to meet these challenges and will provide our clinicians with 2 exam rooms per provider and 3.25 support personnel per primary care provider as the policy mandates. We are convinced that the by name enrollment policy will result in increased continuity of care with a resultant increased quality of care and enhanced provider-patient relationships.

We believe that the CHCS II, a computerized medical information system, will enhance productivity by eliminating or minimizing much of the paperwork associated with the healthcare encounter. CHCS II will enable the clinician to rapidly search the patient's record for data related to the visit and will facilitate data entry which in turn should reduce medical errors associated with illegible handwriting. CHCS II will also provide the clinician reminders when clinical preventive service interventions (e.g., mammograms) are due.

Our strong support of clinical practice guidelines is based on our belief that a more systematic approach to diseases will lead to increased efficiency. Guidelines address the process of care for a specific disease. Guidelines are developed to ensure that only those portions of the process of care that require a clinician are done by the clinician, thus enabling the clinician to devote her/his attention to the actions that demand her/his expertise. The remaining portions of the process become the responsibility of the support personnel. Guidelines promote quality as well as efficiency. Quality will increase as anecdotal practice is replaced by evidence based practice and variation in practice among providers and between patients is reduced. The guideline metrics provide quality benchmarks and facilitate monitoring of guideline implementation.

DEPARTMENT OF DEFENSE/DEPARTMENT OF VETERANS AFFAIRS PARTNERSHIPS

Question. While I am encouraged by the numerous references to partnerships with the Department of Veterans Affairs, contracting challenges are a continuing concern. For example, VA budget justifications and resources may not account for joint ventures. We must ensure that these agreements clearly outline responsibilities in order to maximize efficiencies without limiting flexibility. What impact will these agreements have on the VA's requirements and how will these partnerships be managed to ensure efficiency?

Answer. Under the "big" umbrella of the VA/DOD Health Care Resources Sharing Program, the terms "partnerships," "joint ventures," and "agreements" are being used interchange-ably, and require separate definition .

1. Partnering and Partnership: These terms are not defined under the scope and functions of the VA/DOD Health Care Resources Sharing Program. However, under this Program, the terms "partnering" and "partnership" are being used to refer to an "informal working relationship" between the DVA and DOD. The terms as used have no authority or legal consequences in that there is no legal documentation within the Program, known as or called a "Partnership."

(2). Agreements: The term "agreement" under the VA/DOD Health Care Resources Sharing Program, does have a legal connotation in that there is a formal document, known as or called an "Agreement." Under this Program, there are three types of, or specific agreements, that describe the legal, operational, and working relationships between the DVA and DOD. These three specific types of agreements as used in this Program are: "joint venture agreements," "resources support agreements," and "resources sharing agreements."

(a). Joint Venture Agreements: This term refers to a VA/DOD Agreement funding mechanism, whereby each Agency (Partner) provides 50 percent of the funding requirements of a capital expenditure investment. The capital expenditure may be either funding for the construction of a new facility, or the remodeling or renovation of an existing facility for joint VA/DOD occupancy or use. This type of joint funding may also be used for the purchase for capital equipment, that will be available for joint use by the two Agencies.

At the present time, the AMEDD has three (3) joint venture funded construction projects, where new jointly occupied Outpatient Clinic facilities were constructed at TAMC in Honolulu, HI, at WBAMC in El Paso, TX, and at Reynolds ACH at Fort Sill, OK.

An example, of a capital equipment funded joint venture expenditure for the purchase of capital equipment is the joint purchase project at Moncrief ACH, at Fort Jackson, SC, where each Agency provided 50 percent of the capital funds for the joint purchase and use of $3,000,000 in MRI equipment.

Funding for VA/DOD joint ventures is usually pre-approved Congressional funding for the specific joint venture project, therefore, it is the responsibility of both Agencies to make the project a win-win situation.

Functional and operational management and responsibility of a joint venture in an effective and efficient manner is dependent upon both Agencies (Partners) working together to make the joint venture workable and satisfactory. Oversight responsibility for the success of the joint venture lies with the Veterans Integrated Systems Network (VISN) for the VA MTF, and with the Regional Medical Command for the Army MTF.

(b). TRICARE Managed Care Support (MCS) Contractor Agreements: While this type of agreements are called "support agreements," they are really "contracts" in that the VA MTF, as a Network Preferred Provider (NPP), is really a subcontractor to a MCS Contractor. As a Network Preferred Provider, the VA MTF is reimbursed for services provided at a discounted CHAMPUS maximum allowable charge, or as it is usually called, the CMAC rate. Again the success of this type of an agreement (contract) is dependent upon the effective working relationship between the MCS Contractor (the TRICARE MCS Contractor) and the NPP subcontractor (the VA MTF).

The immediate management responsibility for the effective and efficient management of this type of agreement falls within the purvue of the TRICARE MCS Contractor. Oversight responsibility for this type of agreement lies with the Regional Lead Agent. The Army MTF and the Regional Medical Command have no direct management responsibility for this type of agreement because of the contractual agreement and relationship between the TRICARE MCS Contractor and the NPP subcontractor.

(c). Resources Sharing Agreements: The third type of VA/DOD agreements, i.e., resources sharing agreements, are the VA/DOD Health Care Resources Sharing Agreement. VA/DOD Health Care Resources Sharing Agreements are usually locally

negotiated between a local VA MTF and a local DOD MTF. These local VA/DOD Health Care Resources Sharing Agreements are usually entered into for one of the following reasons: cost avoidance through shared services, cost savings through reduction in duplication of services, or to obtain a service that either the VA or the DOD MTF is not able to provide itself because of lack of funding, or because of the non-availability of personnel to provide that service.

Under the latter type of sharing agreements, reimbursement for the provided service may be by a negotiated rate not to exceed actual cost, usually based upon the MTF's MEPRS data, or by using the current fiscal year interagency rates for the provided service. The VA/DOD interagency rates are established and published annually by Congress. Again, the success and efficiency of the locally negotiated VA/DOD Health Care resources Sharing Agreements is determined by the cooperative working relationship between the two participating MTFs.

Because this category of sharing agreement are negotiated at cost, or not to exceed actual cost, they are "cost saving" by their very nature. The direct management responsibility for the effective and efficient manner in which the agreement is carried out is the responsibility of the participating VA and Army MTFs at the local level. Oversight responsibility lies with their respective next level chain of command organizations, i.e, the VISNs for the VA MTFs and the RMCs for the Army MTFs.

(3). Whether the VA and the DOD are participating together in a Joint Venture Agreement, a TRICARE Managed Care Support Agreement (Contract), or a VA/DOD Health Care Resources Sharing Agreement, participation by the two Agencies is voluntary. Once in an agreement, either party to the agreement has the option of "opting" out of the agreement at any time during the life term of the agreement, upon thirty (30) days written notice to the other party to the agreement.

(4). The duties and responsibilities of each party to the agreement are generally spelled out in the joint general provisions of the agreement. Both parties are required to sign the agreement, indicating that they are in agreement with the terms and/or provisions of the formal agreement. By their signature to the agreement, they are expected to abide by same.

(5). At any given time during the life term of the agreement, they have the following available options, i.e., either to: (a) "opt out" of the agreement, or (b) amend the agreement, or (c) renegotiate the agreement.

PHARMACY FORMULARIES

Question. Military beneficiaries and health care providers have complained of pharmacy restrictions and inconsistencies. As you strive for greater uniformity across TRICARE regions, please comment on how you will correct inadequate and inconsistent formularies.

Answer. The pharmacy benefit within the Department of Defense is a Triservice versus service specific issue. Significant improvements have been made since the implementation of TRICARE with the goal of providing a uniform, consistent, and cost effective pharmacy benefit to all eligible beneficiaries. The pharmacy benefit program is now centrally managed by the TRICARE Management Activity, the DOD Pharmacy Board of Directors, and the DOD Pharmacy and Therapeutics Committee. All corporate formulary decisions relating to the three points of service for the benefit (MTF pharmacy, National Mail Order Pharmacy (NMOP), and the Retail Pharmacy Network) reside with the DOD Pharmacy and Therapeutics Committee (P&T).

The Basic Core Formulary (BCF) is the nucleus for all MTF formularies, with BCF policy established by Health Affairs Policy 98–034, dated April 27, 1998. The BCF is managed and updated by the DOD Pharmacy and Therapeutics Committee. The BCF is not a closed formulary, but rather is the listing of "core" formulary drugs that must be uniformly available as the primary care formulary at all MTF pharmacies, and available to all eligible beneficiaries independent of beneficiary category. Primary selection criteria by the DOD P&T Committee for inclusion on the BCF includes the drugs' clinical appropriateness and cost-effectiveness to meet the primary care needs of a majority eligible beneficiaries. Any restrictions on BCF drugs are permitted only for valid clinical reasons or based on evidenced based medicine protocols published by the DOD P&T Committee. Restrictions on any non-formulary medications are permitted only for valid clinical reasons or based on evidenced based medicine protocols approved by the local MTF P&T committee. Restrictions on any formulary or non-formulary drug may not be imposed solely as a cost reduction strategy, which could negatively impact patient care.

The National Defense Authorization Act of 2000 has mandated the establishment of a "Uniform Formulary" for DOD. It is anticipated that this legislation coupled with additional funding for pharmaceuticals in the Medical Treatment Facilities will

significantly improve the access to appropriate, cost-effective drug therapy for a majority of eligible beneficiaries.

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

EXCESS CAPACITY IN THE MHS

Question. As I understand, the MHS optimization plan will increase access to primary care is by using best business practices to increase the overall capacity and efficiency of the military direct care system. Currently, how much excess capacity, if any, do you currently have in your hospitals and clinics?

Answer. The military treatment facility's capacity to enroll its beneficiaries is affected by the number of Primary Care Managers (PCM) at the MTF. Their availability to see patients, readiness considerations, patient demand for visits, and their productivity will be determined by the availability of sufficient clinic support personnel, facility redesign, and management actions that emphasize improved access.

We are currently in the process of identifying our baseline.

Health Affairs developed with Service input a uniform enrollment-capacity planning model that we are currently utilizing to determine our capacity. This model identified a framework to optimize MTFs and recapture appropriate network workload. Using the model provided, each MTF was tasked to identify its baseline enrollment capacity and to develop a plan to move toward an enrollment objective of 1,500 enrollees per PCM. This is a critical component of meeting our MTF baseline optimization objectives. The Services are conducting their initial assessment of each MTF's present enrollment, availability of examination rooms and support staff and are expected to provide their input by 14 April 2000. A phased comprehensive capacity plan for achievable enrollment targets is scheduled for completion by 30 June 2000.

To reach 1,500 enrollees per PCM, significant reductions will be required in the average number of primary care visits per enrollee. The number of reduced visits will be offset by increasing their health and appropriate utilization of resources through demand management, e.g., the use of nurse advice lines and nurse triage systems, self-help pamphlets, and prevention measures. The model requires greater productivity through the use of appropriate support staff, examination rooms, scheduling techniques and practice patterns. It will also require the availability of assigned PCMs to staff primary care clinics.

We are committed to meeting our beneficiaries' expectations by providing more care in our MTFs.

CARE SENT TO MANAGED CARE SUPPORT CONTRACTORS

Question. In the facilities where you have excess capacity, how much care is being sent to the Managed Care Support contractors?

Answer. In March, 2000 we began tracking the amount of care going to contractors. With the launching of the new MHS Optimization initiative, the enrollment capacity planning model, we are just beginning to analyze primary care access and timeliness of care data in a centralized, systematic way. Prior to now, MTFs developed and monitored their own metrics. As a starting point, we are currently monitoring average visits/provider/day and reporting on a monthly basis. Once we have a firm understanding of the baseline numbers, we can begin to examine barriers to productivity (lack of adequate space, lack of adequate support persons, etc.) and address them directly. The goal is to recapture workload from the contractor to the greatest extent possible.

MEDICAL ERRORS AND PATIENT SAFETY

Question. The prevalence of medical errors has commanded the attention of this Congress and the nation. What initiatives do you now use that address the issue of patient safety?

Answer. The AMEDD enthusiastically supports the Military Health System's (MHS) commitment to improving health care delivery processes and systems to minimize the chances of preventable medical errors. We are pleased to share the numerous innovative patient safety related initiatives which have been implemented throughout the AMEDD:

DOD Pharmacy Technology Initiatives:

Pharmacy Data Transaction Service (PDTS).—PDTS creates a central data repository for all prescriptions filled throughout the MHS to include: the direct care system (MTF), managed care contractor's retail pharmacy network, and the DOD national mail order pharmacy (NMOP). Aggregating prescription data from these dis-

parate system enables PDTS to conduct prospective (real time) drug reviews of a patient's prescription against their total medication profile to identify drug-drug interactions, and duplication of therapy regardless of where they may have obtained their previous medications. The architecture of the process is unprecedented, and extends beyond the current technologies where these clinical screening processes are host or single system based.

Outpatient Prescription Bar-Coding.—The DOD Composite Health Care System (CHCS) was enhanced this past year with an added feature to produce a bar code on the outpatient prescription label. To use this option, pharmacies must first obtain bar code printers, bar code readers, and appropriate labels. This option can be used to prevent dispensing a prescription to the incorrect patient as follows:

—Patient ID card scanned at the pharmacy's dispensing window to identify the patient.

—The prescription bar code is then scanned using the CHCS dispensing option that links these independent events to assure that the correct patient is receiving the intended medications. The dispensing option also documents the time of dispensing and the individual performing the dispensing.

Status: The number of DOD pharmacies with bar code prescriptions are small, but continues to grow. Additional funding, to obtain the necessary equipment, is needed to fully implement bar option. Use of the dispensing option can become standard policy, once the appropriate equipment is operational.

Robotics.—Several facilities have implemented Outpatient Pharmacy Robotic Systems that completely process a prescription order. These systems select, fill, and label the container to include any precautionary auxiliary labels. Some of these robotic systems will also cap the container and provide digital imaging of the contents for a final check of the preparation. These robotic systems incorporate bar coding and other proven technologies that remove humanistic opportunities for process errors. Process errors that can potentially be avoided include selecting and placing the wrong medication in a container, counting errors, and incorrectly labeling a container.

MTF Medication Safety Initiatives:

The Unit Dose Drug Distribution System, automated drug dispensing technologies, and the use of specially trained and certified Registered Pharmacists certified for preparation of IV admixtures and specialty drugs (such as chemotherapy) are safeguards against medication errors which have long been the standard of care in Army MTF's.

All Adverse Drug Events are reviewed locally by the MTF Pharmacy and Therapeutics Committee with significant drug events reported to the FDA.

Concentrations of intravenous infusions (such as pressors) are standardized for adults in the ICUs so as to eliminate calculation errors associated with varying strengths and infusion rates.

Pharmacists accompany physician teams on rounds in the intensive care unit, advising on drug interactions and safety.

Several MTF's use of the Omnicell dispensing system on the inpatient units to ensure the right patient gets the right medication by linking the computer order with the proper medication with the patient's name before it will allow the nurse to withdraw the medication. The use of Omnicell has greatly reduced the number of drugs openly stocked on the wards.

High-risk medications are closely controlled:

—Concentrated KCl solution is not allowed on stocked on units/clinics and all KCl containing intravenous solutions are prepared in the pharmacy.

—Heparin and insulin are stored in separate areas.

—Sodium Chloride is not available in concentrations greater than 0.9 percent.

Clindamycin, a commonly used peri-operative antibiotic, is no longer supplied to the OR in concentrated form, thereby obviating the risk of cardiac reaction from rapid infusion.

Organizations administering chemotherapy ensure preparation in a specialized pharmacy under the direction of an oncologically trained pharmacist thereby reducing the risk of miscalculation of doses.

Adverse drug reactions are broadcast on the hospital e-mail system thereby increasing physician awareness of common and uncommon problems and creating an opportunity for education and feedback. This has also increased the regular reporting of ADRs.

Critical drug information can be provided in the comment fields of CHCS so that a prescriber is reminded of important information at the time a medication is ordered. For example, metformin is used to treat diabetes but can worsen renal fail-

ure. When the doctor initiates a prescription for metformin, he is reminded to check a creatinine.

Pharmacy personnel regularly inspect stock medications including emergency carts for expiration dates, as well as proper storage.

The Composite Health Care System (CHCS) automates the patients' records and performs an automatic crosscheck looking for drug-to-drug and drug-allergy contraindications. The system also requires the provider to enter in the height and weight of pediatric patients before a prescription can be written. The prescription is recalculated by the Pharmacist prior to it being filled.

AMEDD Clinical Laboratory Initiatives:

Many of the safeguards generated through CHCS, which ensure order accuracy, are applicable for the clinical laboratory. An additional safeguard is the bi-directional interface of clinical analyzers (downloads orders from CHCS to the analyzer and uploads results to CHCS). Presently, the DOD Laboratory Joint Working Group has an initiative to standardize laboratory data and gain interoperability between CHCS host computers.

In the Blood Bank arena, the use of barcode has been one method of improving specimen identification processes. The sites with donor and/or transfusion functions have installed the Defense Blood Standard System (DBSS) supported computers to assist in the issue of blood products.

Use of barcodes to register specimens. This has been emphasized throughout the entire laboratory and not just with Blood Banks. Machine readable (barcoded) labels reduce clerical errors associated with manual data entry of human readable labels.

Use of automatic pipettes and other more fully automated analyzers. Minimization of operator intervention improves analytic accuracy.

Unbundling of test panels. Not only is this more cost effective because it reduces unnecessary testing, but fewer tests mean fewer chances for error.

Introduction of more sensitive and more specific tests. This provides clinicians with more accurate information on which to base diagnoses and influence more favorable patient outcomes. Examples include gene probes and DNA amplification assays as well as liquid-based cytology.

Implementation of the FDA's current Good Laboratory Practices for improved process control.

Increased emphasis on training and competency assessment for laboratory personnel.

Panic/Critical Values are identified on lab studies to assure that healthcare providers are notified quickly and can institute appropriate, timely care.

Centers of Excellence:

The AMEDD has established Centers of Excellence as a means to improve patient outcomes for complicated surgical procedures by concentrating specialized medical expertise at one site.

Evidenced-based Clinical Practice Guidelines:

National Quality Management Program (NQMP) initiatives to identify best clinical practice continue. The NQMP has completed baseline studies determining the extent of compliance with DOD/VA and/or other national clinical practice guidelines so that the impact of implementing evidence-based disease management practice guidelines system-wide can be determined. The program will facilitate the benchmarking of DOD facilities against their federal and civilian peers' facilities on DOD/VA Practice Guideline and DOD Putting Prevention into Practice evidence-based process and outcome quality indicators. The JCAHO performance measurement program (ORYX), Special Studies and the annual Quality Management Reviews continue to be utilized to benchmark DOD facilities and identify best practices.

MEDCOM Quality Management Directorate (QMD) Site Visits:

In January 2000 the QMD implemented staff assistance visits to facilitate improving the communication and decreasing related risks within the AMEDD through the dissemination of risk trends and analysis and lessons learned. The current focus on improving patient safety through the elimination of medical errors requires a collaborative approach to collectively demonstrate our success in this arena. Information gathered from sharing lessons learned and best practices will position the AMEDD to proactively demonstrate our contributions to quality care.

MedTeams Project:

A pilot project to evaluate the role of human factors in adverse medical outcomes was implemented using the concept of Medical Team Management. The goal of

MedTeams is to change the medical culture from one which is individually focused to one that is team focused, from a culture that often creates barriers to communication to a culture that fosters it. Ultimately, this will enhance safe and efficient accomplishment of good patient care while reducing the adverse medical outcome rate.

Institute of Healthcare Improvement (IHI) Breakthrough Series (BTS) Collaborative:

The AMEDD will be funding 4 MTF Teams and 1 Leadership Team to participate in the High Hazard Area BTS. IHI defines a Breakthrough Collaborative as "an effort to bring together teams of healthcare providers with experts in the field in rapid cycle quality improvement projects". They use the best information that research has to offer about what can be done to improve performance. IHI's experience in running such collaborative efforts suggests it is possible for health care sites to achieve improvement in performance of 25 percent or more within 12 to 15 months! Two MTF Teams each will evaluate ICU Practice (WRAMC & TAMC) and Labor & Delivery Practice (LARMC & WAMC). Each team will focus on an area of particular importance to their organization. Team members will work together on a frequent basis to execute "small scale changes". The focus of the "learning sessions" is to identify stretch goals, an action plan to implement the goals (recommended changes) and metrics to measure the effectiveness of the "small scale changes" immediately. There will be monthly "coaching" calls from the IHI Faculty.

MTF Surgical Suite Initiatives:

Procedures for conscious sedation have been standardized throughout each organization.

Multiple level system of checks to validate surgery location—patient, record, nurse, anesthesiologist, and surgeon must all independently confirm that the proper surgery is planned. This further reduces the already small risk of wrong site surgery.

Infant Security Program:

Several MTF's have implemented electronic Infant Abduction Security Systems. Staffs assigned to Mother-Baby Units wear color-coded badges for easy patient identification of staff members authorized to take an infant from the mother's room.

Radiology Initiatives:

CHCS prompts questions regarding pregnancy. It is a "must fill" block to draw attention to the importance of knowing the patient's status.

Laboratory results of patient BUN and Creatinine levels attained prior to IV Contrast administration.

Limit amount of radiation exposure through the mandatory use of lead body and gonadal shielding.

Other Safety Related Initiatives:

Each MTF widely disseminates and quickly implements all patient safety related lessons learned.

Patients are educated on their medication and provided written instructions to ensure optimal understanding and compliance with their drug therapy.

Facilities Managers/Safety Officers and Clinical Supervisors perform risk assessment surveys for hazards in patient areas on an established scheduled basis.

Very proactive staff education and awareness programs impact positively on patient safety.

Inpatients, with a history of falls, are put on a special falls alert status where the extra measures and visibility attempt to reduce their chances of falling again.

Tamper-proof electrical outlets and covers have been installed in every area where pediatric patients or visitors spend any amount of time.

QUESTIONS SUBMITTED TO VICE ADM. RICHARD A. NELSON

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

Question. Do you have a budget shortfall in fiscal year 2000? How much?

Answer. Navy Medicine is short funded in the direct care system by approximately $140.4 million. This includes $4.8 million required for the Uniformed Services University for Health Sciences. The Navy is executive agent for the university.

In addition, the Navy Surgeon General needs to make an initial investment in support of the Military Health System Optimization (MHS). This multifaceted plan is designed to optimize the use of readiness required military personnel in the delivery of peacetime health care. It employs the principles of Population Health to begin

to focus our efforts on preventive care, to avert illness and injury, thus decreasing overall healthcare costs. MHS Optimization is strongly aligned with the overall concept of Force Health Protection. Analysis of our direct care system indicates that in many cases, Military Treatment Facilities are not optimally staffed and resourced to deliver efficient health care. For example, a Family Physician working with two clinical support staff may be able to effectively care for a panel of 750 adults. If provided with the industry standard of 3.5 support personnel, that same provider can assume responsibility for 1,500–2,000 adults. The Optimization Plan requires that the cost of the additional support staff be recouped via the higher throughput. In addition to increasing our marketshare, return on investment is generated as the actual cost of care is lower when that care is performed at marginal cost in the direct care system.

To begin this process, we must make an initial investment in staff. The following are our estimated costs:

Clinical support staff.—Clinical support staff to clinical provider ratio is presently 1.81. The MHS Optimization target is 3.50. The annual requirement for increase in staffing is estimated at 2,525 workyears priced at $117.2 million per year (fiscal year 2000 rate). As it is anticipated that we could make these staff available in the fourth quarter of fiscal year 2000 the cost is $29.3 million. These staff are our highest priority.

—Additional staff in the following categories:

  —Case Managers to coordinate care for the top 1 percent of medically complex cases, freeing clinical providers to do more direct patient care. (estimated full requirement 180, anticipate 50 could be brought on board for the 4th quarter of fiscal year 2000).

  —Utilization Managers to analyze trends in ambulatory care usage by diagnostic and patient category, and develop plans for population health interventions. (estimate 30 in fiscal year 2000).

  —Medical Record Coders to perform accurate and detailed ICD9 and CPT coding to account for workload and performance, thus ensuring marketshare is accounted for in comparison with contractor performed work. (estimated full requirement is 80, 20 in fiscal year 2000).

  —The above categories are trained professionals ranging from GS9 to 14. They have been priced at an aggregate GS11 rate for a fourth quarter fiscal year 2000 requirement of $1.52 million.

  —Pharmacy technicians to support increased prescription volume with workload recapture (estimate 20 in fiscal year 2000). Priced at the GS 7 rate, this equates to a fourth quarter fiscal year 2000 requirement of $216,000.

The Navy Surgeon General is aware that investments of this nature carry the inherent risk that return must be earned quickly enough to pay for the salary tails that will be created. He is firmly committed to changing the business practices and culture of Navy Medicine to recapture workload currently being done in the private sector.

Summary

	In millions
Budget Shortfall	$140.4
Optimization Initiatives	31.0
Total Unfunded Requirement	171.4

Question. Does your "direct care" system need supplemental funds to be fully funded in fiscal year 2000?

Answer. The entire $140 million is the amount required in the direct care system. Amounts required for managed care support contracts would be in addition to the Navy $140 million shortfall.

Question. Does the fiscal year 2001 budget as submitted reflect your full requirements?

Answer. No, in fiscal year 2001 the amount necessary to fund our full requirement is $62 million. If we were to initiate Navy medical optimization initiatives, the amount required would increase by $122 million, for a total of $184 million. (Please refer to the answer to question #1 for further detail).

Question. Please provide a list of your fiscal year 2000 and fiscal year 2001 "unfunded requirements."

Answer. The following is a table that contains Navy medicine unfunded requirements:

[In millions]

	Fiscal year 2000	Fiscal year 2001
Non-Programmatic Cash Reductions:		
Program Impact:		
Healthcare Contracts	25.1	.....
MRP	4.3	.....
Initial Outfitting	22.1	.....
Subtotal	[1] 51.5	.....
Program Budget Unfunded Items:		
Medical Equipment	20.0	20.3
MRP to 3 percent	35.6	24.7
Travel	8.2	1.4
TRICARE 3.0 Support	7.1	[2] 3.5
IM/IT	6.8	.....
Family Practice Residency, CL	3.5	[3] 3.0
Dental Aux. Training	0.5	[4] 0.5
Ergonomics Program	0.3	0.3
Injury Rehabilitation Clinics	1.1	1.1
IM/IT Data Quality	1.0	[5] 1.0
Subtotal	84.1	55.8
USUHS Issues	4.8	6.8
Budget Shortfall	140.4	62.5
Navy Medicine Optimization Initiatives	31.0	122.0
Total Unfunded Requirement	171.4	184.5

[1] Relates to Congressional budget execution reduction, TMA 1 percent withhold and Congressional directed rescission package (0.53 percent).
[2] Data validation to implement cross billing required for TRICARE 3.0 in Regions 11 and 6.
[3] Implements family practice residency program to train additional primary care physicians.
[4] Training for additional dental technicians.
[5] Additional coding and certification of record keeping requirements associated with the ambulatory data system.

Question. Regarding the Medicare subvention demonstrations, the Subcommittee is aware that the current negotiation with HCFA may actually cost DOD money. Can you please explain.

Answer. The Health Care Finance Administration (HCFA) generally negotiates a reimbursement rate of 95 percent of the local adjusted annual per capita cost with Health Maintenance Organizations. The reimbursement rate negotiated between HCFA and the Department of Defense resulted in an effective reimbursement rate of 87 percent. In addition, the initial start up and overhead costs were not considered in calculating the cost of the subvention programs.

The Defense Health Program must also provide Rehabilitative and skilled nursing facility care for TRICARE Senior Prime beneficiaries. Historically, military facilities have not provided this type of care and it must be purchased from civilian sources adding a significant cost to the overall program. In addition, utilization rates in the demonstration program are far above the national norms for Medicare HMOs. It is not yet clear whether utilization will decrease as neglected health care needs are addressed or whether the enrolled population has a unique risk profile. Collectively, the total costs of direct care and purchased care for enrollees has exceeded projections.

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

Question. We are all concerned over the quality of care our military beneficiaries receive. As we move to ensure greater access, we must balance this with quality of

care. For example Lieutenant General Carlton mentioned in his statement that the Air Force is committed to 25 patients per day per provider. This metric seems overly optimistic and will force physicians to see approximately 3 patients per hour. This severely reduces the doctors' time for completing administrative requirements, and, more important, it eliminates critical time for building the doctor-patient relationship.

How will you maintain quality while increasing access?

Answer. Navy Medicine's goal is to increase the number of support staff to more efficiently and effectively assist our providers. These steps will minimize the time providers currently spend performing administrative duties; enabling the provider to spend more quality time with their patients while increasing their overall productivity.

Assigning patients to a personal Primary Care Manager, who will be familiar with his/her patients, thus decreasing the time required for the physician to review the patient's history, will further improve continuity of care and customer satisfaction. The Military Health System (MHS) Optimization Plan will play a key role in allowing enrollee assignment to a PCM by name. This will be accomplished by determining demand, productivity, and capacity of our military treatment facilities to achieve optimum results in terms of quality, access, and cost. Once fully implemented, the MHS Optimization Plan will facilitate the ability of Navy Medicine and the MHS to enroll each of our beneficiaries to a personal PCM, with a 1:1,500 ratio as the eventual goal.

Deployment of the Computerized Patient Record (CPR) will also increase quality and access. The CPR has been fully funded for worldwide implementation by the end of fiscal year 2002. When deployed, the CPR will provide a comprehensive lifelong medical record of illnesses, hazardous exposures, injuries suffered, and the care and immunizations received by our beneficiaries. The CPR will also provide clinical decision support and gives military health care providers instant access to the health care history of each patient.

Question. While I am encouraged by the numerous references to partnerships with the Department of Veterans Affairs, contracting challenges are a continuing concern. For example, VA budget justifications and resources may not account for joint ventures. We must ensure that these agreements clearly outline responsibilities in order to maximize efficiencies without limiting flexibility.

What impact will these agreements have on the VA's requirements and how will these partnerships be managed to ensure efficiency?

Answer. From the initial implementation of the DOD/VA Memorandum of Understanding for Health Resources Sharing for Joint Venture Construction, the intent of the agreements has been to share resources to maximize health facility utilization, improve health care delivery, and optimize cost effectiveness for both agencies. The DOD and VA plan, program, and execute joint venture construction projects only when it is in the best interest of the government to do so. Each agency must maintain a primary commitment to its own mission—providing health care services to its beneficiaries.

The Joint Venture Agreements allow the VA to stretch their dollars to cover more veteran care. When VA medical facilities share excess capacity, they are reimbursed with DOD dollars which are then spent on health care delivery to veterans. VA is able to hire additional providers with DOD reimbursements which expands capability and flexibility in health care delivery. The VA also preserves resources by utilizing DOD services through Joint Venture Agreements. Cost benefit analyses of specific agreements have shown that both DOD and VA spend less than they would in procuring services from other sources.

Partners in Joint Venture Agreements form a Joint Venture Planning Team which prepares a detailed Concept of Operations document for each specific agreement. This details a framework for the joint venture, expectations of the parties and the functional relationships. The Concept of Operations is reviewed and approved by the Assistant Secretary of Defense (Health Affairs) and the Undersecretary for Health, Department of Veteran Affairs, but ongoing management rests with the local partners, as delineated in the Concept of Operations. This allows those who are most familiar with the requirements inherent in a particular agreement to ensure the partnership remains effective and efficient.

Question. Military beneficiaries and health care providers have complained of pharmacy restrictions and inconsistencies.

As you strive for greater uniformity across TRICARE regions, please comment on how you will correct inadequate and inconsistent formularies.

Answer. Virtually all patients seen at a Military Treatment Facility (MTF) receive all medications prescribed by MTF providers at the MTF pharmacy. Often, patients who are seen in the community and present at the MTF with civilian prescriptions

are the most concerned with perceived inequities because the MTF formulary may not list every medication prescribed by the civilian provider. To avoid this situation, every attempt is made to contact the prescribing physician to encourage them to prescribe alternatives that are on the MTF formulary. Patients who are retired and under the age of 65 also have access to the retail pharmacy network and the National Mail Order Pharmacy (MOP). Medicare eligible retirees and beneficiaries may have a significant problem in obtaining needed medications because they may only be seen by an MTF provider on a space available basis, are ineligible for the contracted retail pharmacy network, and may be ineligible to use the NMOP. Certain exceptions are made for Medicare eligibles living in Base Realignment and Closure (BRAC) areas, allowing NMOP privileges.

In order to insure a more consistent and adequate formulary at all MTFs, a basic core formulary was developed and is maintained by the DOD Triservice Pharmacy and Therapeutics Committee. Drugs are added to the formulary based on the needs of the majority of the beneficiaries and cost/efficacy considerations.

A Pharmacy Pilot Program has been established for the over 65 Medicare-eligible patient under the Military Health Care Improvement Act of 2000. Pilot Program participants in Kentucky and Florida, will have access to the NMOP and the Retail Pharmacy Network. Results should be influential in shaping a more permanent and much needed pharmacy benefit for the retired military Medicare-eligible population.

Program Budget Decision number 041 provides some funds to directly support MTF formularies and the addition of new drugs to those formularies.

QUESTION SUBMITTED BY SENATOR RICHARD C. SHELBY

Question. Please provide me with an update on acute lung injury research, which has been identified by the Committee as a focus area for the DOD Medical Research programs.

Answer. Current Navy research is focused on preventing acute lung injury in casualties by improving the initial resuscitation. In particular, anti-inflammatory agents are being examined that block the activation of inflammatory cells and their migration into the lung. It is too soon to tell whether such strategies will prove effective, however early results are promising.

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

Question. As I understand, the MHS optimization plan will increase access to primary care is by using best business practices to increase the overall capacity and efficiency of the military direct care system. Currently, how much excess capacity, if any, do you currently have in your hospitals and clinics?

Answer. Presently there are no specific estimates on the amount of excess capacity at our MTFs. Even so, we do know there are facilities that could provide additional care for our beneficiaries with utilization of the MHS optimization concept.

A critical point to make is that excess capacity is not typically idle capacity. The potential increased capacity can only be gained through efficiencies and better use of providers. For example, a provider with limited support may struggle through two patients an hour, if additional ancillary support is added the number can increase to 3 to 3.5. The provider is currently working as hard as he or she can, but with additional support, a 50 percent or greater increase in capacity is created.

In another example, a provider now spends 5–10 minutes on each patient looking up data and performing administrative functions. An effective computerized patient record would reduce this to 3–5 minutes. In a 20 minute appointment, this represents a 25 percent gain that can be given back in quality time spent with the patient.

MHS Optimization is designed to improve access and enhance capacity by increasing the overall efficiency of the direct care system in delivering ambulatory care. This will be accomplished by optimizing facility design and the alignment of support staff to ensure provider productivity, by focusing on continuity of care with an assigned Primary Care Manager, by streamlining appointment templates so that greater scheduling flexibility is achieved, and through an emphasis on preventive care that will ultimately decrease utilization rates.

Question. In the facilities where you have excess capacity, how much care is being sent to the Managed Care Support contractors?

Answer. We do not have idle capacity. The Military Health System (MHS) Optimization Plan will make more effective use of our assets to achieve recoupment of workload from the Managed Care Support Contractors (MCSC). MHS Optimization is designed to improve access and enhance capacity by increasing the overall effi-

ciency of the direct care system and reducing reliance on the MCSCs. Modeling efforts are currently underway to quantify where each Military Treatment Facility (MTF) is today and where they could be if fully optimized. Each facility will then develop specific plans to reacquire workload from the MCSC.

Question. The prevalence of medical errors has commanded the attention of this Congress and the nation. What initiatives do you now use that address the issue of patient safety?

Answer. Navy Medicine has critically examined opportunities for improving patient safety. The following initiatives have been undertaken to improve quality of care:

—A systems approach to improvement using a root cause analysis tool has been implemented at all of our facilities. This tool is used to analyze all adverse events and certain close calls and requires the involvement of a multidisciplinary analysis team. Information regarding common themes is reported back to our facilities for appropriate preventive action.

—Participation in the Institute for Healthcare Improvement (IHI) Breakthrough Series to identify opportunities to implement best practices in four hospital high hazard areas: the Operating Room, Obstetrics, the Intensive Care Unit, and the Emergency Department.

—Establishment of a Birth Product Line to address the delivery of our largest patient service and implement refined clinical practices across Navy Medicine. This will include a focus on reducing variation in access to anesthesia and pain control, and a standardized approach to perinatal education.

—Promoting the use of Evidence Based Medicine with active involvement in the DOD/VA Clinical Practice Guidelines (CPG). Navy Medicine is sponsoring an evidence based CPG addressing urinary tract infections.

—Implementation of Composite Health Care II System of computerized patient records to improve documentation of care provided including the follow up of laboratory, radiology exams, and pharmacy orders.

—Deployment of the Pharmacy Data Transaction system to prevent prescription and allergy errors in a mobile population.

Collaborative efforts to take advantage of lessons learned:

—National Patient Safety Partnership Forum for Health Care Quality Measurement and Reporting Collaborative Work with the VA.

—TRISERVICE DOD Patient Safety Subcommittee recently completed the DOD Instruction, "Patient Safety Program in the Military Health System". This instruction establishes a central MHS reporting system for adverse events through the Armed Forces Institute of Pathology (AFIP) with the goal of sharing lessons learned throughout the MHS. Projected implementation date is August 2000.

QUESTIONS SUBMITTED TO LT. GEN. PAUL K. CARLTON, JR.

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

MEDICAL PROGRAMS

Question. Do you have a budget shortfall in fiscal year 2000? How much?

Answer. Yes. Air Force Medical Service core program is short by $235 million. In addition, there are a number of outstanding contract issues in the Private Sector Care that continue to be defined. These may generate additional significant bills for the Air Force Medical Service.

Question. Does your "direct care" system need supplemental funds to be fully funded in fiscal year 2000?

Answer. Yes. The Air Force Medical Service direct care system is $139 million short of being fully funded.

Question. Does the fiscal year 2001 budget as submitted reflect your full requirements?

Answer. No. Fiscal year 2001 budget is $79 million short of full funding of core requirements. In addition, there are a number of outstanding contract issues in the Private Sector Care that continue to be defined. These may generate additional significant bills for the Air Force Medical Service.

Question. Please provide a list of your fiscal year 2000 and fiscal year 2001 "unfunded requirements."

Answer.

[In millions]

	Fiscal year 2000	Fiscal year 2001
Direct Care Operation	$20	.....
Real Property Maintenance	72	$15
Equipment	23	23
Base Operating Support	.....	17
Education & Training	.....	15
TRICARE Senior Prime	15	4
Info Mgmt/Info Tech	7	.....
Dental Readiness	.....	5
Primary Care Training	2	.....
Known Private Sector Care	96	.....
Ill-Defined Private Sector Care	([1])	([1])
Total	235	79

[1] To be determined.

MEDICARE SUBVENTION

Question. Regarding the Medicare subvention demonstrations, the Subcommittee is aware that the current negotiation with HCFA may actually cost DOD money. Can you please explain?

Answer. Under this demonstration, DOD is paid a lump-sum annual amount, called a capitated rate, for each enrollee to provide medical care. This rate is approximately 83 percent of the amount HCFA pays the average civilian Medicare + Choice health maintenance organization (HMO) for a comparable beneficiary. This reduced figure was derived from a variety of factors based on pre-existing DOD programs and resources as well as HCFA's intent for this program to be cost-neutral to HCFA for these enrollees.

DOD receives capitated payments based strictly on enrollment. Even though our sites are nearly at 100 percent enrollment capacity, DOD is still not breaking even. Certain benefits, such as skilled nursing care, durable medical equipment and home health care, are Medicare requirements which are not normally covered under TRICARE. Payments to DOD by HCFA are first used to cover these expenses as well as the cost of civilian care obtained by demonstration participants. This has left no money to pass on to the MTFs to cover their in-house costs of providing care to these patients.

The primary reason DOD is losing money on this demonstration is the higher-than-anticipated cost of providing civilian medical care for enrollees. There are several causes for this problem. First, enrollees appear to be using more medical services than anticipated. The reasons for this are unclear but are likely related to the lower cost of obtaining care under this demonstration than under traditional Medicare, including most Medicare + Choice plans. In addition, it is likely the space-available care they obtained in our MTFs only represented a portion of the care they received; many beneficiaries who could not receive care consistently from the MTF and needed to rely on civilian care to fill the gaps are now afforded consistent access to the MTF at no cost.

The second reason for the high cost of civilian care is under my control. Frankly, it appears we are paying for civilian care we could provide in-house in too many cases. I'm pressing hard to re-engineer our direct care system to optimize how we use our resources. Specifically, by improving the support for my providers, I expect they will be able to provide care for more patients in a timely manner. This will allow us to recapture much of the work currently sent to the civilian sector, including care for TRICARE Senior Prime enrollees. In addition, these efforts will help us provide the right care at the right time, reducing enrollees' needs for medical services in general.

Finally, the general shift of our MTFs to smaller, outpatient-focused facilities means more care must be obtained from the civilian sector than in the past. While a less significant issue at our medical centers (where the majority of care can still be provided in-house), this shift is definitely a concern at our smaller facilities. The discounted reimbursement from HCFA is lower than what the facilities must pay for civilian care.

Even with our planned improvements in efficiency, I expect the current arrangement with HCFA to continue to cost DOD money. The absence of cost shares in the direct care system combined with broader benefits under TRICARE will continue to mean that we cannot operate this program in the black under the current arrangements. I would anticipate any expansion of this demonstration into more sites with small MTFs will operate at a substantial loss unless the reimbursement arrangements are changed.

QUESTION SUBMITTED BY SENATOR PETE V. DOMENICI

CLOVIS AND CANNON—MEDICAL FACILITY

Question. It seems that there is real potential for another joint facility at this location. I wanted to ask for your assistance investigating this possibility. Should it prove a viable concept, I would ask for your support getting a cooperative arrangement underway as soon as possible.

Answer. The AFMS is eager to explore novel arrangements with local civilian communities to provide medical care for our beneficiaries. In the case of Cannon and the Clovis/Portales communities, it appears there is adequate inpatient care capability at the 106-bed Plains Regional Hospital in Clovis, about ten miles from Cannon. Plains Regional Hospital averages 60–70 beds occupied at any given time with approximately 20 of those beds occupied by Cannon military beneficiaries. The impact of a new medical facility in Portales and the resulting changes in referral patterns on Cannon, Clovis, and Portales would need careful evaluation. The Air Combat Command Surgeon and Cannon Hospital Commander agree that more study and data will be needed to determine the most appropriate sharing agreement in the Clovis/Portales area.

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

QUALITY CARE FOR MILITARY BENEFICIARIES

Question. How will you maintain quality while increasing access?

Answer. This is one of our main foci. Our civilian counterparts in primary care have been seeing 4–6 patients per hour without problems or quality-of-care concerns. We have investigated this and agree with your assessment that we cannot reach beyond 2–3 patients seen per hour, given the administrative responsibilities we have placed on our providers. Our new system is focused on Population Health and Prevention. The system is being restructured to form primary care teams, ensuring that primary care providers are appropriately supported by nurses, medical technicians, and health service managers. In addition to this restructuring, we have begun the training of these teams to function more effectively and efficiently. Realigning structure without changing process will not produce success. The beginning of process change is education. The Air Force Medical Service has trained over 900 primary care personnel from over 75 medical treatment facilities (MTFs) in methods to function more effectively. This training included nurse triage, technicians providing prevention counseling, and health service managers retrieving data to make the system more effective. This will free up the providers to do what they do best: provide high-quality medical care with continuity. This has initially been very successful, judged by feedback from front-line providers. There is also a monitoring plan in place to ensure this supportive effort is sustained. MTFs which have implemented the training have surpassed 25 appointments per day while improving customer satisfaction.

PARTNERSHIPS

Question. What impact will these agreements have on the VA's requirements and how will these partnerships be managed to ensure efficiency?

Answer. I cannot speak for the Department of Veteran's Affairs regarding the impact of partnering agreements on their requirements. Our Air Force/DVA joint venture facilities are long-term commitments on the part of both partners. Both organizations preserve their overall organizational autonomy as appropriate at each location. As each of the three joint ventures developed, decisions were made about the appropriate organizational arrangement to meet the mission requirements of the Air Force and the VA. At the facility in Albuquerque, New Mexico, the medical group commander works closely with the VA Medical Center administrator to ensure efficient use of resources to provide beneficiaries of both organizations quality care in a timely manner. At Nellis AFB in Las Vegas, the medical group commander is dual

hatted as the Mike O'Callaghan Federal Hospital Chief Executive Officer. At our newest venture in Alaska, there is a central Executive Management Team that directs and manages development and execution of the joint venture. Each joint venture is designed to meet specific local needs, mission requirements, and avoid costs.

In addition to joint ventures, the Air Force actively supports combined DOD and VA programs. One example is the joint development of clinical guidelines. Working together, representatives from the VA and DOD have used their unique skills and talents to establish a program dealing with selected high cost, high volume diseases. The group worked jointly to select guidelines that will enhance continuity of care, reduce variability and facilitate cost effective practices for both agencies. The joint group selected the guidelines, worked on educational materials for providers, and is evaluating the new guidelines. Implementation of the guidelines will be Service specific. Each clinical guideline will be deployed with complementary "tool kits" and corresponding metrics.

With your support, we will continue to work with the VA to identify and implement additional sharing opportunities in the future.

PHARMACY RESTRICTIONS AND INCONSISTENCIES

Question. As you strive for greater uniformity across TRICARE regions, please comment on how you will correct inadequate and inconsistent formularies.

Answer. This is a triservice issue and is being addressed through TMA in conjunction with the DOD Pharmacy Board of Directors. Several specific steps have been taken to correct the inconsistencies among direct care (Military Treatment Facility) formularies and among sources of the pharmacy benefit: National Mail Order Pharmacy, retail network pharmacies and direct care pharmacies. Items under review for approval are:

1. Establish policy where medications requiring prior authorization are consistent across the MHS (both purchased and direct care).
2. Establish policy where any quantity limits on medications are in effect and consistent across the MHS.
3. Expand the basic core formulary (BCF) for direct care pharmacies to provide more consistent availability of medication. The DOD Pharmacy and Therapeutics Committee approved twelve additional high use medications to the BCF January 26, 2000. The DOD Pharmacy and Therapeutics Committee in conjunction with the DOD Pharmacoeconomic Center will continue to review the over 200 classes and subclasses of medication and recommend expansion of the BCF on a bimonthly basis as additional direct care funding becomes available.
4. Advances in Medical Practice (AMP). Approval of disbursement of funding for 32 high cost, unique medications through AMP is pending. Direct care facilities have begun providing these medications in anticipation of reimbursement through AMP.

The point of contact for the Uniform Pharmacy Benefit is Captain Charlie Hostettler, TMA, 703–681–1740, ext. 5620. Captain Hostettler can provide additional information on specific actions being taken to ensure a consistent, uniform pharmacy benefit.

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

MEDICAL FACILITIES

Question. As I understand, the MHS optimization plan will increase access to primary care is by using best business practices to increase the overall capacity and efficiency of the military direct care system. Currently, how much excess capacity, if any, do you currently have in your hospitals and clinics?

Answer. Since the beginning of the Managed Care Support Contracts, the Military Treatment Facilities (MTFs) have been trying to work within the parameters of access, core proficiencies and contractor relationships. As a result, the emphasis was in making the contracts work, and understanding the impacts of each outsourcing decision. As we have now matured, we find that a portion of the care being provided by the contractors is for the type of services offered within the MTFs; in fact is directly competing with our MTF service lines. This is the workload we are targeting to recapture through our optimization efforts.

We have not had an adequate view of excess capacity in our facilities. The Air Force Medical Service has recently constructed a data capture file that displays the type of services by catchment area being accomplished by the contractors and the MTFs. This data, along with our optimization strategies, will identify the excess capacity of facilities and provide the basis for decisions about the type and quantity of care to recapture into the MTFs.

Question. In the facilities where you have excess capacity, how much care is being sent to the Managed Care Support contractors?

Answer. The amount of contractor care in catchment areas is not effectively measured as yet. The Air Force Medical Service has recently constructed a data capture file that displays the type of services by catchment area being accomplished by the contractors and the MTFs. This is a service-wide coordinated effort to obtain and analyze appropriate data to make decisions about the type and quantity of care to recapture into the MTFs.

Question. The prevalence of medical errors has commanded the attention of this Congress and the nation. What initiatives do you now use that address the issue of patient safety?

Answer. The AFMS is working on a number of fronts to maximize patient safety. There are several initiatives in pharmacy and medication-dispensing processes. Medical treatment facilities (MTF) use the Composite Health Care System (CHCS) computerized pharmacy order-entry system that eliminates illegible handwriting. The pharmacy staff reviews each patient's electronic profile for allergies, drug interactions, therapeutic overlaps, and duplicate medication therapies before dispensing any prescription. The Pharmacy Data Transaction Service (PDTS), that integrates MTF patient data with TRICARE network retail pharmacies, and the National Mail Order Pharmacy (NMOP) will be deployed soon. The PDTS ensures patients' full medication histories are available wherever they receive their medications.

Two Air Force pharmacies, Patrick AFB and MacDill AFB, were designated test sites to evaluate pharmacy robotics for outpatient dispensing. These systems are designed to assist in filling and checking new and refill prescriptions. The prescription is entered into the CHCS computer system where unique identification numbers are assigned and a bar code is generated to track prescriptions. The computerized robotic system automatically counts, labels, and fills the prescription. Medications are verified before dispensing at a checking station. At pickup, the patient receives drug information sheets and may request pharmacist counseling.

The computerized systems have totally streamlined the prescription process and freed pharmacy personnel for additional patient-focused activities. Patients' waiting times show a documented decrease by as much as 60 percent, while prescription volumes continue to increase. The safety features of these systems represent the latest technological advances in pharmacy dispensing. Before implementation at Patrick AFB, over 50 percent of medication errors involved refills; now they have dispensed over 250,000 refills with a remarkable "zero errors."

On our inpatient units, decreasing the stock medication administration system has reduced medication administration errors in our facilities. The unit-dose system has been widely implemented throughout our facilities.

Each MTF has a Safety Committee with facility-wide membership. This committee analyzes key metrics such as medication errors, patient falls, and other unusual incidents for trends. Monthly environmental safety checklists are conducted in every unit and reports sent to the facility's safety officer and reviewed by the safety committee. Identified trends and discrepancies are corrected as soon as possible. The Safety Committee is accountable to the MTF's Executive Committee.

When an event occurs, the Air Force fully complies with the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) Sentinel Event reporting to include Root Cause Analysis (RCA) of each event. Copies of the RCAs are sent to the AF Quality Division where lessons learned are shared with other AF facilities.

In addition to the above reporting, the Air Force initiates its Medical Incident Investigation (MII) process when a sentinel event occurs. The MII multidisciplinary team is composed of clinical experts not assigned to the MTF where the event occurred. Its purpose is to promote patient safety and to improve care at the MTF and throughout the AF. Team members review human factors (training, competency, fatigue) as well as operational and system factors (communications, equipment, supervision). The team briefs the facility commander prior to leaving and sends a report to the Surgeon General via the respective MAJCOM. Lessons learned in this process are also shared with other facilities via Notice to Airmen (NOTAMS)

The Air Force is fully engaged with members participating in the DOD Patient Safety Working Group sponsored by the Quality Interagency Coordination Task Force (QuIC). This multidisciplinary group is reviewing patient safety issues in the military health system and creating the confidential error reporting system requested by President Clinton. Our Air Force team members have taken the initiative to develop a pilot project to track errors within the Air Force Material Command.

In addition to the above, the Air Force is funding three teams from its medical centers to participate in the QuIC Breakthrough Series. The Institute on Health Improvement (IHI) is facilitating these teams as they review our current systems for

opportunities to reduce errors in high hazard areas such as the emergency departments, operating rooms and intensive care units.

QUESTIONS SUBMITTED TO COL. DEBORAH GUSTKE

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

NURSE CORPS SKILL SUSTAINMENT

Question. How have the three Nurse Corps (active and reserve components) worked together on skill sustainment necessary to meet peacetime and contingency requirements?

Answer. There are multiple Triservice and AC/RC initiatives to meet this challenge. The AMEDD Center and School at Fort Sam Houston, TX sponsors triservice classes preparing officers in nuclear and chemical casualty management and trauma care. Multiple exercises are held each year at the Joint Readiness Training Center (JRTC), Fort Polk, LA and reserve training sites (Fort Parks, CA, Fort McCoy, WI and Fort Gordon, GA) which test the reserve ability to backfill critical medical active duty shortfalls, and the active and reserve ability to provide care, evacuate patients, and coordinate command and control procedures. Exercise Roving Sands at Fort Bliss, TX each year combines the efforts of medical units in the Army, Navy, NATO Forces, USAR, and NG in providing patient care in combat situations, evacuating patients, and testing command and control interoperability. Golden Medic exercises are conducted at three reserve sites each year and combine triservice elements in testing patient evacuation and command and control procedures. In the overseas areas, Operation Bright Star in Egypt, and Operation Team Spirit in Korea, test our joint readiness capability. Furthermore, in all of these exercises we test the ability of our reserve forces to mobilize and backfill our medical treatment facilities.

NURSES IN EXECUTIVE OR COMMAND POSITIONS

Question. How many nurses do you have in executive or command positions?

Answer. Currently, there are 4 Army Nurses serving as Commanders of Level 1 Medical Treatment Facilities: Moncrief Army Community Hospital, Fort Jackson, SC, USA MEDDAC, Fort Drum, NY, Reynolds Army Community Hospital, Fort Sill, OK, and Heidelburg MEDDAC, Heidelburg, Germany. There are 6 additional Army Nurses slated to take command of Level 1 MTF's in the summer of 2000. With regard to executive positions within the AMEDD, Army Nurses are and have been in the past assigned to various DOD, DA, OTSG, and MACOM staff positions.

LEADERSHIP TRAINING PROGRAMS FOR NURSES

Question. What types of leadership training programs are available or are being planned?

Answer. Currently, there are several leadership training programs within the AMEDD and programs specific to the Army Nurse Corps. AMEDD Leadership programs attended by Army Nurses include: Physicians in Management, Executive Skills Conference and the Interagency Healthcare Executive Course. Courses specifically for the Army Nurse Corps include, the Head Nurse Leader Development Course, the Advanced Nurse Leader Development Course, and the Wharton School of Business Executive's Course.

QUESTIONS SUBMITTED TO REAR ADM. KATHLEEN MARTIN

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

Question. How have the three Nurse Corps (active and reserve components) worked together on skill sustainment necessary to meet peacetime and contingency requirements?

Answer. The following are examples of Tri-Service efforts within the Nurse Corps to sustain the skills necessary to meet peacetime and contingency requirements:

—The Joint Trauma Training Center (JTTC) initiative at Ben Taub General Hospital in Houston is an example of Tri-Service cooperation in trauma training. The JTTC provides Military Trauma Training Teams (MTT's) with high volume, real trauma treatment experience that can only be gained at an inner-city, Level 1 Trauma Center, in order to enhance combat trauma skills and medical readiness.

—An Army Reserve unit drills at Naval Hospital Great Lakes and Navy Hospital Corpsmen drill with the Army unit.
—The Navy and Army rotate nursing staff between National Naval Medical Center Bethesda, Maryland and Walter Reed Army Medical Center, Washington D.C.
—The Navy and Air Force Nurse Corps are currently involved in a cooperative effort to provide increased opportunities for obstetrical nurse training for both services.
—The Navy sends nurses to the Army's Colonel C.J. Ready course, an annual Joint Readiness Course for military nurses.
—Fleet Hospital training sets at Naval Hospitals Camp Lejeune, Pensacola and Bremerton provide ongoing opportunities for active and reserve nurses to deliver patient care in the actual Fleet Hospital setting in order to sustain critical patient care skills.
—Ongoing exercises occur on the hospital ships USNS *COMFORT* (T–AH 19) and USNS *MERCY* (T–AH 20) in the form of formal exercises such as Kernel Blitz and Roving Sands as well as "dock trials".

Question. How many nurses do you have in executive or command positions?

Answer. 24 active and reserve component nurses serve as commanding officers, executive officers, or as deputies or chiefs of staff at military medical treatment facilities, lead agent staffs, and education commands. Nurse Corps officers command two of our active duty Fleet Hospitals. Reserve Nurse Corps officers command three of the eight casualty receiving hospital units. Reserve and active duty officers serve throughout the entire breadth of headquarters commands.

Question. What types of leadership training programs are available or are being planned?

Answer. The following leadership programs are available to Navy Nurse Corps officers: Navy Leadership Development continuum; Interagency Institute for Federal Healthcare Executives; Flag Officer CAPSTONE course; TRICARE CAPSTONE Course; Management Development Course; Shore Station Management Course; Prospective CO/XO Course in Newport, RI; Strategic Medical Readiness Contingency Course; Wharton School-Johnson and Johnson Leadership program; Annual Surgeon General's Leaders Conference; Annual Navy Nurse Corps Leadership Conference; and Executive Medical Education (EME).

QUESTIONS SUBMITTED TO BRIG. GEN. BARBARA C. BRANNON

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

NURSE CORPS

Question. How have the three Nurse Corps (active and reserve components) worked together on skill sustainment necessary to meet peacetime and contingency requirements?

Answer. As the AFMS continues to rightsize, the number of clinical training platforms is steadily decreasing, making maintenance of clinical skills and meeting readiness training requirements a significant challenge. Air Force Nursing Services is committed to creating efficient and effective programs for nursing personnel to gain and maintain critical readiness skills. Air Force nursing consultants recently revised Readiness Competency Skills lists to reflect tasks nurses perform in contingency environments. Active duty, reserve, and guard nursing personnel will use these lists to assess their clinical capabilities and training requirements. Programs are already being developed to meet identified needs.

TopSTAR, Sustainment Training to Advance Readiness, expanded to a second location last year. Travis Air Force Base opened a TopSTAR unit in addition to the original site at Wilford Hall Medical Center. TopSTAR is currently used by active, reserve and guard personnel to validate clinical skills and it is also being evaluated as a training platform for nursing personnel to update their skills prior to assignment overseas.

Exceptional training opportunities also occur during medical exercises and real-world contingencies. Medical exercises in Asia and within the Continental United States, and contingency operations in Central America, Asia, and Europe, allowed active duty, reserve, and guard personnel to test their skills. These deployments were also particularly helpful in identifying tasks that required follow-on training.

Two other training success stories were the Joint Military Trauma Training program at Ben Taub General Hospital in Houston, Texas, and the Jefferson Barracks Trauma Training pilot program in St. Louis, Missouri. The Ben Taub clinical rota-

tion for tri-service military teams provided four times the patient admissions, blunt trauma cases, and penetrating trauma cases than experienced by teams at Wilford Hall Medical Center during the same time frame. At the Jefferson Barracks pilot program, similar training opportunities are potentially available to provide our active, reserve, and guard medics excellent experience in trauma management.

Question. How many nurses do you have in executive or command positions?

Answer. Active duty Air Force nurses currently command 32 percent (24 of 75) of our medical groups and 18 percent (50 of 271) of our squadrons. In addition, 9 percent (7 of 75) of our deputy medical group commanders are nurses. The first nurse to serve as a Command Surgeon, a Reserve nurse at the Air Force Reserve Personnel Center, was appointed last year. Nurses also command 29 percent (21 of 72) of the Air Reserve medical squadrons and 15 percent (15 of 101) of Air National Guard medical squadrons.

There is a chief nurse assigned to every facility who is a member of the executive team. A senior nurse is also assigned to each of the nine Major Commands on the medical leadership team.

Question. What types of leadership training programs are available or are being planned?

Answer. Nurses attend a Squadron Commander's Course sponsored by the gaining MAJCOM and the Group Commander's Course upon selection to those positions. Nurses are also eligible to attend Physicians in Management seminars, the annual Air Force Medical Service Senior Leadership Symposium, the Interagency Institute for Federal Healthcare Executives, and Medical Capstone.

In addition, the annual Nursing Executive Leadership Symposium targets Chief Nurses and enlisted nursing superintendents for attendance. To provide more formalized training, the Air Education and Training Command was recently tasked to explore the feasibility of an intermediate executive skills course that would include break-out sessions for newly appointed Chief Nurses.

SUBCOMMITTEE RECESS

Senator INOUYE. The subcommittee will meet in 3 weeks, on Wednesday, March 29, at 10 o'clock to review Air Force programs.

Thank you very much.

[Whereupon, at 12:10 p.m., Wednesday, March 8, the subcommittee was recessed, to reconvene at 10 a.m., Wednesday, March 29.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2001

WEDNESDAY, MARCH 29, 2000

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:39 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Cochran, Bond, Hutchison, Inouye, Leahy, and Dorgan.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE AIR FORCE

OFFICE OF THE SECRETARY

STATEMENTS OF:

HON. F. WHITTEN PETERS, SECRETARY OF THE AIR FORCE
GEN. MICHAEL E. RYAN, CHIEF OF STAFF, U.S. AIR FORCE

OPENING STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. We are sorry for the delay. We appreciate your courtesy. We have had an interesting morning here going through some of the background in our closed session.

First, General Ryan, let me thank you for taking the trip to Alaska this last weekend. Reports of your presentation are just overwhelming and we are delighted you were up there. That is a tradition we have had and you, in your position, really made a great impression on our people. Thank you. We thank you very much.

General RYAN. Thank you, Mr. Chairman.

Senator STEVENS. In this open session, we want to welcome your assessment of the progress made to fix the retention challenges in the Air Force, and we are also looking at the threats faced by our tactical forces and the development of the F–22 and the Joint Strike Fighter programs. We would like to see if we can get a report from you on the substantial funds that we have already made available to reconstitute the Air Force following the war in Kosovo. It is really our feeling that we should get an across the board sort of estimate of where you are now.

I do thank you, Secretary Peters, for appearing here also.

Senator Inouye, you have an opening statement? I will just put the balance of mine in the record.

[The statement follows:]

PREPARED STATEMENT OF SENATOR TED STEVENS

Let me begin by welcoming both Gen. Ryan and Sec. Peters back before the subcommittee.

Earlier this morning, members of the committee were provided an update, in closed session, on Air Force tactical aircraft programs.

That presentation addressed both the threats faced by our tactical forces, and development of the F–22 and Joint Strike Fighter programs.

As we shift to open session, the committee welcomes your assessment of progress made to fix the retention challenges facing the Air Force.

In addition, the Congress add substantial funds to reconstitute the force following the air war in Kosovo, and reverse the downward trend in mission capable rates. We would appreciate a status report on these efforts.

Finally, I want to thank Gen. Ryan for appearing at the annual military appreciation dinner in Fairbanks on Saturday.

Your appearance was a great boost to the Air Force and Army communities in Fairbanks, and your remarks were extremely well received by everyone.

Mr. Secretary, Gen. Ryan, your prepared statements will be made part of the record.

Sen. Inouye, would you care to make an opening statement?

OPENING STATEMENT OF SENATOR DANIEL K. INOUYE

Senator INOUYE. Thank you very much. I wish to join you in welcoming Secretary Peters and General Ryan.

I note that the budget request increases the fiscal year 2001 by $4 billion, but I am certain all of my colleagues will agree that, though it is significant, it is not as much as we would like to see. I note that you have problems in, well, recruiting and retention. Pilots are still leaving the force and we must continue to do everything we can to turn these indicators around. So I can assure you that I will do my best to work with my colleagues to bring this about.

Mr. Chairman, I ask that the full statement be made part of the record.

Senator STEVENS. Yes, sir.

[The statement follows:]

PREPARED STATEMENT OF SENATOR DANIEL K. INOUYE

Mr. Chairman I want to join you in welcoming our Air Force leaders here today.

The fiscal year 2001 budget request for the Air Force would increase funding for the service by approximately $4 billion.

This increase in funding is significant, but not as much as many of us would like to see.

While I understand you are seeing some positive results in retention, unfortunately, many problems remain.

Mission capability rates remain down.

Recruiting goals are going unmet.

Pilots are still leaving the force in large numbers.

We simply must do all that we can to turn these indicators around.

Mr. Chairman, I am sure you agree with this sentiment. We need the support from our colleagues to keep funding levels up to be successful.

Again, General Ryan, Mr. Secretary, we welcome you back before the committee today and look forward to your testimony on these and other important matters.

Senator STEVENS. Senator Bond.

STATEMENT OF SENATOR CHRISTOPHER S. BOND

Senator BOND. Thank you very much, Mr. Chairman. Good morning, Mr. Secretary, General Ryan.

I would just make a brief statement. You might never guess what it is about, but I am very encouraged by your statements that

you intend to put people first, and I understand the support this Congress has given in the area of pilot retention shows signs of turning around what was not a good trend in this area.

While pay and benefits help, they are very important, I feel it is also vitally important that we have a clear strategy for the employment and deployment of our forces overseas. A lack of a clear entry and exit strategy has had a detrimental effect on the number and length of deployments and the resultant stress that is placed on the active and reserve forces and their families.

I also understand lack of adequate funding of contingency operations is placing undue burdens on our forces as we raid accounts to support ongoing operations for which we have not had adequate budgets.

I also know and support your priorities, the F–22, the C–17, but I do want to put in a word for the F–15E. Let me remind you that our most recent overseas engagement, Operation Allied Force, was a major theater conflict, assets deployed to Europe from all over the world. At its conclusion you determined that our efforts had a profound impact on people and equipment that would enable the Air Force to be relieved from normal deployment rotations for 6 months to be able to reconstitute.

The work horses were the F–15C's and F–15E's from Lakenheath. Four of six enemy aircraft encountered were downed by F–15's and the F–15E was the only fighter able to operate around the clock in all weather conditions, using the AGM–130 precisely to target and destroy high-value enemy targets. No other fighter in history as far as I know has turned in this kind of remarkable performance with associated readiness and safety.

Because of higher utilization rates of our assets, it appears to me to be sound judgment to maintain F–15E production at a very slow rate in order to maintain and to replace an adequate number of front-line strike fighter aircraft until we have in production the next generation strike fighter in significant numbers.

We also need to pursue foreign military sales and, while we had a setback in Greece, we understand and appreciate your support in moving forward to at least explore the possibilities that Israel and Saudi Arabia may be purchasing. We need to make sure that we have a good industrial base to support the men and women who are risking their lives.

I have a longer statement that I will submit for the record. I look forward to discussing some of these issues with you further during the question and answer period.

Thank you, Mr. Chairman.

Senator STEVENS. Yes, sir.

[The statement follows:]

PREPARED STATEMENT OF SENATOR CHRISTOPHER S. BOND

Good morning Secretary Peters and General Ryan. Thank you for coming today. Please allow me to make a brief statement before addressing the questions I have for both of you.

I am encouraged by your statement that you intend to put people first and I understand that the support this Congress has given in the area of pilot retention shows signs of turning around what was not a good trend in this area. While pay and benefits help I fear it is also vitally important we have a clear strategy for employment of our forces overseas. Our lack of clear entry and exit strategies has had

a detrimental affect on the number and length of deployments and the resultant stress that is placed both on our active and reserve forces and their families.

I also understand the lack of adequate funding for contingency operations is placing undue burdens on our forces as we raid accounts to support ongoing operations for which we have inadequately budgeted.

This must not continue if we are to adequately address our training and modernization needs and I stand ready to assist you in getting the necessary support.

The F–22 is clearly one of your highest priorities along with increasing our logistical airlift capacity with acquisition of the C–17, and I support you in your efforts to field the best equipment available. As you know we have differed on the issue of priorities in one area, and that is the F–15E and its continued production.

First let me remind you our most recent overseas engagement, Operation Allied Force, was a major theater conflict. Assets deployed to Europe from all over the world to support our efforts. At its conclusion you determined that our efforts had such a profound impact on people and equipment that the Air Force should be relieved from normal deployment rotations for six months to be able to reconstitute. The fighter workhorses of the conflict were the F–15Cs and F–15Es from the 48th Fighter Wing, Lakenheath Air Base, England.

Four, of six, enemy aircraft encountered were downed by F–15s, and the F–15E was the only fighter able to operate around the clock in all weather conditions using the AGM–130 to precisely target and destroy high value enemy targets on the ground. No other fighter in history has turned in this kind of remarkable performance with its associated readiness and safety record.

Because of the higher utilization rates of our assets as evidenced by the operational tempo of recent years it has been my intention to maintain F–15E production at a snails pace in order to maintain an adequate number of frontline strike fighter aircraft until we produce the next generation strike fighter in significant numbers.

Our nation's interests are also well served by the pursuit of Foreign Military Sales to Allied Nations. While we endured some setbacks with the decision on the part of Israel and Greece not to pursue FMS we were aware of credible evidence to suggest Saudi Arabia and South Korea might yet purchase the F–15.

We understand that F–15 production cannot continue indefinitely but we also understand that FMS will help maintain our critical industrial base and its highly skilled workforce. As our defense industries continue to consolidate it is critical that we maintain as much of our remaining skilled workforce as possible because we will not be able to reconstitute these assets at a moments notice, just as we cannot rapidly recreate our pilot base once it is threatened or lost.

We are both accountable for maintaining a core of skilled pilots and personnel so that when needed our forces can respond with devastating precision. You take this responsibility seriously and I commend you for it.

Likewise, we both have a profound responsibility to protect our manufacturing base so that when called upon our two sole tactical fighter companies, Boeing and Lockheed-Martin, will be ready to quickly and reliably respond to our equipment needs. How much is enough? That is a question that is difficult to answer in these uncertain times but one thing is clear. If we have the potential to support our critical manufacturing base with Foreign Military Sales we are remiss if we do not do all we can to secure them. With the real potential to secure FMS we moved to continue F–15 production in fiscal year 2000 and will continue to try and secure funding for fiscal year 2001.

In the meantime we are doing all we can to determine the viability of FMS to Saudi Arabia and South Korea. Your support of our efforts is essential!

It is not always possible for us to agree. That is the nature of our form of government and in part what our founding fathers intended when they designed this great nation. But in the case of continued F–15E production I believe we both share a common responsibility to ensure our two remaining manufacturing bases, Lockheed-Martin and Boeing, remain as strong as possible, just as we both share a common responsibility to ensure we have sufficient numbers of pilots and other skilled personnel to field the best Air Force possible.

I assure you that I am as committed as any of my colleagues in ensuring the next battle we face will not be a fair fight. Your programs are of great interest to me, and the men and women whom you serve can count on my support.

Secretary Peters, General Ryan I look forward to discussing these and other important defense issues with you and your staff as our hearing process continues. Again, welcome!. You serve our nation's defense department faithfully and I wish you well in your continued endeavors.

Senator STEVENS. Senator Dorgan.

STATEMENT OF SENATOR BYRON L. DORGAN

Senator DORGAN. Mr. Chairman, just briefly, let me thank the Secretary and General Ryan for being here again. I will not provide a lengthy statement except to say that, while I support the F–22 and the Airborne Laser (ABL) and a range of other programs that I think we should fund adequately, I am concerned about a couple of issues that I will ask about during the questioning round.

One is the F–16 aircraft that are virtually out of time in the 119th Fighter Wing. The estimate is to replace them in 2007. I do not think that is going to work. The underfunding of the B–52 bomber and the stretch-out of the ABL—there are a series of difficulties that I want to ask about, but I will do that during the question round. I am anxious to hear the testimony.

Senator STEVENS. Yes, sir. Thank you.

PREPARED STATEMENT OF SENATOR CRAIG

Senator Craig has also submitted a statement which we will include in the record at this point.

[The statement follows:]

PREPARED STATEMENT OF SENATOR LARRY E. CRAIG

Mr. Chairman, thank you for allowing me to submit this statement and question for the record to the Air Force during this subcommittee hearing. I would like to thank Secretary Peters and General Ryan for the support the Air Force has given Mountain Home Air Force Base and the men and women, who day-in, day-out are prepared to lay their lives on the line for our country.

The 366th Wing is the Air Force's premier air expeditionary wing. The wing blends the firepower of various weapons systems to form a single, cohesive aerial strike force. As you know, the Gunfighters are a composite force already built and trained, ready to fight, at a moments notice, anytime, anywhere.

Mountain Home is also home to the Aerospace Expeditionary Forces Battlelab, which identifies and rapidly proves the value of innovative ideas for the Commander In Chiefs' employment of Aerospace Expeditionary Forces throughout the spectrum of warfare. With all of this in mind, Mountain Home Air Force Base is key to the Air Force being able to implement the Expeditionary Aerospace Force structure.

I would also like to thank you for your support of the Enhanced Training Range in Idaho. This range will provide realistic, flexible, and efficient training scenarios while minimizing environmental impacts associated with readiness training. Not only will the Air Force save approximately $30 million in the first three years of operation, but it will allow the men and women of the 366th Wing to prepare to fight the next war, not the last, with fewer combat losses through improved training. I commend the Air Force in working diligently with the Federal Aviation Administration, the Federal Department of Transportation, the Bureau of Land Management, Idaho State officials, and local land users to ensure that all concerns were addressed and effectively handled. I would encourage you to let me know if I can be of assistance to the Air Force with any other issues relating to the final stages of implementation.

I was pleased to see the announcement by the Air Force that Mountain Home Air Force Base was being considered for bed down of the F–22 Raptor. I hope that the Air Force would seriously consider this option. As I understand the Expeditionary Aerospace Force implementation, Mountain Home Air Force Base would be the most logical choice for bedding down the first operational F–22 units. Not only is the 366th one of the first to deploy anywhere in the world when a conflict erupts, it is also home to the Aerospace Expeditionary Forces Battlelab, and will have the newest and best day-to-day training ranges in the United States.

Senator STEVENS. Gentlemen, proceed as you wish. Thank you.

Mr. PETERS. Mr. Chairman, Senator Inouye, thank you for the opportunity to be here this morning. We have submitted a lengthy posture statement that we would ask to be put in the record.

Senator STEVENS. They are both in the record to start with.

Mr. PETERS. And if I may, just to give then a very short opening. Our goal in developing the fiscal year 2001 budget was to provide a balanced, integrated, and time-phased plan that supports our evolution into an Expeditionary Aerospace Force and which also implements key lessons learned from Kosovo. Over the last 18 months, the Air Force has shown that its investments in stealth, precision munitions, unmanned vehicles, and improved intelligence, surveillance, and reconnaissance systems have matured into really unparalleled combat power.

EXPEDITIONARY AEROSPACE FORCE

For the first time in history, we have deployed a significant number of Global Positioning System (GPS)-guided munitions in combat and demonstrated an all-weather, day-night precision strike capability far more lethal and accurate than ever before possible. We also have deployed our new Expeditionary Aerospace Force. Each of these 10 forces represents a fundamental restructuring of the way the Air Force does its business.

By structuring our people and assets as 10 rotational forces, we ensure that the majority of our forces are trained to meet our obligation to be ready on very short notice to fight and win two nearly simultaneous major theater wars. At the same time, we have two very highly capable forces deployed or trained and ready to deploy at any time for contingency operations and to support the increasing need for a persistent forward presence in the aftermath of regional contingency operations.

We are, as we speak, fielding forces five and six. Each of these is made up of combined active duty, reserve, and guard units. By rotating our forces this way, the Air Force has provided a stable and predictable deployment schedule for all of its forces, addressing one of the most serious complaints from our airmen, namely the high operational tempo. This structure has, in turn, allowed the guard and reserve to participate in deployments in larger numbers, cutting the work load on the active force.

As we continue to implement the Expeditionary Aerospace Force concept, we should be able to reduce the time all of our airmen are deployed, as well as the workload at home when units are deployed.

RECRUITING AND RETENTION

Last but certainly not least, with the help of this committee and Congress we are addressing serious pay, personnel, modernization, and readiness challenges. Let me just touch on a few highlights. First, we are, in fact, seeing increasing retention in our enlisted force. In the month of February, for example, we retained almost 60 percent of our first-term airmen against a goal of 55 percent. This is still early, but we are doing better and we hope it continues.

Thanks to the new pilot bonus program, our pilot shortage, once predicted to be about 2,000 pilots short this year, will, we think, bottom out at about 1,200 pilots and should go back up to about 600 pilots short at the end of fiscal year 2001. But again, this is based on early trends which will have to continue.

SPARE PARTS

We do, in fact, have an increasing inventory of spare parts, thanks to the funding that we have received from this committee and the rest of the Congress. Our back orders for spare parts are down by over 50 percent from just 1 year ago and our mission capable rates appear to be stabilizing.

On the other hand, on our recruiting programs, we are still not doing as well as we hoped. We plan to have a major blitz here at the end of the fiscal year, but it looks like we are going to have great difficulty meeting our requirements on recruiting.

MODERNIZATION

Finally, in this budget we have in place modernization programs to refurbish or replace virtually all of our aircraft and space systems, and we are also making investments in new capabilities, such as Global Hawk, the Unmanned Combat Air Vehicle, and increased numbers of joint direct attack munition (JDAM).

This budget is also guided by our recent Kosovo experience, which has underscored the fact that the Air Force must remain ready to respond to a full range of missions, from humanitarian and peacekeeping operations to cyber terrorism, weapons of mass destruction, and major theater wars. To do this, we have placed renewed emphasis on upgrading our intelligence, surveillance, and reconnaissance assets and also our space assets, and we continue to fund significant improvements in our communications, network defense, and command and control infrastructure.

PREPARED STATEMENT

Working together with this committee, we are taking the best, most potent aerospace force in the world and making it even lighter, leaner, more lethal and more flexible to meet the national security challenges of the next century.

Thank you, Mr. Chairman. I look forward to taking your questions.

Senator STEVENS. Thank you, Mr. Secretary.

[The statement follows:]

PREPARED STATEMENT OF HON. F. WHITTEN PETERS AND GEN. MICHAEL E. RYAN

AF POSTURE STATEMENT 2000

Mr. Chairman and members of the committee, the Air Force fiscal year 2001 budget, though constrained, is a balanced, integrated, carefully crafted plan that supports our transformation as an Expeditionary Aerospace Force. With your continued support, it will:

Put our people first.—We can never lose sight of the fact that it is our great people—active-duty, guard, reserve and civilian—who make the Air Force the world's premier aerospace force. This budget continues our commitment to improving pay, benefits, and quality of life. It also contains increased emphasis on improving recruiting and retention to ensure that we are growing the force of the future.

Emphasize readiness.—The Air Force has been in a constant state of high operations tempo since the end of the Cold War. We are smaller than we have ever been, yet tasked at a level many times the Cold War pace. The stress is showing. By committing to better organization, more money for spare parts, and increased training, we will halt the downward readiness trends of the late 1990s.

Continue our carefully balanced, time-phased modernization program.—There is no single modernization program that is a "silver bullet" for the Air Force. Instead, we are committed to modernizing existing systems, where it makes sense and pro-

vides the needed capability. Likewise, we must purchase new systems to ensure we maintain our ability to provide the full spectrum of aerospace capability. We continue to believe that the key to success is an integrated system of systems. That will provide the global reach, global power, and global vigilance that make the Air Force a premier instrument of national defense and national security. Our fiscal year 2001 modernization plan touches every part of the Air Force, including space, mobility, surveillance, power projection and information superiority, just to mention a few.

Without the steadfast support of the President and Congress, the stunning successes of the last several years would not have been possible. We are a combat-proven, mission-focused, decisive fighting force for America. With your support we will remain so.

INTRODUCTION

The United States Air Force enters the 21st Century as the most powerful, swift and flexible military force in the world. Aerospace power was born in America with the Wright brothers and was proven decisive in combat by American commanders who understood the imperative of dominating the skies: Mitchell, MacArthur, Eisenhower, Nimitz, Arnold, and many more. Aerospace power became America's unique asymmetric advantage.

For more than fifty years, the Air Force has been the nation's primary provider of aerospace power. Today, aerospace power gives the nation a strategic advantage and is its most rapid instrument of military choice. It is aerospace power that has made it possible for our nation to lead critical security commitments, while remaining ready to engage rapidly anywhere on the globe.

Everything we do in joint military operations requires control of air and space. Without aerospace power, our joint forces could not effectively deploy, fight, or win. With aerospace power, joint forces can secure our objectives quickly with minimum loss of life. We are a combat-proven, mission-focused, decisive fighting force. The following paragraphs outline how your Air Force, with continued support from Congress, will organize, train, equip, and operate in the coming years.

Aerospace Power in the Geostrategic Environment

World events over the past decade have highlighted the value of aerospace forces. They were the conclusive instruments of military power in the three major conflicts of the last decade—the Gulf War, Bosnia-Herzegovina and Kosovo. Throughout the 1990s, aerospace power delivered results not only in combat but in many different types of operations: providing presence around the world to shape the security environment; flying relief supplies into areas struck by disaster; delivering aid to nations and peoples in need; patrolling no-fly zones over Iraq and Bosnia-Herzegovina; providing awareness with space assets; and standing nuclear alert. These are just a few of the examples of how America has used its aerospace power.

Today, our national security policy relies on the steady engagement of air forces in several regions. While the other services use their aviation arms primarily to assist their principal forces, the Air Force provides the essence of our nation's aerospace power.

The Air Force is preparing for a range of potential threats that will vary in character and intensity as the 21st century unfolds. A hostile state actor, weapons of mass destruction, cyberterrorism and a heightened need for defense of the American homeland: all are possible challenges in the future. Security can be fragile. Tomorrow's weapons have the potential to be devious and destructive. New threats can emerge quickly, and our ability to counter them must never be taken for granted.

Given the uncertainty and diversity of these threats, aerospace power, with its unique capabilities, will be more important than ever in carrying out America's security goals. First, aerospace power is far-reaching. Our aircraft can reach any point on the globe within hours, with the flexibility to supply relief or to produce combat effects. Second, it is a lethal fighting force. We can control enemy maneuver in the battlespace and find and destroy targets with great precision. Third, aerospace power is vigilant. Airmen link aircraft, satellites and information systems to create global situational awareness. Vigilance takes many forms, from security forces patrolling the base perimeter to nuclear forces on alert. These three characteristics combine to make aerospace power a highly flexible, powerful military force—indispensable to our nation.

Our Focus

The United States Air Force defends the United States and protects its interests through aerospace power. Our fundamental capability is to dominate the aerospace realm to ensure freedom from attack, freedom to maneuver and freedom to attack.

This capability stems from our core competencies: aerospace superiority, global attack, precision engagement, information superiority, rapid global mobility, and agile combat support. Our heading stays constant: the Air Force vision of global reach, global power and global vigilance is the guiding principle behind our strategic plan and budget programs for aerospace power.

Aerospace power cannot be defined just as fighters, bombers or satellites. Aerospace power comes from talented, trained people employing a combination of systems and capabilities. It starts with our ability to operate out of austere bases—and that requires constant attention to the fundamentals of food, shelter, force protection, communications, airfield and mobility operations, and civil engineering. It includes the world's most capable air mobility assets and infrastructure, empowering the global reach capability without which forces and equipment could not move onto forward bases. At the next level, aerospace power requires Intelligence, Surveillance and Reconnaissance (ISR) assets in space and in the air that are interoperable and that can communicate information back to centers where data can be fused and commanders can use that fused information to command their forces and the battlespace. The constant requirement for data, communications, and systems that turn data into information, in turn, requires capabilities that run the gamut from prediction of solar weather to satellite command and control to computer network defense. What makes the Air Force such a flexible and effective tool is our focus on maintaining a balanced aerospace force that provides the full range of capabilities required to put bombs on target or to rapidly deliver humanitarian supplies.

In one contingency, our primary contribution may be C–17s delivering relief supplies. But as important as the C–17 is to this operation, it would be of little use without the material handling equipment that allows it to be loaded and unloaded. Moreover, relief missions depend on layers of support from information systems, communication satellites, weather, navigation, and air refueling that come together to form an Air Force unique capability: an air bridge. Similarly, the B–2 dropping the Joint Direct Attack Munition (JDAM) is an outstanding capability. But the B–2 cannot perform that mission without targeting data, which depends on our ISR and communications infrastructure, as well as the Global Positioning System (GPS) which, in turn, requires a supporting infrastructure of space launch ranges and launch vehicles.

Our fiscal year 2001 budget program is based on sustaining our decisive fighting force through a balanced program that pays attention to all the systems required to perform our mission, modernizes our systems, takes advantage of innovation, and prepares for the challenges of the future. Most importantly, we are providing better support for our most valuable assets—our people.

The Air Force Leads Defense Transformation

The Air Force's legacy of organizational and operational flexibility leave it prepared for the challenges of the 21st Century. As security goals shifted in the 1990s, we vaulted ahead with two major transformations that greatly increased our decisive power projection capabilities. These transformations—one organizational, the other a result of the ongoing revolution in military affairs, form the foundation of our strategic plan.

The Air Force has always been an expeditionary force: going "over there," to Europe, the Pacific, Southeast Asia, or the Persian Gulf region to join with allies and defeat adversaries. Since the early 1990s, the Air Force has downsized by more than one-third and cut overseas basing by two-thirds. We retired older Cold War force structure and emerged as a lighter, leaner, and more lethal force. Bombers designed to carry nuclear weapons now carry precision-guided conventional munitions. A tanker force designed to support nuclear operations became the backbone of overseas force deployment. Never in history have aerospace forces demonstrated their flexibility with greater clarity.

But during the downsizing, contingency operations multiplied and organizational strain emerged. Soon the Air Force was engaged in many times as many operations as during the Cold War—we were 40 percent smaller than our 1987 levels, but much busier. Like marathon runners, we had to find the right pace. First, the Air Force transformed itself into an expeditionary aerospace force configured for the full spectrum of global operations. In response to seemingly irreconcilable stresses, the Air Force increased its expeditionary capabilities so that we could both deploy forces faster, and be able to keep up a constant presence, for years when necessary, to fulfill long-term multi-national commitments. We did this using forces that were structured to fight and win two major theater wars.

The new Expeditionary Aerospace Force (EAF) concept enables the Air Force to meet the Nation's increased demand for deployed forces. Without this reorganization, we could not sustain that demand with the force levels we have today. EAF

allows us to provide tailored forces to regional commanders, while keeping the force trained and ready to meet major commitments. But most importantly, it gives our people more predictable deployment schedules, adding needed stability to their family lives and career paths. Equally important, EAF allows us to make more effective use of the Guard and Reserve, reducing the operations tempo for all our forces. The new concept works by designating ten packages of our forces—known as Aerospace Expeditionary Forces (AEFs)—and rotating two at a time to be on call or deploy to regional hotspots. It also provides for five rotating mobility headquarters units, to meet demands for airlift. The reorganization required for this transition is largely complete. However, we must continue exercises and initiatives to improve our expeditionary capability by reducing deployment times, improving communications and en route planning, streamlining equipment loads and honing our ability to operate from austere locations.

The second major transformation emerged in the last decade when the Air Force became a stealth-enhanced, all-weather, day/night, precision force. In the 1990s, Americans became accustomed to seeing gun camera video of precision-guided bombs hitting buildings, bridges and tanks. Laser-guided bombs debuted in the early 1970s, but in 1991 just 9 percent of the weapons delivered by aircraft in Desert Storm were precision weapons, and only the F–117, with two bombs on board, was able to penetrate heavy air defenses to drop these weapons. Just four years later, in 1995, more than 90 percent of the bombs dropped during Operation Deliberate Force were precision-guided weapons. In 1999, the stealthy B–2, flying from the United States, with 16 JDAMs on board hit multiple targets at night, in all kinds of weather in its combat debut over Kosovo and Serbia. In addition, B–52s fired GPS-guided Conventional Air Launched Cruise Missiles (CALCMs) hundreds of miles with great accuracy. Our fighter aircraft also dropped precision laser-guided bombs when weather permitted, and we were prepared to use laser designators from the Predator Unmanned Aerial Vehicle (UAV) to enable laser-guided bombs to be dropped through the clouds onto intended targets. In short, during Kosovo, all our attack platforms were able to hit multiple targets per sortie with great precision and much-reduced collateral damage. Past air commanders could only dream of the level of accuracy and reduced collateral damage that we achieved in Kosovo.

But the precision revolution also has costs. First, is the cost of integrating our new precision weapons onto our existing platforms—in many cases this requires extensive modifications. Now that we can bomb at night, we must also be able to fly safely at night, and that means installing night vision goggles and related lighting into all our combat aircraft. Precision weapons also require precise data on the location of targets—data that today must come from operations centers, satellites, UAVs, and supporting aircraft. This in turn drives a requirement for linking our aircraft together through high-speed digital networks and for better on-board targeting systems. We must also complete the integration of precision weapons into our Guard and Reserve aircraft—for EAF and precision to work, every strike aircraft must be capable of dropping precision ordnance. Finally, we must also invest in a suite of capabilities and training to shorten the time it takes to identify and strike targets from hours to minutes.

Your Air Force is funding the programs required to move these two critical transformations to the next level. As we move forward, we will continue to define the next steps in this revolution, and we will ensure that this transformation has many more cycles. Making our force stealthy will allow us to protect the force from evolving counter-air systems. New munitions, like the Small Smart Bomb and Low Cost Autonomous Attack Systems (LOCAAS) on stealthy platforms, will extend all-weather, day/night, and stand-off capabilities and will provide better capability against moving targets. They will also further minimize collateral damage and enable many more targets to be destroyed with a single sortie. Real time, adaptive targeting will combine with stealth and precision to take this revolution to a new level of combat power.

Both of these major transformations depend on increased aerospace integration. Air and space are seamless. We operate aircraft and spacecraft optimized for different environments, but the art of commanding aerospace power lies in integrating systems to produce the exact effects the joint force commander needs. To meet this need, we have changed our command organization, established a Space Warfare Center and an Aerospace Basic Course, and added space training to the air combat training given at our Weapons School. Most importantly, we are putting air and space operators into all our key commands and training courses. We are also investing in the information infrastructure to further link air and space platforms and testing those links in exercises and experiments. This year, we formed an Aerospace Integration Center at Nellis AFB, NV, where younger officers will learn how to em-

ploy and command the totality of aerospace forces. Today, our innovations are bearing fruit—the Air Force is an integrated expeditionary aerospace force.

Operation Allied Force: Total Success . . . and Forging the Way Ahead

Expeditionary operations and precision, all-weather strike converged in the spring of 1999 when NATO airpower compelled Yugoslavia to remove military forces from Kosovo. For the Air Force, Operation Allied Force was equivalent to a major theater war.

We proved expeditionary aerospace power was decisive. From the operational perspective, airmen damaged over 85 percent of critical infrastructure targets and attacked more than 850 Yugoslav army ground mobile targets (such as tanks, artillery pieces and trucks.) From the strategic perspective, aerospace power demonstrated NATO's might and resolve to Serbian leaders and in the end, Serbia complied with NATO demands.

The success of Operation Allied Force stemmed from our long-term investment in aircraft modernization and stealth, as well as a range of precision, near-precision and stand-off weapons; real-time communications; UAVs, space systems and ISR aircraft. We gleaned many insights from this conflict, and they are reflected in the budget and program now before the Congress.

—Expeditionary operations worked. With seeming ease, our airmen deployed to more than 20 expeditionary bases, bringing with them the force protection, logistics, sustainment, and communications systems that supported expeditionary combat operations.

—Reachback worked. Satellite communications enabled warfighters to reach back to the United States for real-time information and analysis, while avoiding the need to deploy such systems. By reaching back to CONUS for real-time support, theater forces were both leaner and better supported than if we had deployed CONUS forces and their equipment to Europe.

—Logistics worked. Depots surged and provided some 500,000 additional hours of work. With Air Mobility Command's worldwide express package delivery system, 93 percent of replacement parts got to forward expeditionary bases in Europe in an average of just 3.7 days. The engaged force averaged a 92 percent mission capable rate, much better than the peacetime average, because it had adequate parts and a full complement of experienced maintenance personnel.

—Technology worked. The many areas where technology gave us great advantages are the same areas that offer us the chance to modernize and improve our forces, gaining greater capability and saving dollars. The most promising of these are high priorities in this year's budget submission.

While individual weapons systems were hailed in the press for their capabilities, it was the successful integration of a broad range of weapons systems and supporting aircraft and space systems that won the day over Kosovo. While the world marveled at JDAM, the war could not have been won without the use of proven precision munitions guided by laser, electro-optical, and inertial guidance systems. Success came from understanding how our weapons systems complemented each other and blended together into a balanced fighting force with capabilities that matched requirements. The synergy that resulted from combining air, space, and information operations allowed NATO to attack strategic, operational, and tactical targets, day and night, and often in adverse weather conditions, within hours of being identified. Having said all that, the greatest advantage we have is our outstanding people.

Decisive Fighting Force

Our airmen are a national treasure—they are a combat-proven, decisive, fighting force. They perform superbly wherever they are, whoever they are: the crew chief maintaining an F–16 for combat operations from Aviano AB, Italy; the C–17 loadmaster flying all over the world from Charleston, South Carolina; the captain and his wingman deploying from Alaska to Korea; the lieutenant flying satellites at Schriever AFB, Colorado; or officers standing alert at a Minuteman missile launch control center near Minot, North Dakota. Airmen are motivated, trained and ready to serve their country.

But their jobs are not easy. The uniformed Air Force of the year 2000 is the smallest in history: 358,000 active-duty members, plus 107,000 in the Air National Guard and 74,000 in the Air Force Reserve for a total of 539,000. On any given day, 90,000 airmen—almost one-sixth of the Total Force—are operating forward at 12 overseas bases and 16 forward operating locations.

The personal commitment of our men and women deserves an equal commitment from the Air Force, the Congress, and the American people. People are the key to the Expeditionary Aerospace Force, and we must do all we can to give our fighting forces what they need to carry out their mission.

People

People are our top priority. Because multiple deployments, crisis responses and aging equipment are stressing our manpower levels, we know we need to move additional manpower into the forces directly supporting the EAF. We moved 2,640 positions into the EAF in fiscal year 2000, and this budget will move 3,180 additional authorizations in fiscal year 2001. In addition, we recognize that unfilled manpower authorizations are of no use, so we have requested 300 new manpower positions for recruiters in fiscal year 2001. We have also commissioned a major study of our end strength requirement and are prepared to request additional end strength, if needed.

Recruiting and retaining the highest quality men and women are among our greatest challenges in the current economic environment. To date, we have been able to recruit men and women of extremely high caliber—99 percent have high-school diplomas. However, during fiscal year 1999, the Air Force fell short of its recruiting goal for the first time in 20 years. To meet this year's goal, we are increasing our recruiter force and launching new efforts in paid advertising.

Retention has also declined. The Air Force needs to retain highly trained people; but the high operations tempo, the strong civilian job market, and previous dissatisfaction with pay and retirement benefits have hurt both enlisted and officer retention.

The bottom-line for retention is that quality of life counts. The pay and compensation package Congress and the administration approved in 1999 and the restoration of 50 percent retirement benefits sent the right message. In addition, quality of life initiatives at the base level are essential. We realize that while we recruit individuals, we retain families. Especially with so many military members deployed, our programs in spouse employment, personal financial management assistance, childcare and youth centers, and commissaries and military exchanges are tangible commitments that make a difference in quality of life every day. Our Dormitory Master Plan to improve facilities is well underway, and we have also funded improvements to family housing through our Housing Master Plan. Additional DOD support for market-based basic allowance for housing (BAH) will reduce out-of-pocket expenses for our families assigned to high cost areas. TRICARE, which was fully implemented in June 1998, continues to receive our constant attention, with focus on customer satisfaction. While surveys indicate that satisfaction is increasing, we are a long way from complete success. Congress' continued support for our budget will sustain efforts in all of these areas.

Training

Several new programs are in place to train our force for 21st Century expeditionary and integrated aerospace operations. Deploying is now a way of life. The vast majority of our force never knew the garrison-style life of the Cold War Air Force. Accordingly, airmen recruits confront the real world during the new Warrior Week encampment at Lackland AFB, Texas, where they learn to operate from a bare-base site. At Maxwell AFB, Alabama, the Aerospace Basic Course extends to new officers and selected civilians a working knowledge of how the Air Force fights. As air, space and information systems become more sophisticated, the Air Force views ongoing training and education as the key to successful command and employment of aerospace power. New training systems like Distributed Mission Training place airmen in a synthetic battlespace, connected electronically to other airmen joining the simulation from bases in other states.

Readiness

Today's global environment demands that we be ready for operations from Kosovo to the South Pole. Our people are ready to meet this demand, but years of ongoing operations and difficult funding choices pose a threat to near-term readiness. Keeping that threat at bay is one of our major concerns and a major focus of this year's budget.

The average Air Force aircraft is 20 years old and even with the introduction of new airframes, the average age will be 30 years by 2015. Supply systems are pushed to their limits as Air Force units deploy continually. Overall, average mission capable rates for aircraft have declined due to the high operations tempo and shortages in parts, equipment, and skilled manpower. With the help of the administration and Congress, we provided obligation authority of $382 million in fiscal year 1999 for more spare parts inventory, and 100 percent funding for spares should reverse the shortage in 2000. We have put the brakes on declining engine readiness, but are still 25 percent short in some war readiness spares. Readiness remains an area of vital concern.

Modernization

The Air Force's modernization strategy has three aims: to maximize combat performance, build the force of tomorrow and exploit new technologies that enhance warfighting capability. The Air Force is sized and shaped to be flexible enough to perform several basic missions with the same force: sustaining deterrence, winning two major theater wars in close succession, rapidly responding to small scale contingencies, deploying for sustained peace enforcement operations, and conducting humanitarian operations. That places a premium on modern, flexible forces and people who know how to do their jobs in a variety of operations.

Our continued innovation begins with basic technological research and program integration. Today's nascent programs are tomorrow's joint warfighting capabilities. Our successes in Kosovo have demonstrated that great military value can come from integration of air and space systems. For this reason, we are doubling our current budgetary expenditures for space science and technology between fiscal year 1999–2005. This will further enhance our integrated capabilities and lower the cost of space support. For this reason too, we have established the Aerospace Command, Control, Intelligence, Surveillance and Reconnaissance Center (ASC^{2}ISRC) charged with integrating our multiple data, intelligence, and analysis systems into a comprehensive Aerospace Operations Center, and the Space Battle Lab charged with finding innovative ways to combine space and air systems.

As we look to our future integrated aerospace force, however, we cannot forget that aerospace power is complex and is built on a broad infrastructure that must also be modernized in parallel with combat systems. To meet Commander In Chief (CINC) requirements, for example, our budget includes capabilities ranging from satellites to smart cards to the Red Horse civil engineers to new forms of combat rations. Tested and proven over time, this phased, balanced modernization program will ensure the future of your Air Force as the most powerful aerospace force in the world.

As the Air Force modernizes its capabilities, we are mindful that they must be interoperable with the other services and contribute to a wide range of capabilities for Joint Operations. For example, the Air Force provides strategic airlift for all ground forces, long-range aerial refueling for naval and allied aircraft in combat operations, and assured access to space for a range of Department of Defense missions. The array of systems and capabilities we supply is broader and more diverse than that required of other military forces. This is not because of the importance of the Air Force as an institution. It is because of the growing importance of aerospace power in our Nation's joint military operations.

Finally, we must always analyze emerging requirements. We face a mixture of threats, and our budget seeks funding to improve our capabilities against emerging threats, such as chemical and biological weapons, terrorism, and efforts to deny or exploit our mastery of space. We also have a program of experimentation that will show us how to improve our capabilities now and to stay aware of potential technology synergies and operational concepts that could be important in this new century.

Investing in the Core Competencies of Aerospace Power

It takes the full set of competencies—aerospace superiority, global attack, precision engagement, information superiority, rapid global mobility, and agile combat support—to create aerospace power. These core competencies are operational capabilities that exploit the advantages of aerospace operations and enable many other types of joint operations. We cannot let down in any of these areas or we will put at risk our nation's ability to prevail in conflict. Therefore, we have taken a balanced approach to sustaining these core competencies in the fiscal year 2001 budget request.

Aerospace Superiority is the control of air and space and the foundation of joint force, full spectrum dominance. From our nation's geographic position in the Western Hemisphere, we rely on aerospace superiority to protect our homeland and to enable us to deploy and to communicate to and from overseas theaters. Through aerospace superiority operations, we establish freedom from attack, freedom to maneuver and freedom to attack for all joint forces. Not since the Korean War have American soldiers been attacked by enemy aircraft. The Air Force is committed to ensuring that it never happens again so we are investing in modified systems, new systems and ISR platforms which support the core competencies, like upgrades to the F–15 and F–16 and the development of the F–22, as well as systems like the Space Based Infrared System (SBIRS), Airborne Laser (ABL), and Space Based Laser (SBL), to name a few.

Global Attack assets allow our nation to deter war and to strike any point on the earth's surface within hours of the decision to do so. Improvements to the B–2's low

observability and integration of advanced weapons in the B–2, B–1 and B–52, as well as phased upgrades to the F–15, F–16, and F–117 aircraft and the development of the Joint Strike Fighter, will significantly enhance our global attack capabilities. Looking to the future, we are funding an experimental unmanned combat vehicle (UCAV) program.

Precision Engagement means precision strike of targets, in all weather, day or night. Beyond these combat applications, precision engagement also refers to our ability to get supplies and people to the right place at the right time to further policy goals. In our budget, new families of weapons are in the spotlight, including the Joint Air-to-Surface Standoff Missile (JASSM), Joint Standoff Weapon (JSOW), JDAM and the Wind-Corrected Munitions Dispenser (WCMD). These programs have joint application and are the promise of a new transformation in power projection and decisive attack operations. In the area of precision support, we continue to fund all aspects of our mobility systems.

Information Superiority is the collection, control and exploitation of the information domain. An uninterrupted flow of data and knowledge of the battlespace are critical to success in current and future military operations. The Air Force meets many service and joint requirements with an information superiority architecture that is at the cutting edge of technology. This truly unique asset is a collection of ground, airborne and space platforms, sensors and systems that represents a key contribution to joint operations. Our evolutionary modernization plan focuses on support to the expeditionary warfighter and includes upgrades to many of these systems. Key among them are the Joint Surveillance Targeting And Reconnaissance System (JSTARS), AWACS and U–2 aircraft, as well as the Predator and Global Hawk UAVs. We're also taking a step toward migrating some capabilities to space with the National Reconnaissance Office and the Defense Advanced Research Projects Agency in our joint investment on the Discoverer II space-based radar.

Rapid Global Mobility is the ability to quickly position forces—from our own forces to those of our sister services or coalition partners—on or near any spot on the globe. Whether employing on-scene Aerospace Expeditionary Wings or deploying contingency forces in response to a crisis, mobility assets make the difference in speed and stamina. Procurement of the full complement of C–17s, development of the CV–22, aggressive C–130 and KC–135 modernization and C–5 upgrade programs, as well as development of the Evolved Expendable Launch Vehicle (EELV) will ensure there are no gaps in our global mobility for the early 21st Century.

Agile Combat Support is the flexible and efficient sustainment of combat forces. As an expeditionary force, we are aiming for continued progress in reducing the deployment footprint, and speeding the delivery of the right supplies to the warfighter. To meet those needs, the Air Force is revamping its combat support systems. New logistics decision support tools and the Global Combat Support System are key enablers that will improve global logistics support.

Air Force Fiscal Year 2001 President's Budget Submission

Overall, the Air Force Budget continues to carefully integrate and balance competing priorities. The budget puts people first, emphasizes readiness, and continues to sustain relevant time-phased modernization and infrastructure programs. This plan continues our transformation and improvement as an Expeditionary Aerospace Force.

The fiscal year 2001 Air Force Budget sustains the people, readiness and modernization gains included in last year's Budget. In addition, we made some key investments that target specific capabilities or issues. For example, we've added funds for Basic Allowance for Housing (BAH), recruiting, and advertising to increase retention and ensure we have the people needed to improve historic mission readiness trends. Other additions such as Large Aircraft Infrared Countermeasures (LAIRCM) and JSTARS address specific operational requirements, while additional modest increases for Science and Technology help underpin our future core capabilities. We've also added resources to cover "fact of life" cost increases for Peacekeeper and Minuteman missiles, fuel, and consumption of spare parts.

However, our budget is filled with many of the same challenges as last year. This budget continues to provide resources to hold readiness levels at the fiscal year 2000 mission capable level. We need Congressional support for the fiscal year 2001 budget to reverse losses to our mission capable levels that we endured in fiscal years 1998–1999. We are hopeful that the adds for BAH, recruiting, and advertising will help improve personnel readiness. Finally, the Air Force still faces a low infrastructure re-capitalization rate. Our backlog of infrastructure maintenance and repair continues to grow and total facility replacement remains on a 200 year cycle.

SUMMARY

That is why we have crafted a carefully balanced plan that addresses the broad range of mission-critical needs of the service.

The security challenges of the 21st Century are difficult to predict. What we do know is that America will meet those challenges through joint operations built around decisive power projection with aerospace forces. The United States Air Force has a unique and broad set of responsibilities to defend the United States, protect its interests, project power, extend a helping hand, and enable joint forces to carry out a full spectrum of operations. The fundamentals of aerospace power—fast, flexible air, space and information systems, skillfully commanded by aerospace warriors—will be the building blocks of 21st Century security. With Congressional support, the Air Force will maintain strategic deterrence, meet regional security challenges through expeditionary operations, support global information exchange, and engage with allies to reinforce multinational security measures. The inherent flexibility of aerospace power and the capabilities achieved through the synergism of aircraft, spacecraft and information systems will be the key components of national security against emerging threats. The United States is an aerospace nation, and your United States Air Force is now prepared and poised to meet the demands of ongoing global security commitments and must be in the future.

Security in the 21st Century depends in no small part on continuing to provide aerospace power that gives this nation its rapid global reach, decisive power and constant vigilance. Our world-class people make it work—they will always be our first priority. We are an expeditionary aerospace force configured for the long haul. We are continuing cycles of revolution as we transform into an information-rich, precision force and as we integrate aerospace systems ever closer together. We are an aerospace force that will grow ever more accustomed to operating in and from space. Our budget balances today's commitments with tomorrow's opportunities. We are prepared for the future and committed to serving the nation. We are a combat-proven, mission-focused, decisive fighting force. With your support, we will remain that way.

COMBAT PROVEN

The United States Air Force in 1999

Since the dawn of flight, America's airmen have answered the nation's calls. Last year was no different. Despite a huge drawdown over the past decade and a surge in contingency responses, last year was a time when the active duty Air Force was tasked more heavily (by percentage of force) than in either Desert Storm or Vietnam. The B–2 saw combat for the first time and the B–1 for the second. We fought an air war with the greatest degree of precision and integration ever seen in the history of aerospace power, while at the same time patrolling the air over Iraq and keeping the peace in Korea.

The Air Force played a dominant role in NATO's air war against Serbia. Operation Allied Force was the equivalent of a major theater war for the Air Force. We had over 500 aircraft and 44,000 people from our active and reserve components committed to this significant combat operation. Some of our airmen fought from home bases in the U.S. or overseas, but many deployed into 1 of the 21 expeditionary operating locations we created during the crisis.

For example, the international airport at Tirana, Albania was turned from a remote airfield into both a major humanitarian relief center and a combat location for Task Force Hawk in less than 12 days. Five C–130s arrived from Ramstein AB, Germany on March 30th and by April 4th, the first C–17 was offloading outsized cargo for the Army's Apache helicopter unit. From the time our expeditionary airmen landed at the airport to the time combat helicopters landed in Tirana was only 9 days. By mid-April the airfield was fully operational, flying approximately 25 airlift sorties per day—carrying supplies and equipment for Task Force Hawk and humanitarian relief for Joint Task Force Shining Hope. Throughout this short time period, Air Force civil engineering units steadily improved airfield operations and living conditions by setting up water, sewer, electricity, roads, and critical runway repairs and upgrades. By the end of operations, 1,240 sorties would fly into Tirana.

During the 78 days of combat, 14 NATO nations flew 38,000 sorties and dropped 27,000 munitions against a wide range of Serbian targets in a small battlespace. Our Air Force provided nearly 50 percent of the coalition aircraft, dropped 70 percent of the munitions, and provided a large portion of the support aircraft. These support aircraft flew critical intelligence, surveillance, reconnaissance, and mobility missions which were key ingredients to the operation's success. During combat missions, hundreds of aircraft from many countries flew in close proximity over the Balkans; at some times, as many as five aerial refueling tracks were operational over

the Adriatic at one time, competing for airspace with the tracks for ISR and command and control aircraft. The fact that none of our sorties resulted in a friendly mishap is testimony to the great leadership of our Air Component Commanders, the plans and operations skills of our Air Operations Centers, and the tremendous professionalism of United States and NATO airmen.

As in other conflicts, a key consideration during Allied Force was the minimization of both combat losses and collateral damage. Because the Air Force continued its legacy of innovation, most joint and coalition strike aircraft were able to employ precision weapons while staying above much of the ground threat. And because of the Air Force's investments in stealth and precision weapons, the B–2 and F–117 were able to strike safely at heavily defended, strategic centers of gravity far inside Serbia. In all cases, multiple targets could be hit with a single sortie. Our goal in this fight was no combat losses and no avoidable collateral damage—we achieved both. We had no combat losses and our actual collateral damage rate per sortie was .0005.

This incredibly low collateral damage rate resulted from the dedicated effort over several years to incorporate precision munitions across our fighting force and NATO's. More than 90 percent of the combat sorties delivered precision-guided munitions: B–2s used JDAM; F–15s, F–16s, and F–117s used laser-guided and standoff precision munitions; B–52s fired Conventional Air Launched Cruise Missiles (CALCMs). Additionally, B–1 and B–52 aircraft dropped 10,000 non-precision munitions to close airfields and strike concentrations of opposing forces. These strike sorties were highly effective and successful because of our well-trained people and our unquestioned ability to control the air above the fight.

It wasn't just precision munitions, however, that made the outcome of Operation Allied Force so successful. The integration of manned and unmanned air and space weapon systems were truly merged in one aerospace domain where intelligence, surveillance, and reconnaissance from air or space platforms were step-for-step synchronized with our combat operations at all levels of warfare—from the strategic level to the tactical level. While much of the world watched the battle unfold through the lens of our precision munitions, it was the integration of weapon systems in the aerospace domain that was the force multiplier. From communications and weather to navigation and combat assessment, this integration was pivotal to the successful outcome and validated our balanced investment strategy over the years.

Kosovo was such an overwhelming display of the capabilities of aerospace power that even our staunchest critics were heard to grudgingly admit that airpower could single-handedly win a war. While Allied Force was our single greatest combat achievement in 1999, it was not our only combat operation. Before the conflict in Kosovo, we built up our forces in the Persian Gulf to respond to increased Iraqi violations of United Nations resolutions. After that build-up, we unleashed that potent force during Operation Desert Fox. It wasn't long after Desert Fox that Allied Force began. Simultaneously, we've continued to respond to Iraqi aggression on almost a daily basis as we enforce the no-fly zones in Iraq. In Korea, our airmen stand ready to provide critical aerospace power on a moment's notice if required.

As you can see, 1999 was a very busy year for our expeditionary airmen as they've answered the nation's calls. But we're not just resting now, we're busily honing our warfighting operations and refining investment strategies given our lessons learned from the many combat operations.

MISSION FOCUSED

Our Role in National Security

The Air Force works with other governmental agencies to meet the national security challenges and the objectives laid out in the National Military Strategy. This requires us to shape and respond to today's security challenges and stand prepared for those of the 21st century.

Today's global security environment demands that the Air Force maintain a mission-ready force necessary to deter aggression, conduct ongoing contingency operations at a very high pace, meet a wide range of peacetime missions, and support two nearly simultaneous major theater wars. In addition, the Air Force must be ready to counter potential enemies who are increasingly likely to attack American interests asymmetrically. In 1999, the Air Force was continually tested, and each time, vigorously supported the national strategy by shaping and responding with its mission-ready forces while preparing for the challenging and complex future ahead.

SHAPING

The Air Force continues to help shape the international security environment by deterring would-be aggressors with our formidable aerospace power, our global intelligence and surveillance operations, our forward presence, and our ability to reach any place on the globe within hours. Air Force people enhance regional stability through numerous exercises and training programs, which build confidence with our allies and coalition partners.

Deterrence

While the nuclear threat has diminished, the requirement to demonstrate our national resolve to defeat any potential aggressor remains at the heart of our nation's security. Air Force watch officers maintain constant global vigilance over events on the ground, in the air, and in space. From the high ground of space, and from manned and unmanned airborne reconnaissance platforms, data streams back to command centers from Greenland to Guam and from Saudi Arabia to South Korea. Air Force airmen also maintained around-the-clock alert with Peacekeeper and Minuteman III intercontinental ballistic missile forces in the U.S., and flew B–1, B–2, and B–52 "global power" missions staged from the U.S. to distant locations, demonstrating to the international community our capability, commitment and resolve to respond anywhere on the globe within hours of an alert.

Promoting Stability

The Air Force seeks to promote international stability by building broad relationships with the militaries of other nations and promoting regional security through our presence. These ties increase mutual understanding and enhance interoperability. Air Force engagement programs facilitate cooperation and access during contingencies and enable future coalitions of willing and capable allies.

Recently, Air Force international engagement and stability efforts have focused on support of Joint Chiefs of Staff (JCS) and international exercises, the Partnership for Peace Program, Military Contact Programs, Operator-to-Operator talks, International Armaments Cooperation Programs, and Security Assistance efforts. Last year, the Air Force was engaged in 84 international exercises in 95 locations throughout the world. These included 15 exercises with 34 Partnership for Peace countries and nearly 300 focused Military Contact Program events.

Last year we also conducted a series of seven Operator-to-Operator talks, continuing a tradition spanning 17 years. These talks allow for open discussion of key interest issues such as doctrine, employment of airpower, tactics, coalition relationships, exchange of operational information, and training. The program currently involves active participation with several nations and is designed to provide direct interface with our allies. Under the International Armaments Cooperation Program, the Air Force has more than 300 agreements with allies and coalition partners to share the cost of developing and producing robust, interoperable systems and technologies. These programs involve cooperative research, development, production, scientist and engineer exchanges, equipment loans, and scientific and technical information exchanges.

In a very successful effort to promote stability and interoperability among allies and potential coalition partners, the Air Force Foreign Military Sales (FMS) program managed more than 3,900 contracts for aircraft, spare parts, munitions, and training in excess of $108 billion. Meanwhile, the International Military Education and Training (IMET) Program continued to emphasize management training and professional military education. Under IMET, the Air Force trained 1,298 students from 95 countries. These efforts have enhanced stability and promoted improved relationships with the U.S.

Threat-Reduction Efforts

Not all threats to the national security of our nation are conventional in nature. Potential adversaries will increasingly rely on unconventional tactics to offset our superiority in conventional forces and technology. The Department of Defense as a whole must counter these asymmetric threats, and the Air Force is heavily engaged in this joint effort. As identified by the National Defense Panel, the key emerging threats are those that seek to deny us forward bases, disrupt our supply lines, and inflict casualties both within the United States and abroad. The Air Force is heavily engaged in both offensive and defensive strategies to defeat the capabilities that support these threats: information warfare, chemical and biological warfare, force protection, and counter-drug operations.

Information Superiority and Network Defense

The Air Force has become increasingly dependent on information networks and information systems, and in the future will become even more dependent on a secure, timely, and accurate flow of information. Indeed, a key enabler for expeditionary operations is the ability to leave a large number of combat support personnel at home base, linking them to engaged commanders through our information systems. Moving information rather than people and equipment reduces airlift requirements and limits the exposure of our forces to terrorism and chemical and biological attack. Robust information networks also enable the key concepts of modern logistics systems: time-definite resupply; in-transit visibility; and the reliance on support outside the engaged theater to minimize people, equipment, and supplies that must be moved to theater. The war in Kosovo tested this vision in combat and proved the validity of our reachback concept—through which we used communications to CONUS-based support elements for the processing of intelligence and targeting data and sustained some two dozen forward expeditionary bases.

In 1999, we worked across the board on the fundamentals of information superiority. Our logistics, financial management, and audit communities continued their efforts to ensure the trustworthiness of the data flowing through our systems by ensuring the accuracy, timeliness, and "auditability" of our key data systems. Our communications and computers community continued its efforts to protect all base data networks by routing all traffic through a central base Network Control Center (NCC) and protecting that traffic with appropriate firewalls and intrusion detection systems. In 1999, firewalls and NCCs were installed in all of our major bases at home and abroad. Similar equipment and procedures will be deployed to all Air Force installations—Active and Reserve—in the near future. In addition, we deployed a robust suite of tools to all of our bases to allow commanders to check for security holes in their information systems, and network protection was made a special interest item in all Inspector General inspections and a high priority audit issue for our Auditor General. Finally, the Air Force Computer Emergency Response Team continuously monitors all Air Force systems to identify computer intrusions and forwards advisories to all bases as new forms of intrusion are detected.

We are full partners in the recently established Joint Task Force for Computer Network Defense through our base network control centers, major command network operations security centers, Air Force Network Operations Center, Air Force Information Warfare Center, and Air Force Computer Emergency Response Team. We have made substantial progress in our Operationalizing and Professionalizing the Network (OPTN) initiative. Our objective is to organize, train, equip, operate, and protect our essential information networks just like our other mission-critical weapons systems.

Building on this foundation of trustworthy, protected data, the Air Force is designing a standardized Aerospace Operations Center for its theater and deployed commanders, drawing on our state-of-the-art theater and wing-level operations centers at Vicenza and Aviano, Italy. Through our Joint Expeditionary Force Experiments (JEFX 98 and 99), we are also trying revolutionary ways of using existing data to support Air Force, joint, and coalition commanders. In 1999, we fielded several "stars" of JEFX 98, including "NIMA in a Box," which provides expanded access to geospatial and mapping data, and the Joint Targeting Workstation, which permits the fusion of national and tactical intelligence data—including Predator video feeds—for rapid targeting. Early versions of these systems were used with spectacular success in Kosovo.

The Air Force fully supports the Global Command and Control System (GCCS) through its C^4ISR Center and will shortly field the Theater Battle Management Control System (TBMCS), which is the core of the Air Force GCCS system. At the end of 1999, the Air Force also established a key headquarters element to monitor and coordinate the development and fielding of the Global Combat Support System (GCSS) within the Air Force. Over the next year, we plan to continue to strengthen our Chief Information Officer structure to ensure that we move toward interoperability of all Air Force information systems and that network defense remains a very high priority.

In the immediate future, improved network defense will require the fielding of the DOD Public Key Infrastructure (PKI). We have budgeted funds for PKI for several years, and intend to embrace PKI as it becomes a technical reality. Within the next two years, all personnel will have smart cards to support digital signatures in software applications, data encryption, and facility and system access control. It is our intent to certify all active-duty, civilian, Guard, and Reserve personnel in PKI as smart cards and associated equipment and software become available. We also intend to deploy PKI throughout our communication architecture to support user identity, access control, non-repudiation, data confidentiality, and data integrity.

Our defense-in-depth approach is paying off. The growing malicious software threat has had little if any impact on our network operations. Intense efforts by hackers and organized groups to disrupt networks during Operation Allied Force were of little or no consequence. We are blocking an increasing number of daily hacker intrusion attempts and the Air Force Office of Special Investigations, teamed with the FBI and other federal law enforcement agencies, has identified, caught and prosecuted a number of hackers.

While our network defenses are improving, so is the threat; it is real and dangerous. We will continue to shore up our defenses through a well-funded and rigorous defense-in-depth program that will deliver the information and mission assurance vital to our expeditionary operations.

Countering Chemical and Biological Weapons

The threat or use of chemical and biological warfare (CBW) is likely in future armed conflicts and poses a genuine danger to global stability and security. The Air Force continues to improve its C^4ISR capabilities to identify and locate CBW weapons, storage, and production facilities. We are seeking to advance our counterforce capabilities to destroy CBW weapons, including those in hardened and deeply buried facilities and improve our ability to actively defend against and effectively manage the consequences of CBW if they are used. On the first point, the Air Force has just incorporated a penetrator warhead in the CALCM missile. The Air Force has moved decisively to prepare and protect its first responders and combat aerospace forces around the globe from the CBW terrorist threat. We have developed counter-Nuclear, Biological and Chemical (NBC) doctrine and concepts of operation, incorporating CBW issues into our training programs, to prepare our men and women to effectively counter the threat posed by CBW.

Force Protection

Protecting our people is a major part of our threat reduction efforts and continues to be a top priority at all command levels. The Air Force has institutionalized force protection by training our people, equipping and reorganizing our security forces, and exploiting technology.

Throughout their careers, airmen are taught the fundamentals of force protection. Our goal is to create a force protection mindset within the service. In 1999, the Air Force incorporated force protection academics as a part of Warrior Week during basic training and provided antiterrorism awareness training to personnel who deployed or moved to overseas locations.

In support of the EAF, the Air Force organized and equipped the 820th Security Forces Group (SFG), to provide stand-alone, rapidly deployable forces with a wide range of force protection skills to secure operations at forward locations. These skills include security, intelligence, medical, communications and engineering. The 820th SFG was developed at the Air Force Security Force Center, Lackland AFB. Upon maturity it will be transferred to Air Combat Command (ACC) and relocated to Moody AFB, GA. This process has begun with an initial small cadre assigned with duties to stand up the first squadron of 325 with an additional 215 military positions arriving during fiscal year 2001. In 1999, the 820th deployed to Tirana, Albania in support of Allied Force and flawlessly demonstrated this dynamic capability.

Technology continues to provide force protection options to our troops. The Force Protection Battlelab at Lackland AFB, Texas, conducts research on new procedures and technologies to enhance our force protection posture. The lab's success stories for 1999 include the testing of a Remote Visual Assessment Strategy permitting rapid assessment of security situations and alarms at remote locations such as ICBM launch facilities and the perimeters of our forward located air bases. The lab also conducted a successful Proof of Concept Demonstration of the Sub-Tactical Unmanned Aerial Vehicle Surveillance System which can support deployed forces in hostile locations with an "eye in the sky" to assess beyond the detection zone of our forward air bases. Yet another example of the lab's success in 1999 was the development of the Vehicle Entry Explosive Search Strategy to improve our ability to safely screen vehicles for explosives and thus increase entry point protection and security of our deployed AEF forces. Implementation guidance was published in a Vehicle Bomb Mitigation Guide which presents ready reference material associated with planning and executing programs and operations for protecting Air Force personnel and assets against the threat of vehicle bombs.

The Air Force also conducted extensive vulnerability assessments to improve security at permanent and expeditionary locations. In 1999, Joint Service, Air Force, and MAJCOM teams conducted 53 assessments of Air Force installations. The Service is mitigating identified deficiencies and aggressively pursuing permanent solutions. These assessments continue to improve our force security at home and abroad.

Counter-Drug Operations

The Air Force continues its role in assisting drug enforcement agencies in deterring the influx of illegal drugs. Air Force airborne and ground-based radars along with sophisticated intelligence and collection platforms work around the clock to identify suspected drug traffickers long before they enter U.S. airspace. Working together as a Total Force, our active and reserve airmen track, intercept and identify drug smugglers far from our borders. Within the U.S., Air Force working dogs stop significant quantities of illegal drugs at U.S. ports. In addition, the Civil Air Patrol (CAP) supports law enforcement agencies through aerial reconnaissance, airlift, and communications support.

RESPONDING

The Air Force is prepared to respond with a wide range of options, should deterrence and promoting stability fail to meet national security objectives. From major theater wars to contingency operations to peace-keeping and humanitarian efforts, the Air Force's ability to rapidly respond anywhere on the globe made it the force of choice in 1999.

Operation Allied Force

As discussed previously, the benchmark for military responses to national security comes in the form of combat operations. Operations Desert Fox, Allied Force, and Northern and Southern Watch were four combat responses we participated in during the past year. Our airmen responded with great skill and courage.

Contingency Operations

Despite our heavy commitment to operations in Kosovo, the Air Force provided support to contingency operations around the world throughout all of 1999. In Southwest Asia, we participated in simultaneous air campaigns—Operations Northern and Southern Watch. In 1999 we flew over 18,400 sorties over Iraq, employing over 1,200 munitions at a cost of $64.7 million. We contributed 73 percent of the air assets patrolling the northern no-fly zone, produced 75 percent of the total sorties flown, and delivered 95 percent of the precision weapons dropped in response to Iraqi violations and aggressions. In the southern no-fly zone, the Air Force provided 35 percent of the total air assets and flew 68 percent of the sorties. In the Balkans we flew 25 percent of the missions in support of the Dayton Peace Accords and continued our successes utilizing state-of-the-art reconnaissance platforms to monitor compliance during Operation Eagle Eye. At the same time, the Air Force continued to support operations on the Korean peninsula out of permanent bases at Osan and Kunsan and through expeditionary forces deployed from Alaska into Taegu. Finally, when violence erupted in East Timor, the Air Force provided planning, airlift and security forces for Operation Stabilise.

Humanitarian Operations

With global power and global reach comes the ability to extend a helping hand for humanitarian relief operations, whether they are in the far reaches of the globe or right here in our back yard. The Air Force provided more than 900 personnel and flew more than 700 airlift sorties in support of Operation Shining Hope, which provided civil engineering, logistics, and security for some of the more than 1.3 million Kosovars displaced in the region. When massive earthquakes devastated Turkey and Taiwan, the Air Force provided airlift for much-needed supplies and provided transportation for crucial search and rescue teams. In July 1999, the Air Force demonstrated its quick global reach and versatility by flying to the South Pole to airdrop medical supplies to a U.S. researcher. In October, we returned again, this time to pick up a doctor who needed urgent medical attention. At home, the Air Force provided expertise in the fields of fire-fighting, environmental leadership, explosive ordnance disposal, emergency medical response, and search and rescue. During Hurricane Floyd, the Air Force flew more than 40 search and rescue missions, saving more than 200 lives. And, as in every other year, the Air Guard, acting in state status, responded to scores of civil emergencies throughout the United States.

PREPARING

To stand prepared to meet national security demands, the Air Force must maintain its superiority in the face of evolving threats, high operations tempo, and reduced funding. To help us better meet these challenges, we implemented the EAF concept, focusing our Total Force team to further our aerospace integration efforts and to explore innovative ways to meet tomorrow's security requirements.

Expeditionary Aerospace Force

Since the Gulf War, America's Air Force has been asked to engage on a continuous basis in contingency operations across the spectrum of peace and conflict, frequently in austere locations, yet all the while remaining ready to fight in two major theater wars. To meet these requirements, we revamped our concept of operations to become an Expeditionary Aerospace Force (EAF)—changing how we organize, train, equip, and sustain our forces to meet the challenges of today's global security environment. The EAF concept represents an evolutionary transition from our Cold War operations and organization.

Prior to 1989, the Air Force was postured against one primary threat, the Soviet Union. Much of our force was forward deployed and if called to fight, would do so from home base or would deploy to a well-established, permanently manned facility. While our mobility forces deployed in support of humanitarian operations, our combat forces generally did not deploy away from well-established bases. Since the Gulf War, however, deployments of both combat and mobility forces to austere forward locations has become a way of life for the Air Force. The consequences of this change are far-reaching. To name a few:

—Our men and women are separated from their home bases and families for unpredictable and extended periods every year—with a significant negative impact on retention;

—Our home-station manning has become inadequate—and workload has increased—because forces are frequently deployed even though home-station operations must continue at near-normal pace;

—Our units deploying forward must carry much more infrastructure to expeditionary bases;

—Force protection and critical mission security for forward-deployed forces is a major consideration;

—The demands on our smaller units, such as ISR and combat search and rescue units, have dramatically increased—they are properly sized for two major theater wars, but some are inadequately sized for multiple, extended contingency operations;

—Due to the unpredictable nature of contingencies, training requirements have been expanded, and training cannot always be fully accomplished while deployed supporting contingencies; and

—Because contingencies are unpredictable, it is much more difficult to use Reserve Component forces, many of whom need time to coordinate absences with civilian employers before they are free to take up their Air Force jobs.

The EAF structure is a revolutionary transition intended to respond to all of these problems. First, we have created a rotational structure by reorganizing our Active and Reserve Component deployable forces into 10 Aerospace Expeditionary Forces (AEFs). These AEFs are employed two at a time for 90 days over a 15-month rotation cycle. During every cycle, the two engaged AEFs have enough equipment and forces to address steady-state contingency requirements, such as Operations Southern and Northern Watch, the Balkans, and counter-drug operations, as well as significant contingency operations short of major theater war. In addition, there are five lead mobility wings responsible for opening and operating airfields and assisting in humanitarian relief operations; each wing is on call for 90 days every 15 months. Finally, there are also two contingency response wings held in reserve to satisfy unplanned requirements above steady-state commitments. These wings will alternate on-call every 90 days and will eventually become part of the 10 AEFs as the EAF concept matures.

Second, we have added manpower to the primary bases that support each EAF component, so that there will be sufficient manpower on a base to support both home station and deployed operations. In fiscal year 2000 we will move 2,640 authorizations from predominately "tail" to "tooth" to support the EAF. We have programmed some 3,180 additional positions for fiscal year 2001, and will need to continue to address the resourcing needs of some of our career fields, such as security forces, to fill base operating support requirements at contingency bases.

Third, we are working on making all of our deploying units lighter and leaner so that they can deploy in 72 hours or less. This effort has many dimensions. For example, we must use our space systems to allow us to "reach back" to CONUS for combat support. We must reduce the amount of equipment and spares that move forward, which requires us to perfect two-level maintenance, time-definite resupply, in-transit visibility, and a host of modern logistics improvements. We must also perfect our deployable support equipment, which provides food, tents, beds, power, communications, sanitation, and all of the basic requirements of life. And we must augment the equipment that is necessary to run operations from austere fields, such

as radar approach control equipment, maintenance equipment, fire fighting equipment, and special purpose vehicles.

Fourth, we must organize and train our deploying forces, especially our expeditionary combat support, and tailor them to the requirements of the contingency operation they will perform. This task includes major innovation to prepare and employ teams in unit type codes (UTCs) within the joint warfighting planning systems. This effort allows us to present our total force capabilities more effectively while providing the predictability and stability our people need in their lives.

The EAF concept is revolutionary as it helps balance the aerospace challenges of the future, the conflicting demands of broad engagement operations, diverse CINC requirements, while providing a clear response to our people's needs—offering them more reason to stay with the greatest aerospace power team ever fielded.

On October 1, 1999, the Air Force began the AEF rotation cycle transition period and expects to be fully operational by March 2000. Building on EAF concepts in Kosovo, in which we were able to open, equip, man, and operate some 21 expeditionary bases in Europe, we expect early AEF rotations to be successful. Our initial deployments have in fact been very successful; however, challenges remain as we fully implement the EAF concept. Global taskings for our low-density/high-demand (LD/HD) platforms—intelligence, surveillance and reconnaissance, command and control, and search and rescue assets—continue to strain our people and equipment. Similarly, we have identified shortfalls in some capabilities, such as suppression of enemy air defenses (SEAD), which will require us to add new aircraft to make all of our AEFs roughly equivalent. We will continue to hone and improve the EAF concept as we implement it, incorporating lessons learned from ongoing AEF deployments.

Total Force Integration

The U.S. Air Force is an integrated Total Force that relies on critical contributions from active-duty members, Guardsmen, Reservists, civilians, and contractors. Each brings unique and complementary characteristics to produce a strong and versatile team. The active component drawdown, in concert with a shortage of trained aircrews on active duty and the increase in operations tempo, has dramatically increased our reliance on the Air National Guard and Air Force Reserve. For example, in EAF, the Air National Guard will rotate 25,000 airmen through contingency assignments in the first 15 months, and combined with the Reserve, will supply 10 percent of the deployed forces in each rotation. The Guard and Reserve are also actively moving into less traditional roles at home. The Air National Guard is transitioning to F–16 training missions at Kelly AFB, Texas, and Springfield Air National Guard Base, Ohio, and to F–15 training at Tyndall AFB, Florida. The Reserve is also transitioning to the F–16 training mission at Luke AFB, Arizona, and is conducting test support at Edwards Test Center, California; flight check functions at Air Force depots; and instructor duties at primary pilot-training bases. We continue to increase the number of reserve associate units established alongside active F–16, F–15, Airborne Warning and Control System (AWACS), KC–135, C–5, C–141, C–17, Special Operations C–130 units, and space operations units. Associate units have no assigned aircraft and use active-duty aircraft for training and mission accomplishment.

Aerospace Integration

Since its inception, the Air Force has made great strides in gaining air superiority and exploiting space. We view the flight domains of air and space as a seamless operational medium. Their integration is essential to advancing our warfighting capabilities in support of the nation's security obligations. We are committed to providing effective and interoperable aerospace capabilities for the nation.

The merger of air and space operations is a continuing journey. For the past decade, the barriers between air and space planning and operations have diminished substantially. Through further integration, we seek to produce the most efficient military effects for the joint force commander without regard to where platforms reside.

The Air Force is not America's only operator in air and space, but we do account for over 85 percent of DOD's personnel, budget, assets and infrastructure for space-related activities. On a daily basis, U.S. military forces depend on the full set of space assets acquired and operated by the Air Force. In addition, our nation's investment in and reliance on space-based capabilities to support the national information and commercial infrastructure is increasing. As more countries enter the space domain, potential threats will increase, and space control will become a more important capability of the Air Force.

Over the past two decades, the Air Force has developed a number of key capabilities that demonstrate the further potential of integrating air and space competencies. For example, to facilitate the timely development of space forces, the Air Force has placed an emphasis on space control in the requirements generation process. The Counterspace Oversight Council (CSOC) has been created to validate Air Force counterspace requirements and ensure space control priorities are adequately considered. Furthermore, intelligence, surveillance, and reconnaissance (ISR) systems, which combine air, space, and ground sensors, are becoming the standard for global ISR capabilities. In Operation Allied Force, our U–2s flying over Kosovo and Serbia relayed their data via satellite in real time to CONUS, where that data was analyzed and sent back to the theater. Real-Time-Into-Cockpit (RTIC) information capabilities have taken intelligence, surveillance, and reconnaissance a step further. RTIC conveys perishable battlespace information directly to the cockpit, enabling aircrews to take advantage of new target opportunities while avoiding new threats. This concept became a reality with the Multi-Source Tactical System (MSTS) and Track II systems that provide satellite communications links to strike aircraft already en route to the target area.

Integration of air and space systems also requires integration of education and training. The Air Force has initiated a number of new programs to accomplish such training. The Aerospace Basic Course at Air University lays the foundation for understanding aerospace concepts that will shape the culture of tomorrow's Air Force. All new officers must attend this course, in which they will learn how to defend an expeditionary force and how to plan and execute an integrated aerospace tasking order (ATO), which is the gameplan for modern combat operations. In addition, we established the Space Warfare Center and, in conjunction with the Air Warfare Center, are developing tactics, techniques, and procedures for better warfighting capabilities. Finally, we established the USAF Weapons School Space Division at Nellis AFB, Nevada, to provide intensive, graduate-level education for space and missile operations officers alongside fellow officers from the fighter, bomber, command and control, rescue, intelligence, and tactical airlift communities.

In an effort to improve the effectiveness of Aerospace Operations Centers (AOCs), we also established the Aerospace Integration Center at Nellis AFB, Nevada. This is a fully equipped, state-of-the-art AOC, where airmen can learn the basics of battle management and test new theories in conjunction with real and simulated operations on the Nellis ranges. The integration center is a significant step toward normalizing the AOCs like any other weapon system, with the goal of ensuring proper training, certification, and management for personnel with air, space, and information credentials for assignment to AOCs.

We have identified a number of goals over the next few years to further integrate our air and space capabilities. We will:

—Provide career-broadening opportunities for our people to develop an aerospace mindset throughout the Air Force;
—Expand education and training for our enlisted members to ensure they can appreciate their contribution to the aerospace force;
—Normalize Air Operations Centers as weapon systems;
—Broaden the training of our joint force aerospace component commanders (JFACC) to include specific aerospace education and field experience;
—Exploit data-fusion capabilities to support AOC functions by fusing aerospace ISR data, exploiting distributed networks, building a comprehensive view of the battlespace, and providing near real-time inputs for existing battle management systems;
—Develop dynamic space scenarios for exercises and wargames to train our personnel in the use and limitations of existing and future aerospace capabilities; and
—Improve the ability of our acquisition community to evaluate ground, air, information, and space options based on military performance, cost, and effectiveness.

Innovation

Innovation has always been the key to ensuring today's Air Force will meet the challenges of tomorrow. Innovation has played a crucial role in our aviation heritage, and it will enable the Air Force to continue to apply and upgrade its capabilities to meet the future security needs of the nation. The Air Force is committed to a vigorous program of researching, experimenting, testing, exercising, and evaluating new operational concepts and future systems for aerospace power.

Battlelabs

The Air Force continues to reap the benefits of the six battlelabs created in 1997. The six battlelabs—Air Expeditionary Force, Space, Information Warfare, Force Protection, Unmanned Aerial Vehicles, and Command and Control—are small, focused groups of operators developing high-payoff concepts as we seek to support DOD's missions. The battlelabs help us to develop superior ways to organize, train, equip, plan, command, and employ aerospace forces. Some early benefits of the labs include development of the Enhance Linked Virtual Informations System (ELVIS), Joint Surveillance Target Attack Radar System (JSTARS) Battlespace Imaging, Network Attack Visualization, Ground Based Radar Site Protection, Expeditionary Operations Centers, and Space Surveillance Network Optical Augmentation. Each of these innovations allows us to provide cost-effective capabilities for combatant commanders and enhanced joint operations.

Joint Expeditionary Force Experiment

Last year's Joint Expeditionary Force Experiment was the second in a series of Air Force experiments designed to explore new operational concepts and advanced technologies. JEFX 99 expanded the command and control experimentation developed in JEFX 98, enhancing the integration of space capabilities into the integrated command and control system distributed architecture and incorporating coalition forces into the Air Operations Center. In JEFX 00, we will focus on agile combat support while continuing our efforts in expeditionary operations, information operations, common operational picture, and medical readiness.

Wargaming

The Air Force conducts two major wargames to explore new strategies, concepts, capabilities, and doctrine. Each wargame is held biannually on a rotating basis. The first, Global Engagement, explores emerging aerospace concepts set approximately 10–15 years into the future. The second, Aerospace Future Capabilities Wargame, evaluates strengths and weaknesses of future forces and operational concepts 20–25 years from now by comparing them against our Vision and Strategic Plan. The outputs from these wargames provide insights and suggest additional analyses that eventually feed into research, experiments, exercises, and the operational Air Force.

Headquarters Air Force 2002

Headquarters Air Force (HAF) 2002 will bring us into the new millennium in a manner consistent with our Vision. It will create a military headquarters that is more effective, more efficient, and a better place to work. HAF 2002 is a response to the changing dynamics of our expeditionary aerospace force, which necessitate a headquarters that is equally agile in providing the appropriate plans, policies, and resources our forces need. Early initiatives have included reorganization of information networks and support offices to permit electronic transmission of tasks and documents throughout the headquarters and the creation of a single executive secretariat to manage work flow. We are also reorganizing our public affairs and legislative affairs offices in an effort to permit better coordination of information flowing to Congress, the media, and the public. HAF 2002 seeks to rethink and redesign processes to achieve dramatic performance improvements and to leverage the talents and improve the quality of life for all Air Force members assigned to the headquarters. It will focus on cutting costs, eliminating redundancies, reducing work of little value, and creating the agility to better adapt to a constrained resource environment.

Defense Reform Initiative/Air Force Management Reform

The Office of the Secretary of Defense has established the Defense Reform Initiative (DRI) to improve the way DOD works by reallocating resources from support areas to fighting forces. The ultimate goal is to balance the demands of meeting current requirements with the imperative to invest for the future. In today's era of tight budgets, the Air Force is committed to reducing overhead functions and moving maximum capability to its combat units.

We continue to aggressively scrutinize management headquarters levels to ensure they are the absolute minimum to execute the operational mission. In fact, reductions in management headquarters have outpaced those of overall force structure since the drawdown began in 1987. However, recent significant shifts in how and where we deploy our forces in response to worldwide contingencies caused dramatic increases in the demands on our staffs. In particular, to make expeditionary operations work, our forward forces must reach back to CONUS-based staffs for combat support functions. We must therefore, maintain adequate management headquarters staff capable of the tremendous logistical and planning efforts necessary

to execute our military objectives. We are already at the limit of staff reductions we can take and still support assigned missions.

We continue to execute the public/private manpower competitions that have become a DRI success story. The Air Force fully executed its 1999 plan for announcement of OMB Circular A–76 studies, with 9,083 positions added to the study pool. We concluded 15 cost comparison initiatives, covering 1,205 positions which resulted in 60 percent of work being contracted and the remainder going to the government's most efficient organizations. Additionally, we completed 31 initiatives to contract via the direct conversion process, covering 646 positions. The average savings was 35 percent. We conducted a top-to-bottom "commercial activity" review of our manpower authorizations, yielding additional competition candidates. This continues to be a promising initiative and will be completed annually. Our efforts to incorporate better business practices and efficiencies are not limited solely to commercial activities. By utilizing a strategic sourcing approach, we will continue to find better ways to do business in areas that are not commercial in nature. Establishing an overarching strategic sourcing program that complements OMB Circular A–76 competitions with other efficiency tools such as reengineering extends our opportunities for improvement into inherently governmental functions as well.

In support of the DRI and Defense Reform Initiative Directive (DRID) #49 which addresses specific goals for utilities privatization, we are tracking the status of 640 utility systems (water, wastewater, electrical, and natural gas) in the Air Force inventory. We have determined 78 utility systems were already privatized prior to the DRI; 23 systems are owned by others (for example, owned by host nations at overseas locations); 98 utility systems are exempted due to readiness requirements; leaving 441 systems as candidates for privatization. We have awarded contracts for analysis of 288 systems to determine the feasibility for privatization. We are also applying these same goals to military housing. Since fiscal year 1998, we have added eight projects to our family housing privatization efforts. This gives the Air Force a total of ten pilot housing privatization projects for fiscal year 1998–2000. The privatization effort is critical to our overall housing revitalization program as outlined in our Family Housing Master Plan, approved in August 1999.

Financial Management Reform

The Air Force, as a prudent steward of public funds, is working diligently to comply with the Government Performance and Results Act (GPRA) and the Chief Financial Officers (CFO) Act. We have already begun incorporating key GPRA measures into our financial statements. Last year the Air Force passed audit tests on some of the most important portions of its CFO financial statements, including disbursements and budgetary resources provided. We have instituted specific organizational and training changes aimed at improving internal controls to help prevent fraud and improve confidence in our financial performance. The Air Force also has an ongoing program to fix its financial systems, a key step in moving toward unqualified audit opinions on all its financial statements. As we improve our financial systems, the Service will focus first on those improvements that help commanders make better decisions.

DECISIVE FIGHTING FORCE

The Air Force meets the nation's challenges because of our world-class people, readiness, modernization, and infrastructure. However, we must continue to address challenges that threaten to undermine our status as a decisive fighting force. We work hard to ensure we recruit and retain quality people, meet our near-term readiness goals with the proper equipment and training, and meet our long-term readiness objectives with a time-phased modernization effort. We are extremely grateful to Congress, the President, and the nation for the historic gains in compensation and benefits made in fiscal year 2000. These recent gains positively impact retention and quality of life for all our personnel and puts us on the road to recovery.

PEOPLE

The cornerstone of our Air Force is our airmen who get the job done, whether maintaining a fighter for combat operations over the Balkans, serving as a loadmaster on a C–17, controlling satellites from Colorado, or standing alert at a missile launch control center in Wyoming. Our airmen are well-trained, fit, motivated, and ready to serve their country. They are our most valuable resource and our top priority.

Because our people are the key to accomplishing our mission, we continually review our personnel end strength levels and size these levels to support evolving mission requirements and fact-of-life personnel dynamics. We determine our military

and civilian manpower needs programmatically through a requirements-based process linked to the National Military Strategy. The Air Force continues to capitalize on technology, modernization, and Total Force integration, as well as aggressively pursuing opportunities to achieve best value by commercially competing non-military essential support functions. We have recently commissioned an independent study of Air Force manpower requirements, focusing on the needs of the EAF at a time when our aging aircraft fleet is also driving increased maintenance manpower requirements. This study, to be performed by RAND with outside reviewers, will seek to define required manning levels and also provide sourcing strategies for required manpower, including using the best combination of Guard, Reserve, civilian, and contract manpower.

Recruiting

Even in the competitive job market of the 1990s, the Air Force has continued to recruit men and women of extremely high caliber. We are committed to building and maintaining a decisive fighting force and to do this we must continue to access high quality people despite the current recruiting challenges. Over 99 percent of our accessions have high school diplomas, and 76 percent rate in the upper half for test scores achieved on the Armed Forces Qualification Test. Because we depend heavily on highly technical skills honed over years of experience, we seek to recruit the very best, and then retain them for a career.

Although we are proud of our recruiting record, we must improve. Our recruiting environment faces the most intense hurdles we have experienced in our history. Interest in military service among America's youth was relatively low, but stable in the late 1990s (13 percent for men and about 7 percent for women) after declines in the early 1990s. At the same time, the job market is strong, especially in the high-tech industries—the Air Force's biggest competitor. Unemployment in 1998 was at its lowest level in a generation at 4.5 percent. Preliminary data shows that the unemployment rate for 1999 was 4.2 percent. These factors coupled with the increase in the percent of college-bound high school youths, now over 65 percent, have further reduced the number of potential recruits.

We need to be aggressive and creative in meeting the challenges of today's recruiting environment. During 1999, for the first time in 20 years the Air Force missed its recruiting goal. We actually accessed more recruits in 1999 than in 1998, but our recruiting goal was raised in 1999 because of our retention declines. Compared to the 1998 recruiting goal of 31,300, our 1999 goal grew to 33,800, and the 2000 goal is 34,000. To help meet this growing challenge for new recruits and proactively frame our future recruiting efforts, we conducted a Recruiting Summit (a top-to-bottom recruiting and accession review). As a result of this review, we have developed a multi-faceted strategic plan including more than 120 initiatives we are now considering for implementation to combat the recruiting shortfall. Reprogrammed funds of $8 million in fiscal year 2000 and $20 million in fiscal year 2001 will target: expanding our recruiting force; stepping up marketing and advertising; broadening awareness of the Air Force; and fielding more enlistment incentives.

—Expanding our recruiting force. Although they enjoy exceptionally high productivity, Air Force recruiters are currently outnumbered by our sister services by a ratio of 13 to 1. A single Air Force recruiter is expected to produce over 2.5 recruits per month compared to the DOD-wide average of approximately one per month. Recognizing the importance of our "front line" ambassadors, we have increased recruiter production to fill 100 percent of our existing authorized billets. As a result, production recruiter manning has increased from 985 in fiscal year 1999 to over 1,140 today and is projected to increase to 1,209 by March 2000. We will continue our "full court press" through March 2001 to increase recruiters by an additional 300 to 1,509 total. In order to support this increase, we will also invest approximately $8 million in fiscal year 2001 in new facilities and support equipment for these recruiters.

—Energizing new, creative, and innovative marketing and advertising efforts. In the past, we have successfully attracted enough recruits without focussed market strategies. However, in today's strong economy, many other attractive options are available to the high quality person we are attempting to recruit. For the first time in our history, we have budgeted for prime time television advertising. We are also expanding our marketing and advertising to include new technology venues: in-system high school television advertising; theater; Internet; and interactive CD–ROMs. In addition, we have refined our advertising efforts in radio, magazines, newspapers and targeted base-level and regional influencer tours. For fiscal year 2000, we have allocated over $65.4 million to these efforts and plan to invest $59.2 million in fiscal year 2001 to continue to

project our Air Force image to America's youth, sending a message that highlights a healthy mix of intrinsic and incentive benefits.

In a parallel effort, we are establishing a centralized Air Force Marketing Office to direct all Air Force marketing and advertising efforts. Its charter will include consolidating all marketing and advertising funding and research, expanding marketing and advertising expertise, and developing an integrated, comprehensive multi-media program for the Total Force. We recognize we must leverage our marketing and advertising efforts and associated resources to optimize our ability to specifically attract our target audience and increase our visibility at all levels, from the broad national perspective to the local community.

—Broadening awareness of the Air Force by increasing our presence in America's local communities. We are opening new high school Junior ROTC (JROTC) units and adding a college Senior ROTC detachment. Although JROTC is a citizenship and leadership development program, nearly 45 percent of all JROTC graduates historically affiliate with the military. Therefore, with reprogrammed funds and support from Congress and DOD, the Air Force is expanding the number of high school JROTC units from 609 today to 945 by fiscal year 2005. And although ROTC enrollments have been down, in fiscal year 2001 we will open a new Senior ROTC detachment in Alaska.

—Developing and expanding accession incentives. Competition for high-quality candidates is at an all-time high. To continue to attract America's best and brightest and maintain our technical edge, we are committed to developing and expanding accession incentives. As a result of our Recruiting Summit, the Air Force is investing $5 million in a pilot College Loan Repayment Program in fiscal year 2001. We have also expanded our Enlistment Bonus Program to include over 100 skills and increased the maximum bonus amount to $12,000 for selective six-year enlistments for combat controller and pararescue specialties. These increases have met with great success—68 percent of our bonus eligible accessions selected a six-year initial enlistment in fiscal year 1999. Expanded funding for critical skill enlistment bonuses was also included in our fiscal year 2000 budget. In addition, a six-month test to award $3,000 enlistment bonuses to members enlisting for four years in the mechanical area (a mechanical aptitude index of 44 and higher) is included in the fiscal year 2001 budget.

We also plan to expand our Prior Service Enlistment Program, which accessed 605 prior service members in fiscal year 1999 compared to 196 in fiscal year 1998, and develop a pilot program to test a new Prior Service Enlistment incentive. We have developed an Enhanced Prior Service Program that expands the number of career fields for former Air Force members who honorably served in any specialty, possess the necessary aptitude and are willing to retrain into any critically manned career field. In addition, we have also expanded the opportunities for former sister service members who meet our entrance criteria. Paralleling these efforts, we are investing $2 million in fiscal year 2001 to develop and field a prototype Prior Service Enlistment Bonus Program targeted at former Air Force members who can move into hard-to-fill or critical career fields.

We believe these four targeted efforts, in addition to the compensation gains provided in the fiscal year 2000, will have a significant impact in our ability to make choosing an Air Force career a viable and realistic option, as well as restore our competitive recruiting edge.

Retention

Our need to retain a highly skilled force remains a top priority. The Air Force's high level of concern has increased because of continued declines in enlisted and officer retention as well as an unbalanced civilian workforce. From fiscal year 1998 to fiscal year 1999, first-term enlisted retention dropped from 54 percent to 49 percent, short of our goal of 55 percent. Likewise, career airmen retention fell from 93 percent to 91 percent, below our goal of 95 percent. Although second-term airmen retention stabilized at 69 percent, it is below our goal of 75 percent.

Officer retention is also challenging, especially among our pilots. Last year, pilot retention fell from 46 percent to 41 percent. However, the fiscal year 1999 long-term pilot bonus take rate, a forward-looking measure of pilot retention, rose to 42 percent, up 15 points from fiscal year 1998's long-term rate of 27 percent, permitting a measure of guarded optimism. Navigator retention remained steady at 62 percent. On the mission support officer side, retention rates actually improved from 43 percent to 44 percent, while retention rates for non-rated operations officers dropped from 57 percent to 56 percent.

Many factors affect the decision to stay in or leave the Air Force. Our quality of life and exit surveys over the last three years have surfaced reasons our members

are dissatisfied. High operations tempo has consistently been a leading motivator to separate, along with the ready availability of well paid civilian jobs, existing wage gaps, and dissatisfaction with the Redux retirement plan. Additionally, reduced quality of life and job security concerns due to competitive sourcing and privatization initiatives are also key influencers for personnel who have separated from the Air Force.

The Air Force greatly appreciates Congressional support for our fiscal year 2000 compensation initiatives that will help combat declining retention rates. Our men and women seeking tangible incentives which might influence them to remain a part of the Air Force Family are experiencing the largest pay raise in almost 18 years (4.8 percent—effective January 2000). These initiatives coupled with the ongoing efforts to close the pay gap with the civilian sector, display sincere gratitude for the daily sacrifices of our service men and women. All of these efforts will make continued service more attractive. Although too early to assess the full retention impact, we believe the benefits gained through fiscal year 2000 legislation will have a positive impact on Air Force personnel contemplating a "stay or go" career decision.

Several other key programs were also in fiscal year 2000 legislation. Enactment of the Career Enlisted Flyer Incentive Pay (CEFIP) will encourage enlisted aircrew members to join and remain in the aviation career field. Reducing out of pocket expenses for first-term airmen assigned to their first duty station through the enactment and implementation of a Temporary Lodging Expense (TLE), which did not exist before, as well as an adjustment to the Basic Allowance for Housing (BAH), will help improve retention.

The authority provided in fiscal year 2000 to expand the Aviation Continuation Pay (ACP) Program is a significant part of the multi-faceted approach designed to improve pilot retention in fiscal year 2000 and beyond. Mid-career and senior pilots have been separating in unprecedented numbers in recent years. In fiscal year 1999 for every two pilots that we trained, three walked out the door. However, we are optimistic that pilot retention will improve due to changes to the ACP program. The restructured program takes full advantage of the authority the Service has been given by increasing the annual amount of the bonus to $25,000 per year and extending the length of the bonus out to 25 years of aviation service. This compensation package is designed to retain pilots through a full military career. As we witnessed the long-term pilot bonus take rate increase from 27 percent in fiscal year 1998 to 42 percent in fiscal year 1999, we believe that this leading indicator of pilot retention will continue to reflect an improved retention environment as we implement the fiscal year 2000 program.

The Aviation Continuation Pay (ACP) Program was enacted and implemented in 1989 to influence rated retention and stabilize the rated force. In exchange for additional commitment to service, ACP is offered to a targeted group of pilots to arrest declining retention due to the significant "pull" of airline hiring and "push" of operations tempo. The Air Force is capitalizing on this increased authority by restructuring its ACP Program and expanding the eligible population of aviators.

We have implemented other ideas and incentives to eliminate the reasons our people leave the Air Force. We implemented the Expeditionary Aerospace Force concept, which will give our people more stability and predictability in their deployment schedules. Whenever possible, we minimized our participation in exercises, and lowered the frequency of our operational readiness inspections, yet still ensuring combat readiness. In an effort to encourage the number of reenlistments needed in certain skills to sustain the specialty career force objectives, we have more than tripled the number of specialties eligible for Selective Reenlistment Bonuses since 1995. Now, approximately two-thirds of all specialties qualify for a bonus in one, some, or all of the three bonus zones. Also, as part of our multi-faceted approach to abate our pilot exodus, we increased Aviation Career Incentive Pay (flight pay) from $650 to $840 at 14 years of service, prioritized our requirements, reviewed alternative staff manning, and increased our pilot production and service commitment.

Air Force civilians are an integral part of our aerospace team. In an effort to provide commanders with a state-of-the-art, sustainable civilian workforce capable of meeting tomorrow's challenges, we are working on the following solutions: managing our accessions with properly sized force renewal programs; expanded and targeted training and retraining; and separations management through the use of buyouts (incentives) for force shaping.

To sustain a civilian workforce, we need the right mix of new, mid-level, and senior employees. In the last nine years we have seen a 62 percent drop in employees with less than eight years of service and a 10 percent increase in the number of our employees who are eligible for retirement. In five years, over half of our civilian work force will be eligible for optional or early retirement. This imbalance occurred

through a combination of loss programs and constrained accessions. Loss programs included early retirements and separation incentives that trimmed the more senior year groups while minimizing involuntary actions, such as reductions in force. Constrained accessions limited the number of new hires while the force was reduced over the last nine years. These factors are leading to sustainment problems and a shortage of mid-level managers and administrators from which to select future Senior Executives. "Currency of skills," particularly in our high-tech area, is another issue related to civilian retention. Without an adequate influx of new employees with current, state-of-the-art skills, our acquisition, scientific, and technical workforce is not sustainable.

Air Force senior leadership is committed to developing a plan to better manage and further improve our Total Force retention. We have scheduled a Retention Summit, similar to the Recruiting Summit, to review retention issues covering the full range of concerns to include operations tempo management, quality of life (medical care, education, etc.), assignment system, mentoring, and leadership. Field focus group visits will validate findings and initiatives resulting from the Retention Summit. We remain optimistic that these changes and improvements will renew our people's faith in our ability to provide the quality of life they deserve and reaffirm our commitment to recruit and retain a dedicated quality Air Force into the 21st Century.

Quality of Life

Our most valuable resource is our people and we are committed to taking care of them and their families. Quality of life initiatives acknowledge the increasing sacrifices our people make in support of our national objectives and are pivotal to recruiting and retaining our people. Quality of life for our people occupies a prominent position in Air Force strategic planning and ranks with modernization and readiness as Air Force's top priorities. The welfare of the men and women serving our nation is a critical factor to our overall readiness. Therefore, the Air Force will continue to place people and quality of life investments in a balanced funding priority with readiness and modernization. We will continue, with your support, to pursue quality of life priorities such as fair and competitive compensation and retirement systems; balanced PERSTEMPO; safe, affordable, adequate housing; increased support of community and family programs; expanded education programs; and improved access to quality health care.

The fiscal year 2000 compensation initiative recognizes our people as a valuable asset, acknowledges their contributions, and provides superb quality of life enhancements. We are greatly encouraged by the improved compensation strategy and increased benefits—full restoration of the military retirement system; a 4.8 percent pay raise; future pay raises set at Employment Cost Index plus 0.5 percent; pay table reform; Career Enlisted Flight Incentive Pay approval; Basic Allowance for Housing increase; Aviation Continuation Pay enhancements; Temporary Lodging Expenses for first term airmen; and the Air Battle Managers save pay provision—and its potential to affect recruiting and retention.

In addition to these gains presented by fiscal year 2000 legislation, the Air Force is making every effort to further enhance our airmen's quality of life. To help arrest the increasing operations tempo levied on our people, we implemented the Expeditionary Aerospace Force concept, which will give our people more stability and predictability in their deployment schedules. Additionally, the need for sustained investment levels, coupled with cost-based housing allowances and the ability to competitively source and privatize ailing infrastructure will go a long way to provide access to safe, affordable, and adequate housing. Our infrastructure bears the brunt of funding pressures in a budget-constrained environment and sustained deferment of maintenance over many years further complicates the problem. Even within these pressures, we have applied $91.6 million on this budget submission toward our Dormitory Master Plan to eliminate a deficit of dormitory rooms and replace the worst facilities. We have adopted a 1 + 1 (one airman living in a room sharing a bath) plan to house unaccompanied airmen and currently 75 percent of our unaccompanied airmen housed on base have a private room with a shared bath. We have also funded $223 million for our Family Housing Master Plan, which improves and renovates military provided housing. In addition, DOD has introduced a proposal to adjust basic allowance for housing (BAH) to reduce out-of-pocket expenses to 15 percent by fiscal year 2001 and potentially eliminate out-of-pocket expenses within five years. Finally, personal fitness contributes to Air Force readiness by increasing productivity, providing preventive health benefits, and long-term medical cost savings. As such, we dedicated $33.4 million for fitness facilities and an additional $3.5 million for in-theater fitness, sports, and recreational equipment.

In the Air Force, we realize that while we recruit individuals, we retain families. In addition, as large parts of our force deploy for extended periods, our ability to care for their families becomes increasingly important. Consequently, we continue to demonstrate our commitment to our airmen and their families through programs such as chaplain services, spouse employment, personal financial management assistance, childcare and youth centers, surviving spouse casualty support, relocation and transition assistance, commissaries, and military exchanges. Also, for our junior airmen, we offer a Personal Financial Management Program to help deal successfully with today's heavily credit-based society. In order to expand and enhance our childcare and youth activities, we have dedicated $4.5 million for child care center construction. We further dedicated $2.9 million to our deployed spouse outreach programs, which increases Internet capability at deployed locations to provide worldwide connectivity between deployed troops and their families. Our family readiness staff members at each Air Force base provide a wealth of information and support for families of deployed airmen.

An important quality of life factor that significantly impacts recruiting and retention is expanded educational opportunities. For airmen working toward attaining their initial college degree, the Community College of the Air Force allows them to combine college credits and military education and experience to earn an associate degree. For both undergraduate and graduate education, the Air Force Tuition Assistance Program pays up to 75 percent of tuition costs for accredited colleges and universities, and the Air Force Civilian Tuition Program supports self-development for civilian employees. Although educational pursuits are difficult given our high operations tempo, our current distance learning initiatives offer our deployed personnel distributed learning through CD–ROM and interactive television (paper-based). We are developing an advanced distributed learning initiative through web-based education for the future. The Air Force supports elimination of the $1,200 payment required to receive the education benefit of the Montgomery GI Bill. In addition, we support expanding enrollment opportunities for those not currently covered by the bill. These Air Force educational programs give our people valuable motivational benefits.

Perhaps the biggest quality of life issue facing the Air Force today and in the coming years is medical care. Access to quality health care is crucial to the quality of life of our airmen (active duty and retirees) and their families and greatly affects our recruiting and retention efforts and, ultimately, our readiness. TRICARE, the DOD program to ensure health care at a reasonable cost, is designed to provide a quality health care benefit, improve beneficiary access, preserve choices for our beneficiaries, and contain costs, all while providing a structure to support the military medical forces needed to deter and fight the nation's wars. TRICARE was fully implemented as of June 1998 and is a good start to providing quality health care. However, there have been problems, such as access to care, claims processing, reimbursement levels, and TRICARE management requires constant attention. Several of these issues have been resolved, and the rest are being worked aggressively. Our latest Air Force Inspection Agency audit concluded customer satisfaction with TRICARE is increasing.

The Air Force Medical Service initiated bold reengineering efforts to increase access to Military Treatment Facility (MTF) medical care and provide a much stronger emphasis on preventive services. The goal is to enable all TRICARE Prime beneficiaries to be assigned to an MTF Primary Care Manager by name, as well as to be guaranteed access for acute, routine and preventive appointments. At the direction of the Secretary and the Chief of Staff, the Air Force Surgeon General (SG) developed a campaign plan to ensure line commanders understand TRICARE and know how to help subordinates with problems. Preliminary results from this program, Operation Command Champion, have been very encouraging.

Also, numerous demonstration projects to improve the quality of TRICARE are under way, especially for retirees and Medicare-eligible beneficiaries. For example, a Medicare Subvention program called TRICARE Senior Prime is currently active at five Air Force locations; the MacDill 65 subvention program cares for up to 2,000 enrollees in the Tampa, Florida region; and the Federal Employee Health Benefit Program (FEHBP) 65 test, a nationwide program at eight selected locations, is slated to begin in spring 2000.

We are now working TRICARE and health care issues through the Joint Chiefs of Staff and the Defense Medical Oversight Committee (DMOC), which has been formed to ensure optimum Service participation in the health care agenda and improve health care for active and retired members. This board consists of USD (P&R), Service undersecretaries, Service vice chiefs, and ASD (HA) as voting members. The Service SGs participate but are non-voting members. The main purpose of this board is to define the medical benefits and establish budget priorities.

Equal Opportunity

The strength of the Air Force is in its talented, dedicated, and diverse men and women working together as professionals to accomplish the Air Force mission. Creating and sustaining an environment that is free from unlawful discrimination and harassment is therefore a vital part of the Air Force readiness equation. And the commitment to fully utilize the talents and capabilities of a diverse workforce is critical to achieving the Air Force mission. Every Air Force member and civilian employee deserves the opportunity to realize his or her full potential and to work and live in an atmosphere that respects and values human dignity and each has concomitant obligation to treat co-workers and subordinates in the same manner.

Air Force policy on unlawful discrimination and harassment is very clear: zero tolerance for such behavior in any form. Harassment, threats or ridicule of individuals or groups based upon their real or perceived differences have no place in the Air Force and will not be tolerated. We will provide equal opportunity and treatment for all members and employees regardless of race, color, religion, national origin, sex, and in the case of civilian employees, disability and age.

The Air Force is also committed to eliminating behavior and unintended barriers that hinder successful performance, and to creating an environment where every person has an opportunity to serve. We are committed to providing our Total Force with strong leadership, effective policies and programs, training and education opportunities, enforcement and resolution tools. We will continue to strive for improvement through an ongoing program of evaluation and assessment.

Commanders and supervisors have a responsibility to combat the effects of unlawful discrimination and harassment and to promote a healthy environment and human relations climate. Equal Opportunity is a critical performance factor for all military and civilian leaders, supervisors and managers.

READINESS

The Air Force must be ready to respond rapidly anywhere in the world on very short notice. We are ready to meet this demand every day, as we demonstrated this past year in operations from Kosovo to the South Pole. However, too many years of high operations tempo, aging equipment, lack of spare parts and engines, and the cumulative effect of chronic underfunding threaten the Air Force's near-term readiness levels.

Our aggregate readiness levels are tied to upkeep of equipment, training and ranges, and mission-related infrastructure. We are making progress in all these areas, but challenges remain.

Upkeep of Equipment

Greatly increased deployments since 1990, aging aircraft, problems in funding spares through most of the 1990s, and low retention of maintenance technicians in recent years have combined to cause a 9.9 percent drop in mission capable rates over the Air Force fleet since 1994. As discussed below, since 1997, the Air Force has addressed a number of issues relating to spare parts. As a result, non-mission capable rates relating to spares (NMCS) appear to be stabilizing. Unfortunately, low retention of maintenance manpower caused by very heavy workloads and deployments has caused a 2.1 percent increase in non-mission capable for maintenance (NMCM) rates since 1994. For example, maintenance manning at the journeyman Senior Airman level has decreased from 100 percent in fiscal year 1994 to 71 percent in fiscal year 1999. In addition to the retention initiatives that apply throughout the Air Force, we are working to increase maintenance manning through both retention and recruiting incentives and ultimately by increasing the manning throughout our maintenance career fields.

We have a multi-faceted strategy to improve the materiel system that supports equipment readiness. First, we have fully funded "depot level repairables" accounts, which are used by operating units to "buy" spare parts from DOD and Air Force sources. Second, we increased inventory levels of critical spares by increasing the obligation authority of certain Working Capital Funds, and we are programming budget authority to pay for these spares as they are delivered. Third, we are working to consolidate Air Force depots and to make the parts system more efficient, to keep down the cost of spare parts. Unfortunately, the consolidation is itself causing near-term spares problems. Fourth, we are modernizing critical subsystems in our older aircraft where it is no longer cost effective to make repairs on individual components, or where manufacturing sources for component repair are no longer available.

Spares Funding

Adequate spare parts are essential for ensuring our equipment remains combat ready. Spare parts shortages, arising from funding problems in the 1990s, were a major contributor to the Air Force's readiness decline over the past several years. Downsizing of the Air Force spare parts inventory went too far. Supply systems were pushed to the limits as Air Force units deployed more often. As a result, the non-mission capable rate attributed directly to supply shortfalls increased from 8.6 percent in fiscal year 1991 to 14 percent in fiscal year 1999.

In fiscal year 1999–2001, Congress, DOD, and Air Force took specific actions to address shortfalls in spare parts funding. In fiscal year 1999 and fiscal year 2000, Congress supported the spare parts recovery with an increase of $194 million and $85 million, respectively. Additionally, the Kosovo Emergency Supplemental added $387 million to spares for surge and reconstitution efforts. Consistently, DOD and Air Force committed to the obligation authority to match these resources, and to the $382 million required to resolve the bow wave shortfall that had accumulated over the past several years. Also in the Air Force fiscal year 2000 and fiscal year 2001 President's Budget, we fully funded the spare parts validated requirement. Currently, we are completing an analysis of Kosovo lessons learned and thorough review of RSP kit levels, and other spare part levels, to ascertain the criticality of increases in this area.

Anecdotal evidence indicates progress is being made in availability of spare parts, although masked to some extent by increased requirements due to Kosovo and disruptions in parts supply due to BRAC-directed workload transitions. The Air Force supply business area, for example, saw an upward turn in almost all its fiscal year 1999 performance metrics when compared to its fiscal year 1998 results. Backorders fell from a peak of 615,000 in December 1998 to 374,000 by the end of fiscal year 1999 (39 percent reduction). We are now working hard with major vendors to cut the elapsed time between the date a part is ordered and the date it is delivered, so we can turn dollars into parts in less than the historic 18–24 months.

We have also seen a trend toward stabilization in total NMCS rates. The overall Air Force rate increased only 0.1 percent from fiscal year 1998 to the end of fiscal year 1999, even though we fought a major theater war in Kosovo in the middle of fiscal year 1999. Monthly NMCS rates also held fairly steady over the past 12 months. Unfortunately, there continue to be "technical surprises" that dramatically reduce mission capable rates in individual weapons systems. For example, late in 1998, all C–5 aircraft were inspected and some were grounded because of a crack found in a major structural member in the tail. In September and October 1999, C–5 mission capable rates dropped because of problems with the newly fielded FMS–800 modification/upgrade to avionics. At the same time, inspections of KC–135 aircraft disclosed problems with stabilizer trim brakes, which caused inspections, groundings, and ultimately a shortage of KC–135 stabilizer trim assemblies.

We anticipate that the improved spare parts funding in the remainder of the FYDP will arrest the decline in NMCS rates.

Spares Inventory

In the early 1990s, the Air Force changed from three-level maintenance to two-level maintenance in an effort to cut operating costs. Under two-level maintenance, operating units no longer make repairs at the base level. Instead, spares parts are sent back to depots for repair, receiving a repaired part in return for a defective part. Theoretically, the combination of fewer inventory points and better transportation would reduce the requirement for spare inventories. In fact, efficiency gains were much lower than projected, with the result that the Air Force inventory system has been short of spare parts for some time. To rectify this, the Air Force received approval from DOD in fiscal year 1999 to add to spare parts inventories through an increase in working capital fund obligation authority of $381.8 million. These funds were put on contract in fiscal year 1999, with anticipated deliveries through fiscal year 2002. At the same time, $135 million was added for the Oklahoma City Air Logistics Center (ALC) because of increased sales at that center.

During Kosovo, depots and contractors surged to provide increased parts support to the units flying Operation Allied Force. When that operation ended, Air Force senior leadership made a decision to keep the depots in surge until the end of fiscal year 1999 to ensure that there were enough parts to take care of maintenance that was deferred during the war. The depot surge was funded with $387.3 million fiscal year 1999 obligation authority, pending the release of Kosovo supplemental funding.

The result of these three efforts is to increase depot level repairable item inventories by $904 million, which should lead to an improvement in stockage effectiveness and a reduction in repair times in Air Force depots as parts are delivered against these funds.

Consumable spare parts have also caused mission outages. Consumables are managed by the Defense Logistics Agency (DLA) in support of all the Services. While DLA has an average stockage effectiveness level of 85 percent, that level has been much lower for aviation spares which tend to be high cost, low demand items. This situation has resulted in operational aviation units and depots in both the Air Force and Navy receiving increasingly lower rates of support, resulting in a devastating impact particularly on engine readiness. DOD has recognized this situation and directed DLA to take immediate corrective action. In response, DLA added $500 million for consumable aviation spares across the FYDP, including $100 million in fiscal year 2001. Action was also taken to accelerate the ordering process, through the working capital fund, in order to guarantee more rapid deliveries in fiscal year 2001.

Depot Consolidation

Fiscal years 1998–2001 are a time of transition for Air Force depot maintenance, as two of our five principal depots complete the process of BRAC-directed closure and their workloads are transferred to our remaining depots and commercial sources of repair. The C–5, Sacramento, and Propulsion Business Area public-private workload competitions, which were a part of this process, resulted in estimated savings of over $2.6 billion over the life of the contracts.

In 1998, we began the move of competed workloads from our Air Force depots. The C–5 workload has now largely stabilized at Warner Robins ALC. The transition of A–10 and KC–135 heavy maintenance to Ogden ALC is essentially complete. However, significant challenges remain in moving the F100 engine workload to Oklahoma City ALC and the "commodities" workload (hydraulics, instruments, and a wide range of aircraft components) to Ogden ALC. At Oklahoma City, shortages of skilled workers, the sheer number of processes that must be transferred and proved, difficulties posed by proprietary technical processes, and the requirements of Kosovo have combined to slow the transition from original plans. At Ogden, shortages of skilled workers coupled with the need to move, reconstitute, and calibrate complex and sometimes delicate equipment has caused major disruptions in the ramp-up of production of commodities parts. In addition, the Kosovo conflict resulted in unusually high spares consumption rates, using up the spares that Sacramento had stockpiled for the transition period. The result has been shortfalls for many Ogden-repaired items.

The Air Force has taken aggressive action to correct technical data deficiencies, install and calibrate specialized support equipment, train the workforce, and streamline the production processes for the commodity workloads. By December 1999, the commodity production at Ogden ALC had reached a level almost equal to the previous Sacramento ALC production output. Ogden has established a "get well" target of summer 2000 to produce commodities in sufficient quantities to significantly reduce customer backorders and satisfy mission capable requisitions. In the interim, "bridge contracts" with commercial suppliers have been put in place to mitigate production shortfalls.

We believe that the consolidation of workloads will ultimately lower costs by increasing efficiencies in the remaining three Air Force depots. With the turmoil of the BRAC years behind us, we are beginning to see the promised gains. All Air Force depots performed remarkably well in fiscal year 1999, considering that over 35 percent of the total workload was in transition and that the remaining depots were engaged in extensive hiring and training of new personnel while meeting the surge demands of Kosovo.

Schedule performance improved in fiscal year 1999, as the time needed for aircraft repair dropped for the second consecutive year. The elapsed time for aircraft to move through the entire depot repair process, measured in flow days, was reduced by an average of more than 30 percent. For example, flow days per aircraft for the F–15, C–5, C–130, and C–141 were reduced ranging from 15 to 82 days. F–16 and B–1 flow days were cut by 22 and 24 days, respectively. Depot Maintenance financial management also improved in fiscal year 1999. Revenue was higher than expected primarily due to increased Kosovo commodity repair requirements. Due to prudent management, expenses, which were only slightly higher than planned, were more than offset by increased revenue. As a result, the fiscal year 1999 profit objective was exceeded by over $60 million, where there had been losses in the hundreds of millions of dollars in many prior years.

Finally, a word must be said about the work of the depots during Kosovo. The Air Force responded to Kosovo by surging its depots. The depots implemented temporary duty recalls, scheduled additional shifts, weekend hours, and accelerated contractor and depot repair operations. These extraordinary actions increased depot production of commodities, engines, and aircraft by 500,000 hours and ensured support to units performing peacetime missions while satisfying operational require-

ments of the conflict. The Air Force continued the surge through the end of fiscal year 1999 to support reconstitution and recovery of our combat units and to reduce existing backorders. We are extremely proud of the men and women who worked weekends and evenings to support the warfighters in the field.

Equipment Modifications

The age of Air Force weapons systems is unprecedented. This year the average age of our aircraft is 20 years. Under current modernization plans, the average age will increase to 30 years by 2015. The cost of maintaining this older equipment is growing. Fatigue, corrosion, and parts obsolescence are driving up the costs of maintaining older planes and reducing overall equipment readiness. Worse, the industrial base that supports older aircraft is drying up, as aerospace companies leave niche markets, particularly in electronics, where commercial systems have long ago abandoned technology still in use in the Air Force. If the Air Force is to continue making readiness affordable—indeed, possible—we must balance the cost of maintaining weapons systems against the cost of replacing major subsystems or the weapon system itself. With our large transport aircraft and bombers, it has proven both feasible and cost-effective to replace subsystems rather than complete aircraft. What we have attempted to do is to group related modernization efforts into "campaigns" where the work on many systems will be performed during one maintenance cycle. This reduces overall costs, while limiting the number of aircraft out of service at any one time. Modernization programs of this type include:

—The Pacer CRAG program which replaces or modifies radar components, provides a GPS-based navigation system, and adds the Traffic Collision and Avoidance System (TCAS), as well as navigation modifications required to meet the Global Air Traffic Management (GATM) system standards;

—The C–130 Avionics Modernization Program (AMP), to go on contract in 2000, incorporates navigation safety, GATM, and expanded TCAS systems into a completely revamped "glass" cockpit; it also replaces the APN–59 radar system with a more capable and cost-effective radar;

—The C–5 AMP, which has already begun, provides a modern "glass" cockpit and replaces the avionics, radios, and flight computers; and

—The C–5 Reliability Enhancement and Re-engining program, scheduled to begin engineering design in fiscal year 2000, includes upgrades for engines, hydraulic, pressurization, airframe, electrical, and landing gear systems.

In the bomber fleet, the B–52 and B–1 have modernization efforts planned. Both are experiencing aging aircraft problems, and require extensive upgrade programs, particularly in the avionics arena. The following are the major planned modification efforts for the bomber fleet:

—The B–52 Avionics Midlife Improvement (AMI) program will upgrade the aircraft's offensive avionics system (OAS) while preserving all current B–52 combat capability. Because the current offensive avionics system is based on 1970's technology, it is suffering from obsolescence and supportability problems. The AMI program will upgrade the OAS by replacing three line replaceable units (LRUs) and developing new aircraft software;

—B–1 mission capable (MC) rates have steadily declined since fiscal year 1996. The "MC Rate Red Team" has been established to determine the reasons for the decline and develop a program to improve B–1 performance;

—In addition, programs are currently in place to fix problems on the B–1. The Defensive Systems Upgrade Program will replace aging components with a newly developed, joint Navy/Air Force Integrated Defensive Electronic Counter Measures (IDECM) system, scheduled for initial qualification in the spring of 2000. The communication system on the Block D models will be upgraded this year to correct a problem with bleed over in both plain and encrypted text. Finally, a study is being conducted to look into a problem with unacceptably high numbers of retained weapons, or "hung stores".

In the fighter fleet, there are two kinds of modernization efforts. The first is service life extension programs for the A–10 and F–16 fleets. These include avionics and structures modifications. The second type of program involves capability improvements, which not only provide improved lethality, but frequently have the added benefit of reliability and maintainability improvements through more modern avionics components. Continued funding for these and other modification programs is critical to ensure our weapons systems are ready and able to meet future contingency tasking. Examples of major modifications for both the A–10 and F–16 fleets, as well as a cost-of-ownership reduction plan for the F–117, are as follows:

—The F–16 Falcon Flex program replaces the most unreliable and obsolete radar components while significantly reducing the ownership costs;

—F–16 electronic countermeasure and navigation systems are also receiving upgrades;
—Falcon UP and the planned Falcon STAR programs include numerous depot level structural modifications required to extend the service life of all F–16 aircraft to 8,000 hours;
—The F–16 CUPID program is bringing our older F–16s (Blocks 25–32) new life by adding night vision equipment, enhanced avionics, and the ability to carry an infrared targeting pod and laser-guided munitions. Ultimately, CUPID-modified aircraft will have the capability to carry JDAM and other GPS-guided munitions;
—The A–10 Hog Up program will inspect, repair, replace and overhaul many structural and mechanical systems; it is the first step to enable the aircraft to remain viable until the year 2028. The Hog Up configuration is the required baseline for the Aircraft Structural Integrity Program, which will allow the A–10 to reach a service life of 16,000 hours; and
—The F–117, the world's first operational low-observable (LO) combat aircraft, is participating in the Single Configuration Fleet (SCF) program. The goal is to reduce the total ownership costs of the F–117 by standardizing the fleet to a single optimized spray/sheet coating and edge configuration. This will reduce LO maintenance requirements and take advantage of state-of-the-art robotic technology.

Engines: A Special Case

The Air Force has made significant progress to stop the decline in engine readiness. Improved engine funding, engine life management planning, and better partnering with vendors have contributed to slow but steady readiness improvements in most of the Air Force engine fleet. However, technical surprises, forecasting, spare parts problems, and a lack of experienced manpower still prevent us from meeting our wartime spare requirements for approximately 25 percent of our systems.

The Air Force is taking action to rectify this situation. Ongoing F–16 engine safety upgrades and modifications have been accelerated by two years to correct six of the most serious technical problems and reduce the risk of engine-related accidents. In addition to the F–16 safety upgrades/modifications, we have been working several other initiatives to upgrade and modernize aircraft engines. The TF39 engine, which powers the C–5 aircraft, is currently undergoing a high-pressure turbine modification which greatly improves reliability. Approximately $31 million will be spent to upgrade the T56–7 to the –15 configuration on the C–130 aircraft. Nine additional KC–135s are programmed for reengining starting in fiscal year 2002 and beyond, funded at approximately $263 million. Over $225 million in the FYDP is programmed for modernization of the oldest (F100–100 & –200) F–15 engines. Finally, the engine problems in the T–38 aircraft are being addressed with almost $289 million in the FYDP for J85 engine modernization and other propulsion upgrades.

Improvements have been made in partnering with vendors to reduce the spare parts acquisition lead time. For example, the GE engine contract reduces acquisition lead time from more than two years to 90 days on catalog items. In addition, the Air Force has identified the need for additional engine manning requirements and will address these in future Air Force budgets.

Training

Training a quality force is instrumental to our readiness. From the day airmen and civilians join our team, we invest in their education and training to prepare them for today's demanding operational environment and tomorrow's challenges. Over the past few years, we have introduced several new programs to further hone our military skills and understanding.

For our new airmen, Warrior Week at Basic Military Training provides a realistic, weeklong exercise at a bare-base site. This program introduces airmen to the expeditionary nature of today's Air Force and serves as a transition from a classroom environment to the real-world, high-stakes environment typical to our deployed forces. Participants experience, first hand, the challenges associated with deploying to a bare-base location, setting up an operating base, implementing force protection measures, and commencing operations, all under austere living conditions. Similarly, Air Force Academy cadets are introduced to the expeditionary nature of today's Air Force by participating in Global Engagement week at the United States Air Force Academy. Initial skills training for the enlisted corps is also essential for mission accomplishment in an Expeditionary Aerospace Force. Upon completion of basic military training, all enlisted personnel attend initial skills training and receive their copy of the Airman's Manual, an operational handbook. The Mission

Ready Airmen and Mission Ready Technician programs are designed to prepare an apprentice to accomplish the basic technical skills necessary to perform in his or her specialty.

The Aerospace Basic Course (ABC) provides new officers and civilians a foundation in the profession of arms and a working knowledge of the unique contributions of aerospace power. Through this entry-level professional military education program (PME), Air Force lieutenants and key civilians gain a deep appreciation of Air Force values, history, doctrine, and the skills required to operate and fight from austere, forward bases, fully exploiting the medium of aerospace for the joint force.

The Air Force develops its leaders deliberately, using a proven process that exposes them to Air Force and joint operations, PME, and increasing command and staff responsibilities. The depth of an airman's expertise is developed through a series of operational assignments that make him or her an aerospace power authority. Having always placed a premium on education for officers, enlisted members, and civilians, our PME system prepares leaders for the challenges they will face in their immediate future. As airmen progress through their careers, the Air Force competitively selects the very best to command and lead its squadrons, groups, and wings. The Air Force relies on a comprehensive series of additional leadership and command courses to supplement continuous mentoring that produces leaders who are able to make the right decision, whether in peace or war.

Operationally, the Air Force continues to train its aircrews and support personnel by participating in numerous joint and combined exercises around the world. These training opportunities encompass both field exercises and simulations. Distributed Mission Training (DMT) holds great promise. Using state-of-the-art simulation technology, DMT permits aircrews to train in synthetic battlespace, connected electronically to other aircrews at distant air bases. Importantly, DMT delivers this enhanced training from the home station, helping the Air Force limit the amount of time airmen spend deployed and facilitating the training of AEFs as they prepare for deployment. Multiple aircraft Mission Design Series (MDS) are currently under development for DMT. An initial delivery of F–15C Mission Training Centers (MTC) has been configured at Langley AFB, VA, and Eglin AFB, FL, and will reach full operational capability in mid 2000. Contracts for new F–16 and AWACS DMT simulators have been awarded and are expected to be delivered this year.

Air Force civilians are an integral part of the aerospace team. They work side-by-side with airmen in some operational roles, as well as most support roles. They play an essential part in the development and acquisition of the aerospace and information technologies that will maintain the Air Force's dominance. The active component drawdown will increase their presence in non-military essential functions and senior leadership positions across the Air Force. To prepare them for the 21st century, the Air Force is making a concerted effort to integrate military and civilian training, to the greatest extent possible, and to streamline human resource development services to simplify and speed delivery of cost-effective training to the Total Force. In addition, the Air Force is engaged in a top-to-bottom review of professional development, training, and education for managers and executives; general work force proficiency, specialized, and career progression training and education to maintain minimum skill and currency; and the development of wage grade supervisors and employees in the trade, craft, and technical maintenance fields. We have increased opportunities for professional development through PME, developmental assignments with increasing command and staff responsibilities, and through participation in the Defense Leadership and Management Program (DLAMP). The goal is to produce technically proficient civilians who are well versed in Air Force missions, structures, and doctrine.

MODERNIZATION

At the beginning of the last century, a relative few shared a vision and dream of flight. Today at the dawn of a new century, the men and women of the Air Force share a common vision of becoming a light, lean, and lethal Expeditionary Aerospace Force. The Air Force Modernization Program is a critical enabler of that vision. We will leverage technology to improve combat effectiveness through upgrades of legacy systems, selective new starts, and investment in critical technology programs for advanced systems. This revolution in military affairs we are undertaking requires a revolution in business affairs. The Air Force will continue to lead the way in acquisition reform, using proven commercial and industry practices. We will develop and deliver new technologies and weapon systems more quickly and cheaper than traditional DOD methods have allowed in the past.

Our challenge in formulating the modernization strategy is how best to balance our sustainment and modernization efforts given the constraints we face and the

needs of the warfighter. Currently 60 percent of Air Force Total Obligation Authority is spent on sustainment and 40 percent on modernization. We have funded both modifications and procurement as highlighted in the tables on page 57.

The Air Force's long range vision to become a light, lean, and lethal Expeditionary Aerospace Force complements Joint Vision 2010—the conceptual template for how America's Armed Forces will channel the vitality and innovation of our people and leverage technological opportunities to achieve new levels of effectiveness in joint warfighting. Thus, our modernization focus is synchronized with Joint Vision 2010. Now we must carefully execute our modernization plan to extend our position as the world's preeminent aerospace power.

Full Spectrum Dominance

Full Spectrum Dominance is required to provide the joint force freedom from attack, freedom to maneuver, and freedom to attack at a time and place of our choosing regardless of weather. Key to this is the Air Force's current high-low mix fighter force structure. This high/low fighter force structure is based on a high capability fighter, the F–15 now and the F–22 in the future, to provide air superiority and a low cost fighter, the F–16 now and the JSF in the future, in large numbers for attack capability. Another key is the heavy bomber force, adding prompt global reach independent of theater basing constraints and high-mass precision engagement capability. America displayed its current aerospace dominance with the success of Operation Allied Force in Kosovo. Maintaining and improving the Air Force's ability to achieve future Full Spectrum Dominance is a primary objective of the Air Force Modernization Program.

Aerospace Superiority

The ability to control the vertical dimension so the joint force is both free from attack and free to attack is the key to achieving Full Spectrum Dominance. In the 21st Century, aerospace superiority will depend on the F–22 Raptor to defeat enemy aircraft; the Space-Based Infrared System (SBIRS) to provide early warning of long range hostile missile threats; and the Airborne Laser (ABL) to provide a credible defense against theater ballistic missiles.

The F–22 Raptor is the replacement for the F–15. The F–22 will dominate the vertical battlespace of the 21st Century with its revolutionary combination of stealth, supercruise, maneuverability, and integrated avionics. The F–22, armed with the AIM–9X infrared short range air-to-air missile, an improved AIM–120 AMRAAM missile, and the Joint Direct Attack Munition will be able to destroy threats to our forces in the air and on the ground when it enters service in December 2005. In 1999, the F–22 logged its 500th flight test hour, continuing flight envelope expansion, successfully demonstrating supercruise and high angle of attack post-stall flight with thrust vectoring. The F–22 avionics program also made major strides with the early delivery of the Block 1 software to the manufacturing line for installation in the first avionics test aircraft. Testing of future versions of F–22 software was also initiated in the one-of-a-kind F–22 flying test bed with the delivery of Block 2 in October. The unique capabilities of the flying test bed to check out, modify, and verify software performance prior to F–22 flight testing will enable the rapid introduction and check out of Block 2 and Block 3 avionics in CY00 and the initiation of F–22 Block 3 fight testing.

The F–15C/D will remain the Air Force's lead air superiority fighter until the F–22 is operational. It is being upgraded to add increased reliability and enhanced capabilities. These upgrades include the APG–63(V)1 radar providing greatly improved reliability; the APG–63(V)2 Advanced Electronically Scanned Array (AESA) radar providing improved performance; the Joint Helmet Mounted Cueing System and AIM–9X missile providing a first shot/first kill capability in the within-visual-range arena; enhanced combat identification for beyond visual range identification of airborne targets. Forty-eight F–15C/Ds deployed in support of Operation Allied Force and shot down four MiGs.

The Air Force is a major contributor to DOD's tiered architecture to counter the ever-growing theater ballistic missile and cruise missile threats. This architecture is based on an integrated capability to detect, classify, intercept, and destroy or negate the effectiveness of enemy missiles prior to launch or while in flight. This capability is vital to protect U.S. and coalition forces, high-value assets, and population centers within an assigned theater of operations. Numerous Air Force programs and systems discussed throughout this document contribute to this architecture. The SBIRS and the ABL programs are critical in addressing the theater ballistic missile threat. The Air Force is aggressively pursuing new technologies within our laboratories to counter the emerging cruise missile threat. Many of these technologies have been transitioned to current weapon systems. The Radar System Improvement

Program (RSIP) for the E–3 Sentry Airborne Warning and Control System is one example, and the F–22 with its advanced radar and sensor fusion capabilities will capitalize on the newest technologies for cruise missile defense.

The SBIRS includes both high and low components that will provide missile warning to national and theater commanders. It will improve our capability to detect and track theater missile launches, cue missile defense systems, and contribute to the characterization of the theater battlespace and the technical intelligence missions.

The integrated SBIRS architecture incorporates a "systems of systems" concept that provides information for target acquisition, cueing and track data to interceptor systems, and a defense battle manager. This cueing effectively extends an interceptor's range and effectiveness over autonomous radars alone. The SBIRS constellation consists of highly elliptical orbit (HEO), geosynchronous orbit (GEO), and low earth orbit (LEO) spacecraft that receive and transmit data to an integrated ground system.

The SBIRS program has four associated increments. Increment 1 consolidates Defense Support Program (DSP) ground processing into a master control station located at Buckley ANG Base in CO. Increment 2 consists of two HEO sensors and four GEO satellites with first launch in fiscal year 2004. Increment 3 will be comprised of 24 LEO satellites with first launch in fiscal year 2006. Increment 4 will optimize the entire system and define requirements for further deployment.

The ABL will be a key Air Force contributor to the Nation's multi-layered theater missile defense architecture. It is DOD's only boost phase intercept system—with a planned fleet of seven operational aircraft. Last year, the Air Force successfully tested an improved version of its flight-weighted laser module and also demonstrated the baseline version of the battle management software. Just this past January, ABL accepted delivery of its first 747 aircraft, with modifications set to take place through early 2002. ABL is on track for a lethal demonstration against a theater ballistic missile in fiscal year 2005.

Global Attack

Global Attack assets allow our Nation to successfully conduct military operations across the spectrum of conflict. Global Attack programs include modernization of the Minuteman III intercontinental ballistic missiles (ICBMs), B–1, B–2, and B–52 bombers, and F–15E, F–16, and F–117 fighters. Coupled with precision-guided munitions, these platforms produce a potent force for deterrence of both nuclear and conventional conflict.

The Air Force is continuing to fund several ICBM modernization programs designed to extend the operational life of the Minuteman ICBM weapon system beyond 2020. The Guidance Replacement Program (GRP) is replacing failing Minuteman guidance system electronics, while the Propulsion Replacement Program (PRP) is remanufacturing all three Minuteman solid fuel stages to correct age-related degradations and maintain weapon system reliability. A GRP full rate production contract was awarded in December 1999, with a full rate production decision on PRP scheduled for September 2000. The PRP first asset delivery to Air Force Space Command is scheduled for March 2001.

The current bomber inventory includes 94 B–52s (built 1960–1962), 93 B–1s (built 1980–1986), and 21 B–2s (built 1988–1999). The B–1s are assigned to five main operating bases, including the two Air National Guard at McConnell AFB, KS and Robins AFB, GA. This mix of bombers provides the capabilities required to meet Air Force commitments—each can attack from the U.S. The B–2 can penetrate against high-value, heavily defended targets; the B–1 is the conventional interdiction workhorse and can penetrate for high volume direct attack in a medium threat environment; and the B–52 equipped with CALCMs provides long range standoff precision and direct attack in a low threat environment.

The B–2 can meet any global power projection mission, anytime, anywhere. The Air Force continues to make improvements to the maintainability of the B–2's low-observable coatings and integrate advanced weapon systems beyond the Joint Direct Attack Munition (JDAM) used successfully by the B–2 over Kosovo, to include the Joint Standoff Weapon (JSOW), Joint Air-to-Surface Standoff Missile (JASSM), and EGBU–28. The B–1 and B–52 continue to provide firepower to the joint force. Upgrades to the B–1 include the capability to carry JDAM and improved defensive systems; a small number of B–1s are already JDAM capable. The B–52H is now operationally capable of employing JDAM; communications and navigation system upgrades will keep it viable through 2040. An Air Force Reserve (AFR) unit operates and trains in the B–52H, providing significant value to wartime mission readiness. The Reserve is evaluating upgrades to improve the B–52H bomb bay camera that will allow crew members to effectively perform safety inspection for unspent muni-

tions after bombing operations. Both the B–1 and B–52 are being upgraded to carry JSOW and JASSM.

The bomber force made significant contributions to Operation Allied Force. It delivered over 6 million pounds of ordnance and struck over 50 percent of all Allied Force targets. The B–2 destroyed 11 percent of the total targets while flying only 1 percent of the total sorties. The B–1 flew 100 percent of sorties assigned and proved the performance of the ALE–50 towed decoy to negate the effects of enemy fired surface-to-air missiles. The B–52 maintained a 98 percent mission capable rate and led the attack with CALCMs. The use of data links will greatly enhance flexible targeting capabilities, and coupled with the sustained use of precision-guided munitions, will increase the lethality of these EAF forces.

The F–15 Eagle and F–16 Falcon, the Air Force's legacy fighters which entered the service in 1975 and 1980 respectively, provide a potent mix of air-to-air and air-to-surface capability. Operation Allied Force reinforced the Air Force's need to ensure a viable fighter force structure until legacy systems are replaced. While the F–15E provides significant air-to-air capability, it is optimized for the air-to-ground mission. Future planning calls for a replacement for the F–15E to be procured in the 2015 timeframe. In the interim, the Air Force continues F–15E modernization activities. Improvements are planned for electronic defenses, computers, and the addition of a fighter data link. Twenty-four F–15Es deployed in support of Operation Allied Force, and expended more than 2.7 million pounds of bombs and missiles in target destruction.

One hundred F–16 Block 40/50 aircraft participated in Operation Allied Force and delivered over 4,000 bombs on target. The principal lessons learned were the need for Night Vision Goggle (NVG)-compatible aircraft lighting, improved precision targeting pod capability, and an air-to-air interrogator. Kosovo also reconfirmed the need for the present major modernization programs for the Block 40 and 50 aircraft covered under the Common Configuration Implementation Program (CCIP). CCIP includes a new aircraft computer, color displays, Joint Helmet Mounted Cueing System (JHMCS), AIM–9X, Link–16, and NVG-compatible aircraft lighting. The new aircraft computer increases capacity and throughput and solves diminishing manufacturing source problems while enabling the use of future weapons systems. Color displays will present aircraft and combat information to the pilot more effectively for easier interpretation as compared to the present monochrome displays. The JHMCS provides the off-boresight missile targeting capability to employ the AIM–9X, the future high off-boresight air-to-air missile. Link–16 will provide the pilot improved combat situational awareness and NVG-compatible aircraft lighting will provide a permanent modification to the aircraft to allow the unencumbered use of NVGs. Additionally, the Block 50s will receive an air-to-air interrogator capability and the ability to carry both a targeting pod and the HARM targeting system pod to better conduct the suppression and destruction of enemy air defense (SEAD/DEAD) missions. One of the major modification programs for the F–16 Block 25–32 aircraft, principally flown by Air National Guard (ANG) and Reserve, is known as Combat Upgrade Plan Integration Details (CUPID). CUPID consists of four separate upgrade programs: Global Positioning System integration, countermeasure systems mechanization, Situation Awareness Data Link (SADL), and NVG-compatible aircraft lighting. Global Positioning System integration will provide the ability to accurately deliver smart munitions. The improved Counter-Measure System mechanization will enhance the self-protection capability. Situation Awareness Data Link (SADL) will provide the pilot improved combat situational awareness. NVG-compatible aircraft lighting will enhance the aircraft's night combat role.

The Joint Strike Fighter (JSF) is the "low end" of our high/low affordable fighter mix philosophy—ensuring sufficient quantities of very capable attack aircraft to give the U.S. dominant force across the spectrum of conflicts. The JSF program will develop and field a highly-common family of next-generation strike fighter aircraft for the Air Force, Navy, Marine Corps, and our allies. Current program emphasis is on facilitating the evolution of fully validated and affordable joint operational requirements, demonstrating cost-leveraging technologies and concepts, and completing the Concept Demonstration Phase. First flights of the contractor demonstration aircraft are scheduled for the spring of 2000. The Engineering and Manufacturing Development phase will begin in fiscal year 2001.

The F–117 Nighthawk plays a key role in global attack as it penetrates dense threat environments and delivers precision weapons against high-value, highly defended, and time-critical targets. The Air Force continues to modernize this weapon system to improve capability, survivability, and sustainability in the 21st Century. The top modernization program is Single Configuration Fleet (SCF), which provides the fleet with a single radar absorbent material configuration, reducing maintenance man-hours by 50 percent. The need to employ precision, all-weather, GPS/INS

weapons was reinforced during Operation Allied Force; this capability is included in Block Cycles 1 and 2 upgrades. The smart weapons program will incorporate all-weather JDAM, WCMD, and the EGBU–27. Operation Allied Force highlighted the need for smart weapons on the F–117 as over 50 percent of the F–117 sorties were cancelled for weather, impacting the ability to deliver ordnance.

Modern warfare has led to an increase in airborne combat under the cover of darkness. To "Own the Night," the Air Force is pursuing a multi-faceted strategy. First, we are upgrading our F–16 aircraft with the Night Vision Imaging System (NVIS). This upgrade ensures the aircraft internal and external lighting is compatible with night vision devices. Second, we are procuring and fielding F–4949 and AN/PVS–7 Night Vision Goggles for our air and ground personnel. Third, we are developing the next-generation of NVGs called Panoramic Night Vision Goggles (PNVGs). For the Block 25–32 F–16 aircraft, the LITENING II Pod procurement is the number one priority program undertaken by the Reserve and Guard from fiscal year 1999 to fiscal year 2004. In addition to LITENING II Pods, the Reserve is planning to procure more advanced Multi-Function Displays for its F–16 fleet starting in fiscal year 2001. These efforts will effectively enable the Reserve to meet modern combat standards and better serve as a member of the Total Force. All of these modernization activities will significantly improve personnel safety, operational tactics, and mission effectiveness.

The Air Force is also actively upgrading laser eye protection for aircrew and ground personnel from a wide range of lasers. The Air Force initiated a three-phase Engineering and Manufacturing Development program in fiscal year 1999 to counter this emerging threat. The threat includes military lasers, commercial lasers, and foreign lasers specifically developed to damage the eyes or cause temporary vision loss. The ultimate goal in developing laser eye protection is to provide full retinal coverage at any angle, while allowing visibility of the aircraft cockpit displays and good light transmission for use in night operations. The fiscal year 2001 President's Budget includes $13.8 million to procure over 26,000 devices.

Precision Engagement

As shown in Operation Allied Force, theater commanders must have the ability to strike targets precisely in adverse weather conditions while minimizing risk and collateral damage. The Air Force's new generation of guided weapons uses the Global Positioning System (GPS), coupled with an inertial navigation system (INS), to put bombs on targets precisely, night or day, in all weather conditions. Because our legacy precision-guided munitions (GBUs/LGBs) can generally be employed successfully only in clear weather, the Air Force is upgrading limited quantities with GPS/INS guidance units giving them an immediate all-weather capability. The Conventional Air Launched Cruise Missile (CALCM), Joint Air-to-Surface Standoff Missile (JASSM), Joint Standoff Weapon (JSOW), Joint Direct Attack Munition (JDAM), and the Wind-Corrected Munitions Dispenser (WCMD) are among the Air Force's high-priority precision engagement programs.

CALCM is a long-range, large payload cruise missile employed by the B–52 against high priority and heavily defended targets. CALCM continues to be the CINC's first strike weapon of choice during contingency operations, as demonstrated by its superb performance during Operations Desert Fox and Allied Force. Current replenishment programs will convert an additional 322 ALCMs to CALCMs by July 2001. Future plans call for the initiation of an extended range CALCM (CALCM-ER) program to fill mid-term long-range cruise missile needs.

JASSM is a highly accurate, stealthy, standoff missile employed by both fighters and bombers to destroy heavily defended, hard, fixed, and relocatable targets with virtual impunity. As a result of acquisition reform, the JASSM price is one quarter of the cost, and its development schedule is half the time, of similar missile programs. JASSM is currently undergoing flight tests during Engineering and Manufacturing Development and is scheduled to begin production deliveries in 2003 with 768 JASSMs purchased by the end of the FYDP.

JSOW is an accurate, adverse-weather, glide munition, which was successfully employed in Kosovo and Iraq in 1999. The Air Force will use it to deliver cluster munitions that seek and destroy armored and soft targets at ranges up to 40 nautical miles. We are buying two variants: the JSOW/A delivers 145 Combined Effects Bomblets and the JSOW/B delivers 6 BLU–108 anti-armor submunitions. We will procure 3,000 of the A variant and 3,114 of the Bs. We took our first JSOW deliveries in November 1999.

JDAM provides the Air Force the capability to deliver 1,000- and 2,000-pound, general-purpose and penetrator warheads in adverse weather with precision accuracy. We will use JDAM to destroy high-priority, fixed, and relocatable targets from multiple platforms. The first operational use of JDAM was from a B–2 during the

first night of Operation Allied Force. The B–2/JDAM combination was 96 percent effective and targets attacked using JDAMs were damaged or destroyed 87 percent of the time. The current plan is to buy more than 40,000 JDAM kits from fiscal year 2001-fiscal year 2005, with a total program buy of approximately 62,000 kits.

The Miniaturized Munitions Capability (MMC) program is in the Concept Exploration phase with supporting work on-going in the laboratories. Two laboratory technology demonstrations being evaluated in the MMC program are the Small Smart Bomb (SSB) and Low Cost Autonomous Attack System (LOCAAS). SSB is a 250-pound to 500-pound class penetrator with GPS/INS and a terminal seeker. LOCAAS is a 95-pound mini-cruise missile with a LADAR seeker, a 3-mode warhead, and a miniature turbojet engine enabling a 100-km range and 30 minutes of search for mobile targets. The objective is to field adverse-weather precision munitions that are significantly smaller in size and provide increased combat effectiveness against fixed, relocatable, and mobile targets. This would enable carrying more weapons per sortie and increase sortie effectiveness, key to such aircraft as the B–2, F–22, F–117, and JSF where carriage is limited to the internal bay for stealth reasons. Interim results from the on-going Analysis of Alternatives (AoA) points to the MK–82 (500-pound) JDAM as a near-term low risk solution against fixed targets. With internal weapons rack modifications, B–2s and B–1s would be able to carry approximately 80 Mk–82 JDAMs per sortie, significantly increasing target kills per sortie.

Wind Corrected Munitions Dispenser (WCMD) is an INS-guided tail kit that enables us to accurately deliver dispenser weapons from medium to high altitudes. WCMD tail kit-equipped weapons are expected to be available in late 2000. We will buy 40,000 tail kits for integration with Sensor Fuzed Weapon (SFW), Combined Effects Munition, and the Gator mine dispenser.

The Sensor Fuzed Weapon, when mated with a WCMD, will provide a first time capability to accurately engage armored targets from medium to high altitudes. We plan to buy 5,000 SFWs, all of which will be mated with the WCMD.

This combination of next generation weapons provides a balanced force structure enabling our warfighting CINCs an unprecedented ability to attack targets with highly accurate weapons at any time of the day or night in adverse weather and survive the hostile environment well into the 21st Century.

Information Superiority

The capability to collect, process, and disseminate an uninterrupted information flow while exploiting or denying the adversary's ability to do the same, will be critical to success in future military operations. Integrating Command and Control, Intelligence, Surveillance, and Reconnaissance (C^2ISR) assets enables the Air Force to leverage combat capabilities to the maximum extent. Our evolutionary modernization plan to support the EAF includes upgrades to many systems within the information superiority core competency.

A robust C^2ISR infrastructure is key to providing an uninterrupted and timely flow of information. The Air Force has embarked on a study to analyze end-to-end bandwidth requirements, with the goal to ensure sufficient funding is programmed to meet warfighter requirements.

The Aerospace Command and Control, Intelligence, Surveillance and Reconnaissance Center (AC^2ISRC) is the Air Force organization tasked to standardize and integrate Air Force C^2 and ISR systems across joint and coalition systems and create a C^2ISR investment plan that meets future challenges. AC^2ISRC is working to rapidly identify, through joint experimentation, advanced capabilities to transition to the theater commanders that will enable them to get inside an adversary's operating cycle and use information against the enemy. AC^2ISRC's key thrust is creating a "reach back" air operations center that provides modernized command and control through the Global Combat Support System (GCSS–AF) and the Theater Battle Management Core System (TBMCS) program.

JSTARS and AWACS provide theater commanders real-time, wide-area surveillance of enemy ground and air movements. The delivery of three aircraft in fiscal year 2000 will increase the JSTARS fleet to eight aircraft. In addition, we are developing enhanced JSTARS capabilities through the Radar Technology Insertion Program (RTIP), which will significantly improve situational awareness and real-time processing of fixed and mobile targets. Air surveillance will also be improved when the AWACS fleet achieves initial operational capability with the Radar System Improvement Program (RSIP) in June 2000. RSIP provides increased detection range for low radar cross section targets.

The Air Force's Unmanned Aerial Vehicle (UAV) programs, Predator and Global Hawk, are maturing rapidly to support intelligence, surveillance, and reconnaissance operations. During Operation Allied Force in Kosovo, we took real-time video

imagery from Predator and fused it with digital terrain data on the ground in Italy to produce highly precise target coordinates for our precision-guided munitions. These coordinates were then relayed to attack aircraft, typically in minutes. The potential for JSTARS-Predator integration was demonstrated by manually correlating data from both platforms—laying the ground work for future automated correlation and exploitation of the data. We also took Predator beyond its normal ISR mission and into the realm of attack operations by equipping it with a laser target designator. Although the laser designator has not been used in combat, it has been tested, and has the capability to allow laser-guided bombs to be dropped through weather. Air Combat Command is in the process of developing a long-range plan to incorporate a laser designator into the sensor package on all Predators.

The Air Force will continue to exploit the technological promise of UAVs and explore their potential uses over the full range of combat missions. At present, the Air Force has committed $80 million across the FYDP to support the Defense Advanced Research Projects Agency (DARPA) Phase II Unmanned Combat Air Vehicle (UCAV) Advanced Technology Demonstration (ATD), which is designed to answer multiple questions regarding the potential application of UCAVs throughout the spectrum of conflict, with emphasis on C^2ISR feasibility.

Global Hawk is approaching the end of its Advanced Concept Technology Demonstration (ACTD). It is in the user demonstration phase and has achieved over 27 hours endurance on a single flight, reached over 66,000 ft. altitude and totaled nearly 500 hours of flight time. It has participated in several joint exercises, including an over-water flight to and from Alaska and transmitting imagery to ANG, Air Force, Navy and Marine Corps units. Following a Milestone II acquisition decision in late 2000, the Air Force will begin a one-year design update period and produce two post-ACTD air vehicles. The Global Hawk program will provide a cost-effective and useful system to the user at the earliest possible date through spiral development of platform, sensors, and other capabilities.

Global Hawk's first Outside Continental United States (OCONUS) deployment will occur March 2001 when it deploys to Australia under a 50/50 cost-share agreement with the Australian government. This will be Global Hawk's first opportunity to demonstrate its interoperability with a coalition ground exploitation system. Other nations have also expressed interest in Global Hawk and its capabilities.

When Global Hawk begins operations with Block 5 aircraft in fiscal year 2003, it will be used to augment the U–2 fleet, enhancing the Air Force's overall ISR capabilities. In the long-term, the Air Force expects to improve Global Hawk payload capabilities to the point where it could fulfill many missions now executed by U–2 and JSTARS.

The U–2 and RC–135 Rivet Joint continue to be the primary DOD aircraft for ISR data collection to support the joint forces commander. The Air Force is currently upgrading the U–2's defensive system capabilities and synthetic aperture radar to provide near-real-time targeting capability for precision-guided munitions. The first reengined Rivet Joint is undergoing flight testing and will provide improved battlefield coverage as a result of higher altitude and longer loiter times.

Discoverer II is seeding the transformation to global space-based surveillance. The Air Force's Discoverer II partnership with the National Reconnaissance Office (NRO) and DARPA will develop and demonstrate space-based radar capabilities against time-critical moving ground targets in fiscal year 2005. Discoverer II is a two-satellite R&D program that will demonstrate affordable satellite manufacturing by leveraging commercial processes, provide key enabling technologies for advanced radar payloads, and show the operational benefit of the deep-look, continuous, broad-area coverage space provides against an adversary's ground moving targets. Satellite design trade studies are ongoing by three competing contractor teams: Lockheed-Martin; TRW and Spectrum Astro; and Northrop-Grumman and Raytheon. Each team has successfully completed initial hardware tests for competing radar payload designs.

As the developer and operator of the Global Positioning System (GPS), the Air Force provides the world continuous position, velocity, and timing data in all weather, to an unlimited number of users, free of charge. For the Joint warfighter, GPS navigation information is being integrated into nearly all facets of the modern battlefield. The Air Force is modernizing GPS systems and fielding GPS navigation warfare upgrades that will ensure continued U.S. and allied military access to GPS while preventing adversarial use and preserving civil use outside of an area of operations.

Modernization also includes transitioning the ground control segment from a legacy system to a distributed architecture that will facilitate full utilization of the increased capabilities being incorporated into the next generation of space vehicles. In order to address the evolving and expanding threats to GPS, the fiscal year 2001

budget provides funding for the addition of a new military code and a high power spot beam on future satellites. The fiscal year 2001 budget request expands the program from last year, providing additional power to military users in a region of conflict and providing military and civil signals on earlier satellites. This modernization program provides the warfighter with significant increases in protection of military GPS signals from intentional and unintentional interference, beginning with initial deployment of satellites and receivers equipped to process new military signals in the last half of this decade and growing to provide a worldwide robust system about 10 years later. Once fielding of the new equipment is complete, we will have a secure worldwide navigation and timing source for all our weapon systems, augmented by higher power signals in one or more theaters of operation simultaneously as required by senior unified commanders.

MILSATCOM systems, notably the Defense Satellite Communications System (DSCS) and Milstar, continually support contingency and current operations. These systems place powerful communication tools in the hands of battlefield commanders and warfighters around the world, enabling information reachback to CONUS, continuity with the National Command Authority, and intra-theater communications. Global Broadcast Service will replace DSCS. Advanced Extremely High Frequency (EHF) will replace Milstar in fiscal year 2006.

Rapid Global Mobility

Modernization of the Air Force's mobility assets is integral to the daily execution of our National Security Strategy (NSS) and is integral to supporting the EAF concept. Acquisition of the C–17 Globemaster III through 2005 remains the flagship of airlift modernization. The C–17 will replace the C–141 Starlifter force. The Air Force has fielded 57 C–17s and key mobility studies could result in additional buys beyond the currently planned force of 135. The Mobility Requirements Study Fiscal Year 2005 (MRS–05), an update to the 1995 Mobility Requirements Study/Bottom-Up Review Update, will determine the ultimate mix of end-to-end mobility assets. MRS–05 results are scheduled to be released in spring 2000. Using MRS–05 data, Air Mobility Command's Oversize and Outsize Analysis of Alternatives will determine the most cost-effective strategic airlift fleet mix to achieve our National Military Strategy from various postures of engagement. The Tanker Requirements Study for fiscal year 2005, baselined from MRS–05, will determine the number of tankers needed to carry out the NSS.

The C–130 Avionics Modernization Program (AMP) and procurement of the C–130J will consolidate 20 C–130 aircraft configurations into two supportable configurations. AMP will install a state-of-the-art avionics suite to increase reliability, maintainability and sustainability of the C–130 fleet well into future, and eliminate the navigator and simplify training and operational employment. The program will make the aircraft Global Air Traffic Management (GATM) compliant and meet identified navigation and safety mandates.

The Air Force plans to procure the C–130J to replace its oldest 1960's vintage C–130Es. The C–130J will provide increased range, performance, and cargo capacity over the current C–130E/Hs. The Air Force Reserve and Air National Guard C–130 fleet will undergo an extensive AMP that will be followed by a structural, engines, and environmental improvement program. The tactical airlift mission will continue its modernization transformation with the addition of C–130Js. Four C–130Js are being delivered to Reserve units this year while several more are on contract for future delivery.

The Air Force has begun a Large Aircraft Infrared Countermeasures (LAIRCM) initiative to counter increasingly prolific Man-Portable Air Defense Systems (MANPADS). LAIRCM will use state-of-the-art technology to provide active defenses for airlift- and tanker-sized aircraft against widely deployed shoulder-launched surface-to-air missiles. LAIRCM will build on existing systems designed for helicopters and small fixed-wing aircraft. It will add new missile warning and tracking systems to locate and direct the laser at an incoming missile. The laser will jam the missile, driving it away from its target. Operational capability is expected on the first C–17s in fiscal year 2003, with C–130s receiving LAIRCM beginning in fiscal year 2004. Additional airlift and tanker aircraft will be outfitted with this system later in the FYDP.

Equipping a limited number of aircraft with LAIRCM gives the Air Force an initial capability to support a small-scale contingency or other missions that require this additional IR missile protection. A major advantage of LAIRCM over traditional IR countermeasures is the ability to counter an incoming IR missile without deploying self-protection flares as currently used. This greatly reduces the complicated logistics and political sensitivities associated with the use of flares.

Whether employing on-scene Aerospace Expeditionary Wings or deploying contingency forces in response to a crisis, mobility assets make the difference in speed and stamina. Procurement of the 60,000-pound capacity (60K) Tunner aircraft loader and Next Generation Small Loader (NGSL) will replace aging equipment and significantly increase throughput and our ability to rapidly offload cargo from both military and commercial aircraft. We are moving forward with the application of space assets to enhance mobility operations via "In-Transit Visibility," a satellite linked worldwide identification and tracking system.

KC–135 Pacer CRAG (Compass, Radar, and Global Positioning System) upgrades are replacing 1950's technology compass and radar systems. Pacer CRAG eliminates the navigator on most missions, improves operational capability and reduces maintenance-related costs. The KC–135 is also being upgraded with TCAS (Traffic Alert and Collision Avoidance System) and TAWS (Terrain Avoidance Warning System), systems vital in today's crowded skies. Pacer CRAG serves as the foundation for the Global Air Traffic Management (GATM) modification, ensuring unrestricted access to global airspace and will meet FAA and ICAO requirements.

C–5 Galaxy modernization continues to be a top mobility airlift priority to improve our global rapid response and delivery of outsize and oversize cargo. Improving C–5 reliability, maintainability, and availability while reducing operating costs are the cornerstone objectives to improving fleet capability. The Air Force has in place a multiphase modernization plan for the C–5. It includes an ongoing high-pressure turbine upgrade to the engines, an avionics modernization program to comply with new GATM requirements of the 21st Century, and a reliability enhancement and re-engining program.

Our procurement of the full complement of required C–17s and CV–22s; aggressive C–5, C–130, and KC–135 modernization programs; procurement of new ground handling equipment; and global access, navigation, safety, and avionics upgrades to the entire mobility fleet will ensure Global Reach well into the 21st Century.

Likewise, the Evolved Expendable Launch Vehicle (EELV) will provide the Nation rapid access to space. EELV will institutionalize payload processing with a fleet-wide standard payload interface specification and standard launch pads. Key benefits include 24-month payload to booster build integration timelines (reduction of 50 percent over today's systems) and common mating procedures. EELV standard launch pads and pad operations will reduce on-pad cycle time to 1–9 days versus 60–180 days for current launch systems.

Boeing will develop a Delta IV family of launchers around a common core booster which will be powered by a new Boeing/Rocketdyne liquid hydrogen/liquid oxygen RS–68 engine. This 650,000-pound thrust engine is the first new liquid propulsion engine developed in the U.S. since Rocketdyne developed the space shuttle main engine in the early 1970s.

Lockheed Martin's family of launchers is also developed around a common core, which will be powered by the Energomash RD–180 liquid oxygen/kerosene engine. This 860,000-pound thrust engine is derived from the RD–170 engine currently used in the Russian space programs. The RD–180 is the world's highest specific thrust liquid oxygen/kerosene engine. It is reliable, demonstrated, and currently ready for its first launch of a commercial payload in a Lockheed Atlas III. To ensure a foreign supplier cannot deny the U.S. access to space, it is DOD policy that former Soviet Union propulsion systems must be converted to U.S. production prior to use for national security missions. The use of the Energomash RD–180 engine leverages Russian investment in developing over 50 new engines in the past 40 years, transfers unique Russian technology to U.S. manufactures, and provides a path for cooperative ventures between Russia and the United States.

Agile Combat Support

Through Agile Combat Support (ACS), the logistics and combat support communities create, deploy, sustain, and protect personnel, assets, and capabilities across the spectrum of operations. A strong and robust ACS is key to the success of the EAF concept and supports the Air Force core competency of Rapid Global Mobility. Effective beddown support and sustainment allow deploying forces to downsize the amount of equipment to start up and sustain base operations. This reduced deployment footprint lowers the need for prepositioned assets and airlift requirements.

To meet these needs, the Air Force is revamping its combat support systems in many areas. Time-definite delivery provides users with reliable, predictable delivery of mission-critical parts and reduces inventory investments. Reachback provides ready access to rear or U.S. based organizations for support, reducing the deployment footprint, and saving associated costs. Logistics Command and Control (C^2) and other logistics decision support tools leverage information technology, improve base support planning, and enhance tailoring deployment packages for specific loca-

tions and scenarios. Global Combat Support System-Air Force (GCSS–AF) is a key enabler of ACS and provides a framework for integrating our critical combat support information systems and processes across functional areas. It will provide the warfighter and supporting elements with timely, accurate, and trusted ACS information to execute the full spectrum of military operations. Leading edge technologies, such as Survey Tool for Employment Planning, will continue to enhance ACS in the future.

Science and Technology

The Air Force is committed to a strong science and technology (S&T) program that will enable a fully integrated aerospace force to meet the challenges of the 21st Century. The Air Force S&T investment strategy has been focused through a series of six integrated technology thrusts—Space Superiority, Information Dominance, Agile Combat Support, Aircraft Sustainment, Training for Warfighting, and Precision Strike—that directly correlate to and will fully enable the Air Force's six core competencies. These six integrated technology thrusts are multidisciplinary and are distributed across the majority of the ten technology areas in which the Air Force invests. The portion of the Air Force S&T budget relating to space will be doubled by fiscal year 2005 relative to fiscal year 1999, in recognition of the growing importance of space to all facets of Air Force operations. Topline funding for Air Force S&T has improved over last year's President's Budget request. The additional funding has, for the most part, gone into two areas: Basic Research (Budget Activity 1) and Propulsion. Indeed, one result of the changes has been to make Propulsion (i.e., air- and space-related propulsion technologies) the single largest investment area in Air Force S&T (approximately 16 percent of the total.) Moreover, special emphasis is being placed on technologies that will make both current and future weapon systems "lighter, leaner, and more lethal," thereby directly supporting the Expeditionary Aerospace Force concept. Also, detailed planning efforts have been completed that identify high payoff investments in directed energy technologies for the full spectrum of operations.

In recognition of the importance of an agile, highly competent workforce to our future success, the Air Force Research Laboratory (AFRL) has instituted major personnel initiatives under the Laboratory Demonstration Program. Additionally, AFRL is now building new collaborative arrangements with universities and industries under the auspices of the S&T Workforce for the 21st Century (STW–21) Study. This government-operated, collaborator-assisted approach will consist of a team of career civil servants, military scientists, and engineers, and collaborators from the top academic and industrial research groups and Federally Funded Research and Development Centers (FFRDCs). The objective is to engage a small number of non-government collaborators with high national repute to augment the AFRL's on-site government technical workforce.

Several new civilian personnel initiatives are also being explored under STW–21 that should enhance AFRL's ability to attract the best and brightest cadre of civilian scientists and engineers. A contingent appointment authority would provide the ability to immediately hire civilian scientists and engineers for up to 5 years (with a 1-year extension). A second initiative allows appointment of up to 50 eminent civilian scientists and engineers for up to 4 years (with an option to extend 2 years) at salaries up to Level 1 of the Executive Schedule. Another initiative we pursued is high-grade relief to allow AFRL to manage grade/salary levels without artificial constraints. Fiscal year 2000 legislation has already provided AFRL with this exemption, and we thank Congress for this relief.

Through a carefully balanced investment portfolio of basic research, applied research, and advanced technology development, the AF S&T program will both protect the future and transition focused technologies to current and planned weapon systems to improve their performance, supportability, and affordability. The end result is the assurance our warfighters will have the tools they need to remain technologically superior in the new millennium.

Acquisition Reform

The criticality of the revolution in business affairs demands our commitment to continuous acquisition reform. We have taken major steps toward commercial off-the-shelf solutions, migration from military specifications to commercial standards, and increased commitment to cooperative development programs. We are institutionalizing acquisition reform initiatives such as Cost As an Independent Variable (CAIV), and Reduction of Total Ownership Cost (R–TOC) to improve affordability. Our R–TOC program establishes a comprehensive, long-term, cradle to grave process for Air Force cost reductions.

We will continue to look for new areas in which we can improve our ability to deliver systems and capabilities faster and smarter. Promising areas include the integration of the requirements and acquisition processes, cycle-time reduction initiatives, contractor incentive programs, evolutionary acquisition guidance, commercial services, streamlining of the modification management process, and further improvements in electronic business/electronic commerce with such initiatives as the Automated Business Services System and Electronic Posting System.

The Air Force fiscal year 2001 Modernization Program is a balanced approach to securing the required capabilities for Joint Vision 2010 and the Expeditionary Aerospace Force. We are upgrading existing equipment that is still viable and procuring revolutionary new weapon systems where they are needed.

INFRASTRUCTURE

Combat support provides the foundation that enables global engagement and is a linchpin that ties together Air Force core competencies. It includes those actions taken to create, deploy, employ, generate, sustain, maintain, protect, and redeploy aerospace personnel, assets, and capabilities through all peacetime and wartime military operations. The fundamental mission for infrastructure incorporates the unique contributions and capabilities of aerospace power: speed, flexibility, versatility, and global reach. It is a collection of physical elements, such as squadron operations buildings, and processes, such as the military personnel flight operations. Infrastructure supports operations across the spectrum of conflict in both garrison and expeditionary environments. Some infrastructure areas of concern are mission and base property related. Some areas of advancement are in flight ranges, environment, and space infrastructure.

Mission Related Infrastructure

Getting our forces there safely and ready to fight has become more crucial than ever in the rapid response environment we now live in. Our en route petroleum infrastructure equipment and reserves stand ready to support airlift operations worldwide. However, antiquated fuel systems are a major impediment to air mobility and their timely support to the warfighter. As the airlift fleet modernizes, these old fuel systems will be the number one reason why we cannot meet the theater CINC's delivery schedule of combat troops and equipment. Especially hard-hit is the Pacific theater which suffers from a 50-year-old system that constantly fights corrosion in the humidity of the tropics. We have Defense Logistics Agency (DLA) Military Construction (MILCON) projects valued at $275 million from fiscal year 2001 through fiscal year 2005 to both upgrade and increase that support. Other en route infrastructure has experienced a severe funding shortfall over the past decade. An air mobility survey team identified over $1 billion of en route infrastructure deficiencies. Inadequate infrastructure has a drastic negative effect on cargo throughput supporting geographical CINCs. Worldwide air mobility en route system infrastructure has downsized and is deteriorating. In 1992 we supported 40 locations—today we support just 12. The Air Force needs continued strong congressional funding support for mission related infrastructure, most notably in the European and Pacific theaters. Host-nation funding helps; however, that support can be limited and/or unpredictable. In addition, because today's changing strategic environment will involve the Air Force in numerous contingencies in unpredictable locations, access agreements to strategic locations are becoming more critical. The Air Force is working very hard to ensure continued access to these "gateways" which allow air power to be applied anywhere in the world, anytime, while we have reduced the U.S. footprint abroad. Significantly increased infrastructure investment and access agreements will be key as the Air Force continues to maintain global power projection across the spectrum of conflict.

Military Construction and Real Property Maintenance

In the competition for funds, military construction (MILCON), and real property maintenance (RPM) often lose out to more pressing requirements. In addition, funding available for MILCON and RPM could be better spent if the Air Force base infrastructure were properly sized for the force structure it supports.

In the past decade, reductions in Air Force manpower and force structure have outpaced those in infrastructure. As a result, the Service is spending scarce resources on unneeded facilities, spreading its airmen too thin, and struggling to maintain readiness and its modernization program. The need to fund higher priority programs has caused the Air Force to invest less in base operating support, real property maintenance, family housing, and MILCON than it otherwise would have. For fiscal year 2001 our MILCON request is approximately one-third of our validated need. To enhance readiness the Air Force must be allowed to reduce its base

structure. Consequently, the Air Force fully supports Defense Secretary Cohen's proposal for two additional BRAC rounds.

The fiscal year 2001 Air Force MILCON budget request is $596 million, which funds the Air Force's highest priority MILCON projects. Congressional support for this budget request is appreciated, especially for overseas infrastructure. Host nation support alone is insufficient to preserve the infrastructure and quality of life initiatives in Europe, the Pacific, and elsewhere. The emergency funding the Congress provided in fiscal year 1999 for overseas MILCON projects was much needed. If the Congress decides to provide the Air Force additional MILCON funding, consideration should be given to overseas MILCON projects to address readiness and quality of life requirements for our airmen on the front lines.

RPM is funded at a minimum sustainment level intended to accomplish only the day-to-day maintenance required to sustain real property facilities and infrastructure. It does not provide the resources necessary to reduce the backlog of repair and maintenance. As a result, our backlog of repair and minor construction is over $4 billion and will continue to grow.

Ranges and Environment

Maintaining continued access to Air Force land, ranges, and airspace is vital to sustaining mission readiness. The Air Force recognizes the need to balance its test, training, and readiness requirements with responsible environmental stewardship. Over two-thirds of Federal lands are accessible for various public uses. The Service actively participates in collaborative processes and regulatory partnering initiatives that enhance our military operations, address public interests in compatible uses (such as hunting, grazing, etc.), and safeguard the natural and cultural resources on our test and training ranges. This year we started construction of a new training range in Idaho which will significantly enhance local training for our Air Expeditionary Wing at Mountain Home AFB. The success of this range initiative was the result of extensive cooperation between the Air Force and State and Federal agencies, dialogue with Native Americans, active public involvement, and strong Congressional support. We were able to find common ground which allowed us to not only enhance our operations but also end 10 years of conflict and enter a new era of cooperation.

Additionally, this year Congress renewed the withdrawal of public lands which comprise the Barry M. Goldwater Range in AZ and the Nellis Air Force Range in NV. These two ranges have been used to train America's airmen since World War II and represent over 60 percent of all Air Force lands. The Service worked closely with the Department of the Interior, State agencies, interested citizens in both states, and the Congressional delegations for over five years. The extension of the withdrawal of the Nellis Range for 20 years and the Goldwater Range for 25 years will assure the Service the stability it needs to address its test and training needs for the future and to implement successful resource management and public interaction programs necessary for long term sustainment of these two vital ranges.

We continue to look at our training airspace and ranges to provide the Service the operational flexibility, efficiency, and realism we need to continuously enhance our readiness and still minimize, to the extent possible, the impacts associated with our testing and training. Currently, we have a proposal to consolidate some of our bomber training infrastructure and rearrange some existing airspace closer to our bomber units in Texas and Louisiana. This proposal will allow our bomber crews to convert the time they currently spend flying to remote ranges into effective and efficient integrated training. We are committed to working with all stakeholders to improve training capability for our bomber crews while addressing citizen concerns to the maximum extent possible. The Service is committed to prudent integrated range and airspace management to sustain operations, sustain the environment, and sustain community support.

Similar to its commitment to protect rangelands, the Service promotes pollution prevention programs to help reduce or eliminate existing and future environmental compliance burden. Where past practices have disturbed the environment, the Air Force is now more focused on pollution prevention, and also continues to implement clean-up programs and make progress towards clean-up completion.

Space Launch Infrastructure

Assured access to space is vital to U.S. national security and important to our economic well being. Mission success will be enhanced through the Air Force's Evolved Expendable Launch Vehicle (EELV) and spacelift range modernization programs.

The introduction of EELV system will provide modernized launch and processing facilities which will improve on-pad processing time from months to days. The Air Force has partnered with industry to develop a national launch capability that satis-

fies government requirements, reduces the cost of space launch by 25 percent, and improves operability. This equates to a $5 to $10 billion savings through 2020. EELV will reduce on-pad processing time, due in part to the standard configuration of each booster. Launch operations times are reduced through the use of a new standard payload interface, standard launch pads, common components across each family of launch vehicles, and off-pad payload processing (to include encapsulating the payload off-pad.) The reduction in processing time will free up range resources, launch property and services currently occupied by tasks unique to each booster configuration, thereby realizing efficiencies to effectively increase spacelift range capacity.

The Air Force's innovative contract for EELV launch services will develop the launch vehicles and associated launch infrastructure to support commercial launches beginning in fiscal year 2001 and national defense launches beginning in fiscal year 2002. This acquisition approach should enable U.S. commercial launch service providers to become more competitive, not only from a cost position, but also from vehicle availability and flexibility standpoints.

The Eastern and Western Spacelift Ranges, headquartered at Patrick AFB, FL and Vandenberg AFB, CA, respectively, provide tracking, telemetry, communications, flight analysis, and other capabilities necessary to conduct DOD, civil, and commercial spacelift operations and DOD ballistic missile test launches. Much of the range infrastructure is outdated, inefficient, unreliable, and costly to operate and maintain. To better support the evolving spacelift mission, the AF has undertaken a phased modernization program, emphasizing standardization and automation of the ranges, to produce a Spacelift Range System (SLRS). Key objectives include reducing reconfiguration times from days to hours and reducing operations and maintenance costs by 20 percent.

Over the past year, the Air Force has sponsored numerous meetings with industry, NASA, FAA, and other interested federal, state and local agencies to ensure that we understand the needs of the civilian space industry. We will continue to work in partnership with industry and civilian agencies as we modernize our ranges for the future.

CONCLUSION

America is an aerospace nation. Its aerospace forces are the military instruments of choice for rapid, tailored, and effective response for a wide range of contingencies. Air Force strengths—quality people, Total Force participation, expeditionary capabilities, and advanced technology systems—allow us to offer military options that meet national objectives, save American lives, and conserve resources in crisis or conflict. We are a combat-proven, mission-focused, decisive fighting force for America.

In this millennium, we are faced with new challenges and critical choices. Limited resources and the increased likelihood of encountering non-traditional threats will require us to reassess our program and make minor adjustments as required. However, steady and unchanged are our commitments to combat readiness, our people, and providing this nation those aerospace tools required to meet America's interests around the world. We are organized to win, preparing for the future, and committed to the security needs of the nation.

Senator STEVENS. General Ryan.

General RYAN. Chairman Stevens, Senator Inouye, and members of the committee: I appreciate the opportunity to appear before you on behalf of the dedicated men and women of the United States Air Force.

READINESS

I want to again thank the administration, Congress, and particularly this committee for responding to our most critical readiness needs described over the last several years. With your support, the increase in funding we received in 1999 and 2000 helped to address some of our most immediate concerns, but I am optimistic that if we continue to sustain funding for readiness we can turn around our readiness problems.

I can report to you, Mr. Chairman, that while our readiness trend has not yet turned the corner, our airmen continue to per-

form their worldwide missions with great pride and professionalism. As you know, 1999 was a very busy year for the Air Force. Our airmen put forth a tremendous effort in the air war over Serbia. We opened 21 expeditionary locations, employed over 500 aircraft and, together with our sister services and our North Atlantic Treaty Organization (NATO) allies, air power played a key role in forcing Milosevic to cease his tyranny in Kosovo and to withdraw his forces.

Our airmen performed superbly in a just and righteous cause and they did it in the face of great danger, and we are all very proud of them.

During and following that operation, we continued a marathon effort, flying sustained air combat throughout the year in Iraq and responding on short notice to multiple humanitarian crises such as earthquakes in Turkey and Taiwan and hurricanes and floods in the United States and Latin America, and we are just wrapping up an operation in Mozambique.

RECRUITING AND RETENTION

Despite these successes, we have had many challenges. As the Secretary said, we are losing too many of our experienced people, both enlisted and officers. And last year, though we recruited more airmen than we had in the previous years, we missed our goal, which we had reset, by 1,700. We are behind again for this year's goals, but we are putting forth a great effort to turn that around.

Regarding retention, I am particularly concerned about our midcareer non-commission officers (NCOs) and, though we have seen a turnaround in the last several months, I am hopeful that that will be sustained, that the increased pay, benefits, and retirement that were approved last year by this committee, along with the stability provided by our Aerospace Expeditionary Force (AEF) concept, will begin to help us retain more of these airmen we so value.

Last year I testified that pilot retention was again a major concern and we ended the year about 1,200 short. We are still about 1,200 short. The good news is that the indicators are positive, though we have a very small sample size on this. The new bonus system approved last year in the legislation is helping influence many of our folks to stay for a career.

AIRCRAFT MAINTENANCE

With a progressively aging aircraft fleet, our people are working harder to maintain readiness. We have addressed most of our critical readiness requirements in this budget by funding the needed spares and by trying to revitalize some of our older aircraft, like our airlift force and our bomber force, and by beginning to replace systems that are approaching the end of their operational life, such as the F–15, with the much needed revolutionary capability of the F–22 Raptor.

REAL PROPERTY MAINTENANCE

Unfortunately, current funding levels do not allow us to address the infrastructure shortfalls we have across the Air Force, such as

construction and real property maintenance. So our infrastructure will continue to deteriorate and will ultimately impact long-term readiness if we do not adequately fund these in the years ahead.

HEALTH CARE

Finally, I remain concerned about health care provided for the Air Force people, both active duty and retired. And although the amount of funds required to address that issue is uncertain, it is certain that our active duty and retirees and their families deserve our support to keep the health care promise.

I look forward to working with the committee as we tackle these challenges and strive for a full recovery of our force readiness levels today and build our needed capabilities for tomorrow.

Thank you for inviting me to speak on behalf of the men and women of the Air Force. We are so proud of them. They selflessly serve for all of us. Thank you, Mr. Chairman.

F–22

Senator STEVENS. Thank you very much, General.

Let me start with you, Secretary Peters. It is my understanding that the Department of Defense (DOD) Cost Analysis Improvement Group (CAIG) has reviewed the F–22 costs and restated its belief that those costs, the engineering and manufacturing development (EMD) costs, will exceed the cap that was established. Now, this is worrisome to us, particularly in view of this 40-day labor strike at Boeing. Could you tell us first what will be the impact on that strike now, have you analyzed that, on the program and its costs? And how will the Air Force handle this $200 million increase in estimate of F–22 development that we have heard based on both the CAIG group and Lockheed's estimate?

Mr. PETERS. Let me start with the cost estimate, Mr. Chairman. As the General Accounting Office (GAO) has found in a recent report, we are actually on track to meet our EMD requirements. We said 1 year ago that we were going to save *x* number of millions of dollars. We have had an ongoing dispute with the Office of the Secretary of Defense (OSD)-CAIG about whether we would meet those goals or not. We already have met them. We have met them and we are on track actually to do slightly better than predicted, and the recent GAO study found that we would, in fact, finish within the cap based on where we are today.

In fact, our belief is——

Senator STEVENS. Including the strike?

Mr. PETERS. Including the strike. We do not think the strike is going to have a major impact on costs. Let me talk about schedule in just a minute. We had our most recent Chief Executive Officer (CEO) conference, where all of the major vendors, Boeing, Lockheed and Pratt, as well as the Air Force, sat down and went through the analysis of the estimate to complete EMD, and we think we are going to be several tens of millions below the EMD cap if we stay on the course we are currently on.

Now, the difficulty we are going to have is that the strike is, in fact, going to put in high risk our ability to get the so-called Block 3 software—that is the first level of software which has the full integrated sensors with it—into Aircraft No. 5 and fly it by the end

of the year. If you recall, last year there was an exit criterion that we had to have that avionics block actually in one of the F–22's as an exit criterion to go into low rate initial production.

At that time, that was probably a moderate risk item. But the effect of the Boeing slip from the Boeing strike, is essentially a day-to-day slip in the dates, which we are trying to recover from. I think it is now fair to say it is high risk as to whether we will have the software actually flying on an F–22.

We will have that block of software out of the integration laboratory. We will have it in the flying testbed, but we will not actually—we may not have it in the actual airplane. Our experience to date has been that the software in the lab, in the integration lab, and in the flying testbed, in those settings we catch about 97 percent to 98 percent of the problems. So, we may be in a position to urge this committee not to include that exit criterion, but to allow us to meet the normal testing on the flying testbed.

But at this point it looks like we will be very close to where we thought we would be last year, but it is high risk.

Senator STEVENS. General Ryan, what does this Block 3 software really mean to the functions of this airplane?

General RYAN. The Block 3 software will be the software that integrates the avionics system and some of the defensive systems and communications systems on the airplane into the displays that are part of the revolutionary capability of this airplane. Being able to use different antennas and receive different wave forms and then display that in terms of things that the pilot can use in combat is the important part of the Block 3 software.

Senator STEVENS. Mr. Secretary, are you indicating you think that there could be a catch-up now despite the 39, 40 day delay at Boeing? As I understand it now, this initial production contract is conditioned upon that Block 3 software.

Mr. PETERS. It is so conditioned in last year's appropriation act. It is conditioned on the Block 3 software actually being in the aircraft. We are going to make an effort to try to catch up and get to that point, but the experts think that that is a high risk area and we may not make it.

Now, our view would be that low rate initial production (LRIP) is still appropriate so long as the software has been successfully demonstrated in the integration laboratory, which is a ground-based, full-up mockup of the F–22, and also has been demonstrated to work in the flying testbed, which is a 757 aircraft that has been modified to have many, but not all, of the F–22's sensor systems on it. It is an asset we have been using for some time.

As I said, we think those two demonstrations would show that we are very close to having workable software on the aircraft. We will have, between now and then, additional software upgrades on the aircraft and we anticipate that we will have quite a few additional hours of test on the basic aircraft in some of the earlier versions of the software. But at this point it is high risk that we will actually have Block 3 in an airplane by the end of December of this year.

Senator STEVENS. I want to get back to it later.

Senator Inouye.

F–22 TESTING PROGRAM

Senator INOUYE. Mr. Chairman, if I may follow up on your questions, which talked about the cap. What is the status of your testing program on the F–22?

Mr. PETERS. The F–22 testing program is a pyramidal program. It starts with hundreds of thousands of hours of tests in wind tunnels and individual component tests. We now have three aircraft at Edwards. Two have flown in test activity out there. One has just been ferried from Marietta to Edwards. We have about 580 flight hours on the aircraft.

We have had no major glitches. There has been some concern expressed by Mr. Coyle, the head of Director of Operational Test and Evaluation (DOT&E), about whether we will make up some months that we are behind. As you may recall, about 1½ years ago we had trouble with the aft booms on the aircraft, the way they have been manufactured, and that has slowed the test program by several months.

We are about 450 test points short of where we thought we would be at this point, and as we increase aircraft we actually could surge and our belief is we could make that up. Our belief right now is that if we were as much as a 1,000 or even 2,000 test points short, if we were at this point a year from now we would have five or six flying assets and we could make those test points up in a matter of approximately 1 month at a cost of roughly $20 million.

So while we are behind where we had thought we would be, we are not in a position where we are not going to be able to test. We are going to be able to get those test points done and we will get them done pretty close to where we had originally thought we would be. As I say, if we had to we could extend the tests and delay initial operational test and evaluation (IOT&E) by perhaps 1 month and probably make up all the ground we have lost to date.

So our plan is to try to get back on schedule, probably to do some surge on the aircraft. We have not, for example, by and large been flying on weekends, which we could do. And once we get more assets out there, we will assess the situation. Our hope is that with additional tankers and longer flights we will increase the number of test points that we get done per flying hour and we will get back on track.

Senator INOUYE. Are you ready to make the decision in December, the production decision?

Mr. PETERS. I think we are ready to make the decision, based on where we estimate we will be at that time. Whether or not the Block 3 software is actually in the airplane, I think we will have enough risk reduced to know that it would be a prudent decision.

Senator INOUYE. Are you satisfied with the testing program so far?

Mr. PETERS. I am, and I actually spent an hour with Dr. Coyle last week one on one to go over this. I am convinced that we are still fine. His main concern is whether we will be able to pick up the test point production. I think we will. I think we have a robust and smart program to do that, and at this point I think the EMD

cap is appropriate. It is an important management tool, and I think we are going to get where we need to be.

General RYAN. Senator Inouye, just one point also. By the time we come to the decision in December, we will have tested this airplane airborne more than we have tested any other aircraft when we made a production decision for low rate production, including the F–15, the F–16, and the F–18. We have put substantial amount of testing into this airplane, not just airborne, which is high, but we have done things in the lab and in the flying testbed that give us great confidence that this is going to be a great airplane.

Senator INOUYE. You are satisfied with the flight testing. What about other testings?

Mr. PETERS. At this point, Senator Inouye, all of the testing has gone well. There have been no major problems. As was reported in the press, we did have a structural member, an element called a flaperon, break at 143 percent of design load. It is a composite item. It has been rapidly and correctly repaired. We can use titanium for the time being and it is not a major issue.

So at this point all of the loads testing, all the flying testing, all the avionics testing to date, has shown that we have a very, very good design and one that is performing in the way that we had predicted when we did all the computer modeling and simulation years to decades ago.

Senator INOUYE. If I may, I would like to submit for the record technical questions on the F–22. I am doing this because we may have need of such information as we get into conference.

C–17

I have just one other question: C–17, multi-year procurement program, the contract; are the costs going to stay down?

Mr. PETERS. Yes. With the adjustment we made. There is, however, one requirement to keep the costs essentially where they are, and that is that the advanced procurement money that was appropriated last year for 15 aircraft remains available to us even though we are only going to buy 12 in the coming fiscal year. Three are slipped by approximately 90 days into the following fiscal year. We need to keep that, all the advance appropriation money, to keep the parts line flowing to make that happen.

Given that, we will have no cost increase at all on the basic airplane. There is about an $880,000 financing change on the engines. But we had anticipated when we entered into the multiyear that we could slip aircraft. And I would suggest it does look positive that the United Kingdom may pick up the three we slipped.

In addition to that, it is becoming apparent to us that we need a bit of time to catch up things like pilot training and infrastructure construction with the airplane delivery. I was out at McChord about 1 month ago and literally the concrete is not drying by the time the planes get there. So a 90-day slip to let us train more air crews and load masters and to get the infrastructure built would synchronize the delivery of aircraft with our ability to actually use them.

So I think we are on a very prudent course and would suggest we stay where we are.

Senator INOUYE. Thank you. I will come back again.

Senator STEVENS. Senator Bond.

Senator BOND. Thank you, Mr. Chairman.

Following up on that, Mr. Secretary, we have been hearing from the Commander in Chief (CINC's) that they think they are going to need more C–17's, and this committee recommended last year an additional buy of 60 additional aircraft. Is it your intention to get back up at least to 15 aircraft in the next budget submission?

Mr. PETERS. Yes, it is. We intend to keep the same profile through 2002 and 2003 as we have in the 2001 budget, which gets us back to 15 and then the remainder in 2003.

With respect to the additional aircraft beyond that, we are waiting for the Mobility Requirements Study 2005 to come out of the Joint Staff. It was originally on track for about now. It has now slipped to the summer time. Until we have a chance to look at that and then do the analysis of alternatives between C–17 and C–5, we are really not in a position to make an intelligent decision on what to do with the C–17 line.

But we should begin making those decisions in late summer time to the end of this year.

Senator BOND. Well, I would think the sooner you can make it, because if there is a need, as has been suggested, I would think that possibly with a multiyear contract you could bring the price down on most of these things. If you know where you want to go and you are willing to make a commitment, you can get a lot more, you can get a lot more power for your dollars. We will await with interest your recommendations on that.

F–15E

You and I have had the opportunity to discuss and I have mentioned before the F–15E production. It was the intention of the committee and the conference committee to provide for the procurement of five aircraft. Because of requirements and different things, we know that the cost is definitely above $55 million. And while we do not know what the status is of the supplemental and there are efforts going under way, we do not know when we can have an answer on that.

I wonder if it is possible for you to conclude with the manufacturer your requirements for what can be done with the money available now so that they can begin the planning and get into the business of producing at least the four that could be produced.

Mr. PETERS. We have been talking with Boeing. Our current plan is to try to get them on contract by the end of April. We are looking at a fixed contract for three aircraft, which is all the available money allows us to buy, with two options each to buy one additional airplane. We would need to reprogram procurement money or get about a $25 million add in the supplemental to buy the fourth aircraft, and we need $90 million above what was appropriated to buy all five aircraft.

My understanding is the $90 million figure is in the supplemental at the moment. So that is where we are.

Senator BOND. Well, we will wait and see how that works out. The House has obviously its views and the Senate will work its views. But I hope that you are at least able to get the work started on the three, and certainly I will do my best to see that there are

the funds for the additional, for the additional aircraft that were originally envisioned.

One of the questions—and I guess I direct this question to General Ryan. From the Air National Guard standpoint, one of the things they are concerned about in the Air Guard is funding equipment upgrades. Every year we have had to add funds for modernization. Now, I understand that the number one issue for the F–15 community both in Air Combat Command and the Air National Guard (ANG) is the Bofors Launchers Infrared (BOLIR) countermeasures system that has been highly effective on the Navy's F–14 fleet.

The ANG fleet of 126 F–15's is tasked for increasingly sophisticated threats throughout the world as a part of the Expeditionary Aerospace Force, and the lack of robust protection affects its combat capability. I believe that we should consider very seriously adding funding for this important upgrade, and I would appreciate your thoughts on the importance of this particular upgrade and what you think about the need for the upgrade.

General RYAN. We have looked at the BOL capability as a countermeasure to help the survivability of the aircraft in the end game of a missile shot at it and we do believe it has merit. We have not put money against it to upgrade the aircraft to put that kind of capability on. We currently have chaff and flares that also perform that mission and have a fairly substantial stock of those to do it.

I think that BOL has some significant capabilities. It is an affordability issue for us.

Senator BOND. Thank you, Mr. Chairman.

Senator STEVENS. Yes, sir.

Senator Dorgan.

Senator DORGAN. Mr. Chairman, thank you.

RETENTION

Again, Secretary and General Ryan, thank you for being here. Let me ask about retention. Can you describe what kind of experience you have had on retention since last year, when we increased some of the compensation and also adjusted some of the retirement benefits?

Mr. PETERS. Let me start off, and the Chief probably would like to add some words as well.

The increased compensation, of course, did not actually take hold until January 1. The retirement benefits happened immediately. The pay table reform does not take effect yet, I think, until July 1. But my sense from talking with airmen in the field is that they are extremely grateful that their needs have been met. They feel that the Air Force leadership, the administration, and this Congress have all gotten the word and are out to try to really make sure that they can afford to stay in the military, which many of them like very much.

I think the impact has been seen earliest on the enlisted side. On the enlisted side, we are doing better on first term and second term retention and have been doing that for the last several months. In the month of February alone, we reached almost 60 percent first term and almost 75 percent second term retention, both of which are excellent. We are still in the low 90's with what we call career

retention, which is third term and after, and that's probably about right. We have a metric of 95 percent, but we are at 91 to 92 percent—and it looks like it is stable, so that is not a major issue.

On the enlisted side, specific career fields are still a problem. In computer communications, we still have a situation where staff sergeants leave the Air Force and come back and work for contractors at $80,000 a year rather than what we pay them as a staff sergeant. We still have some critical career fields, because of Operations Tempo (OPSTEMPO); the maintenance area in particular is one that comes to mind.

On the officer side, while the pilot bonus looks like it is having a major impact and will ultimately get us out of our pilot shortage several years earlier—that is based on early returns—we still have specific career fields, again computer/communications is one that jumps out, where the market is so strong we are having a great deal of trouble keeping our junior officers. And there are several of those career fields.

So while I think the overall picture is positive on our first and second term enlisted side, it is very much a mix on the other side.

General RYAN. Just a couple of issues. Though we have some indications in these first few months of turnaround, most of the people who were going to leave had made their decision probably 1 year ago and had started to divest themselves of the things that would allow them to reverse their decision. So we are not quite sure yet what the dynamic is. I do not think we will know until probably this summer if we really are on a trend or whether this is just a seasonal change.

Anecdotally, talking to our young people in the field, they are very appreciative of the fact that Congress has taken that step. We in the Air Force are a family Air Force. Almost 70 percent of our folks are married. What they are looking for is stability, stability in their home life and stability in their family life and stability in their pay. In this booming economy, there are lots of alternatives for our very highly technical folks that serve in our Air Force.

I think that the follow-through has to be that we stay the course on bringing back pay to an equitable level, particularly for those who are affected by the employment opportunities that these people have as an alternative. So I see it is too early to call the current positive signs a success. We must sustain the proposed employment cost index (ECI) plus .5 raises on out through the Future Years Defense Plan (FYDP).

Senator DORGAN. I appreciate the answer. It is an important issue because all of the other plans we have for our armed forces do not mean very much if we cannot retain our key people.

Let me ask briefly about the F–16, the ABL, and the B–52. I will not have time to get all of them because I know Senator Cochran has some questions.

F–16

The F–16, you propose ordering no new F–16's. Yet in my judgment we need some. I have written you a letter about the 119th Fighter Wing. As you know, that is an Air National Guard wing that has twice won the William Tell Award. They are the best fighter pilots in the world. In fact they won it with the wrong air-

plane. They are flying some of the oldest F–16's around and so obsolete they are incompatible with active duty units and cannot be effectively employed, I am told, in certain combat situations.

I have written you a letter about that. We really need to address that equipment problem for the Happy Hooligans. I hope it is not a source of embarrassment to other pilots anywhere else in the world, but these are druggists and farmers and mechanics and professors, and they won the title of the best pilots in the world twice in recent years. So we need to address that.

General RYAN. Yes, sir. You know we are committed to upgrading the equipment there. It is an issue of affordability for us right now and sequencing when they come in the sequence. What we are doing is trying to buy 30 additional Block 50 F–16's for the active duty and that will allow us to modernize our A model F–16's throughout the force up to the C model capability.

Senator DORGAN. But that is another 7 years or so.

General RYAN. Yes, sir.

Senator DORGAN. We need to talk more about that.

My time is up. I would like to just make one comment. I hope—I have toured the ABL project. I am very impressed with what they are doing and impressed with the technology there, and I hope that the slippage that was envisioned in some of the funding issues, that we can try to restore some of that and get back on track. I think that is an impressive program.

Senator STEVENS. Senator Cochran.

Senator COCHRAN. Mr. Chairman, I am pleased to join you in welcoming the Secretary of the Air Force and General Ryan to our committee hearing today reviewing the budget request for the next fiscal year.

We are very proud in Mississippi to have a close connection with the Air Force. We are very pleased that at Keesler Air Force Base we have the headquarters of the Second Air Force, the Education and Training Command, and a training wing. We also have in our State at Columbus Air Force Base a pilot training facility that we are very proud of and which was designated by the Air Force in the last base closure round as its number one pilot training facility in the country.

We also have Air National Guard units at Jackson, Meridian, and Gulfport. We have the famous hurricane hunters that are located down on the gulf coast as well, flying the C–130J's.

So we are very interested in the budget request that you submitted. We notice that you have some requests for a training facility for construction at Keesler Air Force Base. I think it is a $15 million item. We are pleased to see that included.

C–17

We also hear in connection with the C–17's that are under construction and are being delivered to units around the country that the facility in Jackson, the Air National Guard unit there, is the first Air National Guard unit in the country that will receive C–17's. When Secretary Peters was down there just recently, he was brought up to date on the preparations that are being made to receive those aircraft and we know that there are going to have to be some MILCON projects approved, some training undertaken, so

that we will be able to manage the hosting requirements for the C–17's.

There has been a review underway to be sure this is a good decision that is being made. I wonder if Secretary Peters can tell us about the status of that review.

Mr. PETERS. Our current plan is certainly to stay the course with getting C–17's into Jackson. In fact, one of the reasons I went down there a couple of weeks ago was to make sure that I understood the planning, and also the contingency planning, in the likely event that C–17's are delivered early, which they may well be.

We do in fact, if recollection serves, have the construction projects in the FYDP where we think they need to be. A simulator was purchased in the fiscal year 2000 budget to get into Jackson, so we will have that capability. We need to continue to review where we are in light of the actual delivery schedule of C–17's, which at the moment is 5 months early. The unit told me that they could, in fact, probably take aircraft early with their current facilities. Obviously, they would not be able to get a C–17 into their hangars because the doors are not high enough, but some of that could follow on.

I think the major concern we have is the training pipeline is now pretty full. The real issue is going to be getting pilots through the pipeline. I think the simulator at Jackson will help a lot with that, and we are going to have to review the ramp-up schedule. As things stand now, we are actually behind on both pilot and air crew production versus the delivery of the airplanes because they are so early. So we are going to have to work that some more.

Senator COCHRAN. Last year we were concerned that, because the delivery schedule was running behind by 180 days, I think was the testimony last year, that this could cause some difficulties with related military construction (MILCON) projects, one of which involves a corrosion control and maintenance hangar. Last year we asked if we should move that up because of the slippage of the schedule. The original project cost was estimated at $12.8 million. The 2001 budget contains $10.5 million for the corrosion control and maintenance hangar.

Can the project be completed at this reduced amount and would it help to accelerate the construction?

Mr. PETERS. You are taxing the limits of my memory on that one. If I may get back to you for the record on that, I could provide an answer.

Senator COCHRAN. That would be good to have for the record.

Mr. PETERS. I will get that for you.

[The information follows:]

MILITARY CONSTRUCTION IN CONNECTION WITH C–17

The C–17 Corrosion Control and Maintenance Hangar is in the fiscal year 2001 President's Budget, which is the correct year for executing the project. The significant cost reduction made to this project during the budget process does present contracting and execution challenges. The Air National Guard will have to apply cost-cutting measures to execute this project.

Senator COCHRAN. We want to be sure that everything is done to receive these aircraft and that the projects that are on schedule are kept on schedule.

Let me ask you also about the housing situation. We had some people come up to the office the other day expressing concerns about the lack of adequate housing. This was particularly true of the Columbus Air Force Base. There does not seem to be any plan for improving the housing there for the next several years.

They expressed concern also that the plans the Air Force has for building two-bedroom housing facilities are beginning to be unpopular and they are concerned because, with the pilot retention problem, we know that the airlines are attracting Air Force pilots and the difficulties with scheduling family life in general is putting a lot of pressure on pilot retention.

What is the situation, General Ryan? Would building some more modern and better designed housing facilities be indicated to you to help with the pilot retention problem and general morale on our Air Force bases around the country?

General RYAN. Absolutely, sir. We have over 110,000 family housing units, about half of which ought to be completely rehabbed or plowed under and started all over again. We are looking at innovative ways to try and finance the recapitalization of our housing. It is very, very important to our people that their families are in safe locations, particularly at the high OPSTEMPO that we run when the members are away from home a great deal. So yes, sir, it is very high on our priority list.

Senator COCHRAN. Thank you.

Mr. Chairman, I have some other questions, but I will wait for the second round, on missile defense.

Senator STEVENS. Yes, sir. Well, we will get back on another round, I hope.

I am interested in continuing the discussion of the C–17. Last year Senator Inouye and I, joined by our colleagues, increased that buy by 60 and we are now up to 134, as I understand it. I do not know whether the administration has agreed to that yet, but I assume they have.

I am concerned and I think my colleague from Hawaii is about the deployment plan for C–17's. Forces in our two States are semi-forward deployed, both offshore, and yet those forces are going to have to wait for C–17's to come from enormous distances in order to project the forces stationed in our States out into the area of possible crisis in the Pacific.

Now, General Ryan, the lift requirements and distance in the Pacific theater are well-suited—the C–17 is well-suited for those distances, is it not?

General RYAN. Yes, sir.

Senator STEVENS. Have you made the decision yet as to—I know Secretary Peters said there is a study being made. Maybe we cannot forejudge that, prejudge that. But it seems to me that in the long term we need more 17's and we need to recognize that the C–5 cannot fulfill that requirement out there. Has that been assessed yet in the Air Force?

General RYAN. Sir, the mobility requirements study, which is a look at our two nearly simultaneous major theater war contingencies, will be completed this summer. Indications are that it is going to come forward and say we do not have enough lift in our current configuration.

Senator STEVENS. It does not take a rocket scientist to figure that out right now, General.

General RYAN. I do not think so, sir, but I think we need to document it, and that is what that study is going to do. Then the question is, "what is the solution?" As you know, the C–5 does not achieve a very high in-commission rate. In fact, it is at 60 percent right now. And our plans call for it to be at 75 percent when we have one of these major contingencies. So we are 15 percent short of where we need to be with the C–5's just to begin with.

So I think when we finish this study this summer we will have some insight into whether we want to continue on with C–5 upgrades or whether we want to balance that in some way against an additional C–17 buy.

Senator STEVENS. I am worried, and I think I have expressed this to you and others before, I am worried that the current plan for stationing the C–17 is going to result in the Army deciding that they want to have their deployable troops stationed within a few miles of those three bases in the continental United States, so they can be rapidly moved by the airlift. There would be less time involved in deployment, and the net result will be, because of the decision on the stationing of the C–17, we will alter the total alignment of bases within the contiguous 48 States.

Meanwhile, forces that are stationed in our two States will really just be sitting there waiting for others to be airlifted over them and we are going to lose the whole concept of the advanced deployment out into the Pacific of the forces stationed in Hawaii and Alaska.

Does anyone else share that fear?

General RYAN. I do not share the fear that they would be jumped over. I think that the forces in Alaska, the ground forces both in Alaska and Hawaii, are very important to the stability in the Pacific region. I do not see them being pulled back in any way. I know of no plan to do that.

Senator STEVENS. I do not see them being pulled back. I just do not see them being able to respond to crises in the timeframe they could if they have to wait for airlift from the State of Washington or Nebraska or maybe even South Carolina. It just does not make much sense.

Beyond that, I also think that the 134 we have now, if that is going to be our one aircraft that we primarily rely upon to have deployability to prevent crises from developing, that that is not enough. Now, I am happy that I can say that. I do not have any production in my State. I have no provincial interest in it other than looking at it from the point of view of how do the forces in our States get deployed in order to prevent crises from developing in the Pacific.

I urge that that study be completed as soon as possible. And I think it is going to affect that chart that shows the allotment of funds out into the future. We have to take into account the additional numbers of C–17's we will need or if you decide to do the C–5.

I have got to tell you, I voted for the C–5, but it has been a disappointment to me as a pilot. I just do not think it has performed as we thought it would, and it does not have the endurance in the long run that we thought it would have.

I do hope that we will get some information hopefully before—when is that decision going to be made, Secretary Peters?

Mr. PETERS. I think it is currently in the July timeframe for the Mobility Requirements Study (MRS) 2005. We have done preliminary work on an analysis of alternatives for what we call outsized and oversized cargo, which is the issue, the mix of C–5's and C–17. Our analysis, which has been done primarily by Mobility Command and United States Transportation Command (USTRANSCOM), is that C–17 overall is likely to be a very cost effective fleet.

The issue arises whether you want to have only a single strategic airlifter and that is the very difficult judgmental decision that has not been made yet. The difficulty is we recently had to ground 200 of our 550 tankers, for example, because of a single parts failure, and if you put all your eggs in one basket like C–17 and you have a similar part failure, you could find yourself very, very short of lift very quickly.

So the logisticians believe and are urging that we keep both C–17 and C–5, and we are going to have to look at what it really takes to keep C–5's. There are different alternatives, from at the high end, reengining and doing other systems, to at the low end, going through the avionics modernization program which we have done, and perhaps putting the C–5's in the Reserve and Guard where greater maintenance experience might bring them back to life or at least sustain them at the mission-capable rates they have.

So there are a number of those basing alternatives and force structure alternatives that we really need to try to resolve. Hopefully they will be resolved in time for the fiscal year 2003 cycle or possibly for fiscal year 2002, depending on how quickly it is done.

Senator STEVENS. Well, we will go into that later in another hearing. I would like to know what that transfusion for the C–5's is going to cost compared to increasing the C–17's.

Have you got another one on the boards? Are we looking for a replacement for the C–5, or is the C–17 the only replacement?

Mr. PETERS. The C–17 is the only one at this point.

General RYAN. And the C–17 quite honestly can do the work that the C–5 does. It does not have the capacity that the C–5 does, but it can carry the outsized and oversized cargo with the exception of just a few pieces of equipment.

Senator STEVENS. Thank you very much. Sorry to take so much time. Senator Inouye.

Oh, by the way, I am going to put in some questions for the record that, like Senator Inouye, we do need some information as we prepare. And I will state for the committee it is my intention to try and get us an airplane to take the committee down to Marietta, Georgia, and have a full briefing there where we are talking to people who are involved in the F–22 and see to it that the questions that anyone has here are answered. We hope to be able to do that on either a Friday or a Monday morning, depending upon the schedule. We will try to work it out with you all.

But I think it is highly important that more people go and see F–22 and talk to the people who are doing this testing and get an understanding of where we are and what the holdup is. We have done that and I am convinced in my mind that none of them are

serious enough to warrant any hiatus as far as the procurement rate or the appropriations for procurement during this coming year.

Senator Inouye.

Senator INOUYE. Thank you, Mr. Chairman.

I would like to associate myself with your statement and question on the C–17 and just underscore that by suggesting what others have suggested to us, that we should be carefully considering the potential impact of the recent Taiwan elections. The instability that exists in the Korean peninsula is still there. There is instability in India-Pakistan. The Southeast Asia-Indonesia problems are still not resolved. I would think that the concerns expressed by the chairman should be taken very seriously.

If I may ask a question, General, we added about $2 billion to your readiness budget. Is that enough?

General RYAN. No, sir. We still have readiness shortfalls in terms of spares, in terms of engines, reliability and maintainability modifications that we can do, in terms of training shortfall for munitions. We are still short in the readiness account.

Senator INOUYE. What amount do you think would do it? Another 500?

General RYAN. On the readiness side, I'd have to answer—I can give you the answer for the record. But we submitted along with our testimony, along with our posture statement, an unfunded priority list which lists in detail about $3.5 billion that we think we are short in the budget this year to be able to execute and turn around our readiness and our modernization.

Senator INOUYE. Would you share that with us for the record?

General RYAN. Yes, sir, I will answer that on the readiness side for the record.

[The information follows:]

READINESS BUDGET

Our unfunded readiness priorities include 19 separate requirements totaling $1 billion. Without funding for these requirements, we can only sustain readiness gains made in last year's budget. No significant improvement can be made to Air Force readiness without this additional investment. Specific readiness requirements were provided to you on 8 February.

PILOT SHORTAGE

Senator INOUYE. General, on the matter of pilot shortage, we have been advised that you have placed in headquarters nonpilots to make certain that the pilot requirement is maintained.

General RYAN. Yes, sir.

Senator INOUYE. But at the same time, one would think that you need pilots in the headquarters, men who have had experience, the know-how. What do you think about that?

General RYAN. What we have done, Senator, is at the wing level and below protect the pilot manning, and we have taken the shortfall in the headquarters above, which means that we are short about 40 percent of the pilots that we need in the headquarters to do the work that we have laid out.

We have put some nonpilots into some of those positions, and then we are working our pilot force very hard at the headquarters level, very, very hard. We had some relief in the legislation that was helpful. It allowed us to hire back, at full rate, retirees who

had pilot experience to help us in those headquarters jobs. But those retirees are only, quite honestly, good for 2 or 3 years because they lose their currency then, and you need to bring in fresh and more current people.

So we have tried to protect our fighting force at the wing and below level and it has been at the expense and on the backs of the pilots who serve in headquarters.

Senator INOUYE. Well, that situation is not desirable, is it?

General RYAN. No, sir, not at all.

Senator INOUYE. What do we have to do here to bring about some resolution of that problem?

General RYAN. Sir, I would say that we need to wait just about 6 months to see whether this turnaround in pilot retention as a result of pilot bonuses, some of the things we have done in AEF, the retirement, the pay raises, et cetera, will convince enough of our pilots to stay for a career.

These are wonderful people who are leaving us at the 9, 10-year point. They have served their country. They have done everything we have asked them to do. We have sent them to war for the most part. Most of them served in the desert. It is our fault that they do not want to stay for a career.

But I think the incentives are there right now to turn around the pilot shortage and if we sustain what we have seen in the first 4 months of this year, we should cut the pilot deficit in half in about 2 or 3 years. So we see some positive trends there.

So we will give a report back to you here in about 6 months on where we think the real trend is.

[The information follows:]

PILOT SHORTAGE

Last fall, the Secretary of the Air Force approved a white paper entitled "The Pilot Shortage: USAF's Integrated Plan," which was widely distributed to Congress. This white paper provided a comprehensive overview of the issues associated with the pilot shortage, and what the Air Force was doing to address them. This paper is due to be updated by 31 October 2000, which closely coincides with the timeframe that the Chief of Staff of the Air Force promised to report back to the Senate Appropriations Committee, Defense Subcommittee. The Air Force will provide an update of the pilot white paper in October, which will include a summary of the results of the fiscal year 2000 Aviator Continuation Pay (ACP) Program.

Mr. PETERS. If I may add one thing, one of the other ways we have alleviated the shortage is to make very good use of our Guard and Reserve. Now the Guard and Reserve are beginning to see some of the same strains in their full-time forces as well as their part-time forces that we have had because of OPSTEMPO and the pay level. I think one of the things that is very important is to make sure we continue toward pay and benefit parity for the Guard and Reserve forces that serve with us so often.

Senator INOUYE. Thank you, Mr. Chairman.

Senator STEVENS. Yes, sir.

Senator Dorgan.

Senator DORGAN. Mr. Chairman, thank you.

AIRLIFT

With respect to the questions about the C–17, I have supported the C–17. But I think the chairman asked questions about what

about beyond, what about in circumstances where a contingency lift is needed. I know the Air Force at one point kicked around the notion of commercial lift capability, the acquisition of 747's, for example, as backstop. Where are you in that discussion?

Mr. PETERS. We have a robust and funded civil reserve air fleet program. In fact, we do not have another airlifter on the books, but 747 space has been available and actually has been used heavily. We also are using a lot of charter air for personnel movements.

We also have been working with industry to look to see if there is a commercial market for C–17, which we think is a business case that may be there if we have a multiyear contract. We have been working with some very experienced people in industry and the financial world in New York to look to see whether some of the larger freight carriers might take a commercial version of C–17 in circumstances under which we would have early call on those if we needed them for a contingency operation.

I will tell you the business case has not been there in the past. We think we are getting close to it. It requires more work. But we have asked the task force we have working with, which includes General Walt Cross, the former Commander of Transportation Command, and a number of other retirees and businessmen, to keep going and to try to see whether there is, in fact, a case that can be made to American transportation companies that they should buy C–17's.

So that is the immediate course we are following.

Senator DORGAN. Mr. Secretary, thank you.

AIRBORNE LASER

On Airborne Laser, I note that the restoration of the $92 million is high on the Air Force list of unfunded priorities. If Congress were to restore the $92 million in the ABL for fiscal year 2001, would the Air Force restore the $800 million that is now missing in the out years? What is your impression of where we go with ABL?

Mr. PETERS. We would try hard. The numbers that are in this year's budget represent a compromise between the Air Force, which like you, thinks the ABL is a fabulous project, and several folks outside the Air Force but inside the Government who still have doubts that they raise every time we come around to a budget question about the effectiveness of ABL. So what we have reached is a compromise. We have kept the program on track in fiscal year 2000 so money could be added.

Our view is the program is very well managed, it is very capable, it is meeting its technical hurdles. And we did make a major milestone, which was to convince Dr. Gansler to agree that we could start the modification of the first ABL aircraft. So that is ongoing. There was a minor impact from the Boeing strike, but that is ongoing.

So the program is preserved so that we could add the money and keep it going on track, and we would try hard to do that.

Senator DORGAN. The ABL I assume when deployed under certain circumstances has National Missile Defense capabilities, is that correct?

Mr. PETERS. We think it could. We certainly think its sensor suite could be very important in terms of locating missiles and doing target analysis, and it may also help us actually roll in a B–1 or a B–2 to hit the missile launchers. But we believe it does have capability beyond theater missiles.

Senator DORGAN. I would like to, Mr. Chairman, submit some questions on the B–52 and also National Missile Defense. I will just submit them for the record and ask if I can get responses to them.

Senator STEVENS. Yes, sir. Thank you.

Senator DORGAN. Let me again thank General Ryan for your service. We have two bases in North Dakota we are very proud of. One is a core tanker base, the other is a Minuteman missile and B–52 base. I know Secretary Peters has been there a number of times, as has General Ryan.

Anyway, thank you for your service.

Mr. PETERS. Thank you.

Senator STEVENS. Senator Cochran.

Senator COCHRAN. Thank you, Mr. Chairman.

AIRBORNE LASER PROGRAM

Following up on Senator Dorgan's questions on the ABL, let me ask you. In last year's budget the request was for $308.6 million, which you received, for the Airborne Laser Program. The plan accompanying the request included $1.71 billion for the fiscal year 2001 through 2005 period, with a first intercept attempt in fiscal year 2003 and an initial operating capability in fiscal year 2007.

Last year you certified to the Congress that the ABL program was making satisfactory progress in reducing risk in five key areas and it was indicated was on schedule, on budget, meeting or exceeding its technical requirements.

In last year's budget submission, the Air Force had all the money it needed for ABL in its out-years plan. In the fiscal year 2001 budget request, $895 million or 52 percent is cut from ABL over the fiscal years 2001–05 period. You testified before the House Appropriations Committee that this was due to affordability concerns.

How is it that the ABL was affordable and fully funded in last year's plan, but this year it is now deemed to be unaffordable despite its remaining within the budget?

Mr. PETERS. It is unaffordable because of the higher priority other items have had. It is still on budget, it is still on schedule, it is still, in my view, meeting all technical requirements. There are still some who worry about the technical requirements point, but in the wake of Kosovo a number of items became more important. One of the things, Global Hawk for example, which we really felt we needed, and we have accelerated that. Another, Joint Surveillance Target Attack Radar System (JSTARS).

So, there are other items which we think are more pressing. As General Ryan said, we think we have a $3.5 billion deficit in the fiscal year 2001 budget of hard items that we could execute today, and part of that is Airborne Laser.

Senator COCHRAN. The ABL system program office and the prime contractor agree that cutting the program by $895 million will delay the intercept attempt by at least 3 years and delay the initial

operating capability for the system by 5 to 7 years and add $1 to $1.2 billion to the cost of the program. You also testified to the House Appropriations Committee that cutting the program by more than half would have no effect on the initial operating capability of fiscal year 2007.

How is it possible to cut over 50 percent of the program's budget over the next 5 years and have no impact on its deployment date?

Mr. PETERS. I do not remember testifying to that, except to say at the time we made the decision we knew we were cutting the intercept date from fiscal year 2003 to 2005, which I think is still actually the position of the program office. The contractor has said that the sky falls when we do that. My own view is if the system works as planned in fiscal year 2005, that people will want to accelerate its introduction, because it, in fact, would be a very important capability.

Obviously, if it does not work in fiscal year 2005 we would take the money for something else. But the state of the debate is that the intercept is a critical issue in the program, and if, in fact, it works as we hope it does in fiscal year 2005 it will be an extremely effective theater missile defense (TMD) system that will be available or could potentially be available and deployed earlier than other theater missile defense systems that are on the books.

So my belief is that if it meets its requirements throughout, it is highly likely that it would be funded at a higher and more rapid rate after it demonstrates capability.

Senator COCHRAN. The unclassified summary of the current national intelligence estimate on ballistic missile threats to the United States makes three key points. First is the theater ballistic missile threat to deployed U.S. forces exists now; second, that the United States will face a long-range ballistic missile threat from states like North Korea and Iran in the near future; and third, that the ballistic missile threat will continue to become more severe for the foreseeable future.

I am advised that the ABL aircraft now being modified in Wichita will be the first capability the United States has against North Korean missiles of all ranges if the fiscal year 2000 schedule is maintained.

Given the fact that in August 1998 North Korea tested an intercontinental ballistic missile (ICBM), why do you believe it prudent to delay the capability presented by the first ABL aircraft?

Mr. PETERS. Because, Senator, the theater missile defense is one of a series of threats and problems that we have. We are short on money and, as I have said before, there are others who doubt the technical capability of the aircraft. This was a compromise between many people and many other programs to try to come up with a budget which met all of the needs we have while being $3.5 billion short in the 2001 fiscal year.

So it is not a problem with the airplane. It is that we have so many other systems which so desperately need money and attention.

Senator STEVENS. Could I interrupt?

Senator COCHRAN. Yes, sir, Mr. Chairman.

Senator STEVENS. What is the total amount needed, Mr. Secretary?

Mr. PETERS. It is on our unfunded priority list.

To restore the Airborne Laser, it is $92 million in fiscal year 2001. It is a total of about $850 million, I think, throughout the FYDP. But it is $92 million in fiscal year 2001, $74 million in fiscal year 2002, and it ramps up from there.

SPACE BASED INFRARED SYSTEM (SBIRS)

Senator COCHRAN. My last question, Mr. Chairman. I see you cut off the light. That means I ask one more question?

Senator STEVENS. You can have all the time in the world.

Senator COCHRAN. On SBIRS Low, this is another program that I think is very important. It is the program definition risk reduction (PDRR) program for SBIRS Low. The 38-month program began in fiscal year 1999. It was recently described to Senate staff by Air Force officials as a classic PDRR program for a space system.

After spending 5 years and $1.2 billion on the demonstration and validation phase of the SBIRS Low program, the Air Force still has not set the requirements for the program and does not know how many satellites will be part of the objective system.

Given this record, why should we be confident the Air Force intends to pursue this system aggressively, at a time when we think it is of crucial importance to the ballistic missile defense programs?

Mr. PETERS. Let me address that. First of all, the requirements are not being set by the Air Force. They are set by the Ballistic Missile Defense Organization (BMDO) and by OSD. So the requirements are not within our control, number one.

Number two, a decision was made by Secretary Cohen some months ago that we need to do spiral development on this program because it is a high-risk program in terms of schedule and that the priority ought to be to support the National Missile Defense (NMD) and TMD mission. When that decision was made, General Ryan and I urged that the program actually be taken back into BMDO because that is where the requirements are actually coming from and where the technical integration has to occur, not in the Air Force.

So at the moment where we are on it is trying to get all affected players, which is BMDO, the Joint Staff, Navy, and Army, all of whom play in these systems, together. One of our greatest difficulties is that this system supports the so-called C–2 capability of NMD and there is no definition for exactly what C–2 is, nor is there today a contract out for a C–2 system.

So it goes beyond simply deciding what SBIRS Low needs to be. We have to decide what the C–2 capability is, what the technical requirements are, and where those technical requirements are met between SBIRS High, SBIRS Low, and indigenous and NMD systems. So we are in the process of trying to sort this out. I have discussed this at some length with Dr. Gansler, and the need for a better forum to try to tighten up these requirements and make this prediction.

But this is a hard problem because we are trying to make a SBIRS Low design today that is going to match a system that we have not actually designed in the 2010 period. So we need to move

along on several different fronts, only one of which is under our control.

Senator COCHRAN. It seems that after spending 5 years and $1.2 billion, now we are being told that we are starting over with a classic PDRR phase. It makes you wonder what the Air Force was doing with all the money and the time preceding the beginning of this phase in fiscal year 1999.

Mr. PETERS. Senator, this has been a high-risk program technically, and now from the schedule standpoint, for some time, as confirmed by the Defense Science Board. The difficulty, as you know, is that the NMD system itself has been a moving program. It is very difficult to define requirements and reduce risk when you do not know what this system integrates into, and that is the continuing problem.

Senator COCHRAN. In the defense authorization bill in fiscal year 1996 there was this provision: "Although Space and Missile Tracking System (SMTS)"—meaning SBIRS Low at the time—"Although SMTS can over time become a multifunctional sensor system capable of fulfilling missions such as technical intelligence and battle station characterization, the conferees direct the Air Force to ensure the SMTS flight demonstration system (FDS) and block one system be designed primarily to satisfy the missile defense mission. Missions not related to theater and-or national ballistic missile defense should not be allowed to add significant cost, weight, or delay to the SMTS, FDS, or block one system."

That is the quote, and to my knowledge this requirement has not changed since this 1996 defense authorization bill was passed.

Mr. PETERS. We would agree with you, Senator. But that is not the view of some of the other services who have to use this, nor at the moment is it clear it is the view of the Joint Staff. So again, this is a problem that we are an integral participant in trying to resolve, but it is one that requires all of the players to get focused on this.

The ultimate problem, as you know, those early systems on SBIRS Low proved to be so cost prohibitive that we had to cancel them, and that, of course, has been a setback as well. But the difficulty now, as I say, is trying to predict exactly what the technical requirements are overall for NMD and which system in the system of systems provides those requirements. It is, in fact, the Air Force view that we ought to be focusing on NMD and TMD, but that is not the view of others in the Department. That is what we are trying to sort out at this point.

Senator COCHRAN. You are saying you have basically been overruled in your effort to comply with this provision by the higher-ups in OSD?

Mr. PETERS. No, it is simply unresolved at this point. Let me put it this way. We have proposed, and others feel, that there needs to be earlier capability, for example TMD capability, as well as NMD capability. And now the difficulty, as you know, is the NMD system has been evolving. So we do not have the C–2 capability on contract. My understanding is it is not designed. And yet this satellite system has to feed information into the C–2 configuration.

So we are trying to work the baseline for what is the C–2 configuration as well as SBIRS Low all at the same time.

Senator STEVENS. Senator, if I could interrupt just a minute. Senator Inouye and I have to go meet our old friend the president of Egypt. So would you mind chairing now?

The next hearing for this committee will be next Wednesday at 10 a.m., when the Army will appear before us. But if you and Senator Hutchison would continue the questioning, I would appreciate that.

Senator COCHRAN. I would be glad to, Mr. Chairman.

Senator STEVENS. Thank you.

Senator COCHRAN. So you are basically saying your hands are tied and that you are not going to be able to ensure that the requirements for other mission areas do not encroach on SBIRS Low ballistic missile defense missions?

Mr. PETERS. We are certainly urging the position that you just read, that they should not, and that is what I have urged as recently as last week to Dr. Gansler. But the difficulty is to get a consensus on exactly what that means, and also then, as I say, the further technical problem of trying to design this, what is essentially a subsystem of a missile defense system, to marry up with the other pieces, which are BMDO, Navy, and Army systems. So that is the difficulty, trying to get everybody on the same page, and it is a difficult problem.

Senator COCHRAN [presiding]. Senator Hutchison.

Senator HUTCHISON. Thank you, Senator Cochran. And I appreciate your questions on the Airborne Laser because I am in agreement with your position.

BASE CLOSURE AND REALIGNMENT (BRAC)

I understand a lot of the issues have already been taken up and I want to just ask one question. It is on the Brooks Air Force Base issue that you have certainly been forward thinking about. That is the city base pilot program that is getting ready to be put in place so that you can have more of a sharing of infrastructure costs on bases. I want to say first that I appreciate very much your willingness to think beyond the box in looking at ways to make our bases more efficient while we do not have a BRAC in place. I am one who does not support a BRAC right now because I do not think we have absorbed the last ones.

But having said that, I wanted to ask you how you think the pilot program is going, what you think will be usable in other bases, and if you think that we can do enough efficiencies with this kind of sharing that perhaps it would alleviate the need for future BRAC's or even one less future BRAC?

Mr. PETERS. Let me say, Senator, that when I have traveled around the country talking about BRAC issues, State and local government officials everywhere I have gone have said that: If you would let us start the renewal and the reengineering before you kill the base, it sure would help us out.

As you know, Kelly Air Force Base was subject to a BRAC and is now doing fairly well. But the point that many officials have made, if you would let us start the reuse before you shut the whole base, then we would have an economic base. Then even if you decided to shut it, it would not be such an impact on the local community.

So what we are trying to do with the Brooks city base concept is build on a significant interest from the city of San Antonio and the State of Texas to try to demonstrate that underutilized areas of the base can be reutilized in advance of a BRAC, with the idea that space which is today kind of vacant land would actually be able to be used for facilities perhaps similar to what we have there, which is medical research, or alternatively for innovative concepts such as a tourist mecca in an area of the city which is part of urban renewal.

BROOKS AIR FORCE BASE

So we are using all of our tools, actually including things like historically underutilized business (HUB) zones, to try to work to build the city and the base closer together. As I have talked to Members in the other House about this concept, which has been an area which has had some concern, I think there is now agreement that the Brooks concept is a very, very good one in many areas where we have bases. Many of our bases are located next or near to urban environments where there is a strong demand for business. We think there is a synergy, for example, between the medical research we are doing at Brooks and things that the university system in Texas may want to do.

Similarly, we have other tenants on bases. For example in Albuquerque we have Department of Energy (DOE) and others on the base. It seems to me that one could easily see universities and others being interested in being on the base and utilizing property that is underutilized today and sharing some of the costs of the base. So I think this is potentially exportable to many of our bases and perhaps many of the other services' bases which are located in areas of the country which are enjoying economic expansion, as San Antonio is, indeed, as much of the country is today.

So our hope would be that this will be a success. Right now there are some, what I would call tweaks, that several Members of the House would like to see in the bill. My understanding is we have worked out a fairly good compromise on what that needs to be. The environmental impact statement is the next step, as it always is. It is funded and is under way.

So I think as soon as we have a final version of legislation, whenever that would be, in the next several months, even as late as late summer, we would be prepared to move out. We would have done the environmental work. And we are actively talking with the city of San Antonio about their plans. I know they are actively talking to both industry and academia about various plans that work on the site.

Senator HUTCHISON. Well, I know I was speaking to a border health conference a couple of weeks ago in San Antonio and I think some of the research on some of the diseases that are particularly prevalent on the border may be done at Brooks. That is just one more area where I think there could be a really good base of operation for research facilities.

But let me ask the second part of my question again, and that is if you see this not as necessarily a transition to closing a base, but if there could be enough efficiencies by this kind of sharing

that it might make the base more desirable and also be a substitute for a future BRAC?

Mr. PETERS. I think the economic studies that we and the city of San Antonio have done show that if we are successful with what is left there, the part of Brooks we actually use today, would, in fact, be a very economically efficient base and would be one that would be advantageous probably to keep, given the sharing of costs and things that would go on.

We have looked around Air Force bases and believe this would provide a model in a number of other areas which would allow us to get rid of excess space without actually shutting down the base. Now, we do not really have a good handle yet on how many places that would be, but I think it might be a significant number. How exactly it would play into BRAC I am not sure. We have some bases, which I think are not readily adaptable to reuse in this way and some of those I believe would still be excess.

Senator HUTCHISON. All right. Thank you, Mr. Chairman, for letting me ask those questions.

Once again, I want to thank you, Secretary Peters and General Ryan. I know I came to the earlier briefing on the F–22 and I thought it was an excellent briefing about the strategic need for the F–22. I appreciate having that and hope others will be able to get the benefit of that information.

I just want to thank you for working with us in Texas. Certainly we have a number of bases and a number of issues, and we appreciate the cooperation and the good working relationship that we have had.

Mr. PETERS. Thank you, Senator.

Senator HUTCHISON. Thank you.

Senator COCHRAN. Thank you, Senator.

ADDITIONAL COMMITTEE QUESTIONS

Thank you, Mr. Secretary, Mr. Chief of Staff. We appreciate very much your cooperation with our committee and your responsiveness to our questions.

Mr. PETERS. Thank you.

General RYAN. Thank you, sir.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED TO HON. F. WHITTEN PETERS

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

F–22 BLOCK 3.0 SOFTWARE DEVELOPMENT

Question. Are we adding excessive risk and cost to the F–22 program by trying to accelerate the first flight of the Block 3.0 software?

Answer. The delivery date of Block 3.0 software was accelerated from December 2000 to October 2000 to ensure enough schedule margin to meet the Defense Acquisition Board (DAB) criteria of Block 3.0 first flight prior to Low Rate Initial Production (LRIP) contract award in December 2000. Once Block 3.0 has been loaded, flight testing of unique Block 3 functionality will commence and continue until Block 3.1 is delivered. Accelerating the Block 3.0 delivery date does increase risk, but we do not believe the risk is excessive. The acceleration should not increase cost, because the program has been restructured.

Flight testing of the Block 3.0 software remains one of the most challenging of this year's F–22 program criteria. The recent 38-day strike by the software engineers and technicians at Boeing and Lockheed only made this challenge more significant. As schedule risk mitigation, the Air Force recently decided not to certify Block 3S for flight in an actual F–22, although Block 3S will still be extensively tested in the Avionics Integration Laboratory (AIL) and on the Flying Test Bed (FTB). This rescission mitigates some of the schedule risk incurred during the Boeing strike and enables us to start Block 3.0 integration in the AIL on 15 May as previously planned. Block 3.0 software encompasses all of the capabilities of Block 3S, as well as adding additional capabilities.

Currently, the program does not foresee any technical or non-technical issues which would delay the start of Block 3.0 flight testing past December 2000. The F–22 avionics team will continue to take a disciplined development approach to deliver a mature Block 3.0 software capability to the test aircraft without adding risk and/or cost to the F–22 program.

Question. If there were problems with the Block 3.0 software, would we be likely to slow F–22 production or look to fix problems in the Block 3.1 software?

Answer. A specific solution to any software problem would be dependent on the magnitude of the potential impacts. For most problems, the production programs would continue as planned, and the problem(s) would be fixed in a subsequent software release. With all development programs, the possibility does exist for a solution that would involve both software and hardware changes which could impact the production program. However, any problem/solution will be addressed when it is discovered. The F–22 team does not know of, or anticipate problems with the software performance or schedule which would impact the current production schedule.

F–22-STRIKE IMPACT AND COST GROWTH

Question. What other Air Force programs were affected by the Boeing strike and what the consequences are?

Answer. Boeing and the Society of Professional Engineering Employees in America (SPEEA) settled the strike after 38 days. The strike had an impact on numerous Air Force Programs which include the Joint Strike Fighter (JSF), Airborne Laser (ABL), B–1, B–2, Conventional Air-Launched Cruise Missile (CALCM), C–17, USAF AWACS, NATO AWACS, and the E–4B, NAOC Aircraft programs.

JSF:

The strike will have some impact to the JSF program. Specific program impacts are currently being assessed. There may be some impact to the first flight of the CTOL variant scheduled for late Spring 2000. However, source selection is still scheduled for March 2001 and at this time there has been no impact to the overall program schedule.

ABL:

The ABL program experienced only a minor impact in the area of software development, but will recover schedule by the end of the year. No major milestones were impacted, and the system Critical Design Review (CDR) is still scheduled for 25–27 April 2000.

B–1:

The strike delayed the B–1 Conventional Mission Upgrade Program; both Block E (Computer upgrade) and Block F (Defensive System Upgrade Program) slipped approximately two months.

B–2:

Northrop Grumman and Boeing are evaluating the strike's impact on the B–2 program. The B–2 Program Office is anticipating the following impacts: potential reduction in the number of Boeing software fixes that can be incorporated in the next developmental software version; late delivery of the Long Term Software Support (LTSS) Avionics Simulator by up to 12 weeks; late development of an improved JSOW Launch Acceptability Region (LAR) capability; and late delivery of the JASSM Mission Independent Data (MID) file. The late delivery of the JASSM MID file is not anticipated to impact the JASSM integration schedule. A Northrop Grumman-Boeing team will convene at the end of April 2000 to definitize these schedule impacts, as well as assess any associated cost increases.

Conventional Air-Launched Cruise Missile (CALCM):

The CALCM program has been affected by the strike. There is no affect on the replenishment of the AGM–86C Block 1 missiles. However, the AGM–86C Block 1A ALCM to CALCM conversion is estimated to be one month behind the original con-

tract schedule and the AGM–86D Penetrator program is estimated to be two months behind.

C–17:

The C–17 program experienced two minor impacts as a result of the Boeing engineer's strike. One was a delay in a current Material Improvement Program investigation on avionics cooling fans. The other was a delay in lightning testing and subsequent test reports on component parts. At this time, the Air Force believes that these delays will not financially impact the C–17 program.

USAF AWACS:

Even though the Boeing engineering strike has caused some interim delays, there will be no impact to any fielding of capability. AWACS production and install support efforts were unaffected by the strike. The major RSIP follow-on production effort was not yet on contract.

An example of interim delays is the loss of specific software personnel on the Data Link Infrastructure (DLI) team. Boeing plans to move people with the necessary skills from elsewhere in the company or hire additional people. No long-term impact is projected.

NATO AWACS:

The one substantial full-up EMD AWACS program is NATO Mid-Term (NMT). The Boeing engineering strike played a role in the 8-month slip in this program. Additional manpower is being added to overcome delays in the program. NMT had been encountering schedule problems prior to the strike due to software progress and vendor deliveries. Current year budgetary impact is minimal since this EMD effort is a Firm Fixed Price Contract.

E–4B, NAOC Aircraft:

The E–4B program was minimally affected by the Boeing engineering strike. The affect was to delay E–4B work related to commercial aircraft issues, such as deviations to standard aircraft repairs. These instances arose during Programmed Depot Maintenance (PDM) activity on the one E–4B, # –677, but did not result in a delay of the PDM completion date.

C–17 REQUIREMENTS AND PRICING

Question. Starting in 2003, the Air Force rate for C–17's changes to 9, then 5, and finally 8 aircraft in 2005. How can the C–17 production line remain efficient under such a plan?

Answer. The outyear C–17 buy profile is currently not structured for production efficiency. These additional 14 aircraft (1 in fiscal year 2003, 5 in fiscal year 2004 and 8 in fiscal year 2005) were added into the fiscal year 2000 President's Budget subject to fiscal constraints, and assume a procurement rate of 15 aircraft per year. The Air Force plans to adjust production rate and funding after the total C–17 follow-on requirement is determined, and the possibility of foreign or commercial sales is better understood. The Air Force expects a firm follow-on requirement after the results of the Mobility Requirements Study 2005 and the Outsize and Oversize Analysis of Alternatives are released this Fall. In addition, the Air Force will consider potential commercial and foreign military sales with Air Force buys to smooth the production rate and gain production line efficiencies.

Question. What rationale supports the Air Force's pricing of the outyear C–17's at a 15 aircraft per year price?

Answer. Currently, the Air Force is reexamining the C–17 requirements. Mobility study results (Mobility Requirements Study 2005 (MRS–05) and Oversize and Outsize Analysis of Alternatives) are due to be published in Fall 2000. Based on our expected force structure and basing in 2005, we believe MRS–05 will show that the requirement for strategic lift and the C–17 is growing. Additionally, the Air Force is considering potential direct commercial and foreign military sales with Air Force buys to smooth the production rate and gain production line efficiencies. To accommodate these emerging requirements, the Air Force is examining the contractual, programmatic and budgeting issues associated with purchasing additional C–17s in the outyears. Once the total C–17 follow-on requirement is determined, the Air Force plans to adjust production rate and funding.

JOINT STRIKE FIGHTER (JSF) ACQUISITION STRATEGY

Question. Would you agree that taking an industrial base approach to JSF acquisition will add cost to the program?

Answer. A cost increase is possible should there be a change in the acquisition strategy. The Office of the Secretary of Defense (OSD) is reviewing all options. Short term cost increases due to split production would be weighed against potential long term procurement savings.

As a part of acquisition reform,the Under Secretary of Defense Acquisition, Technology, and Logistics has commissioned a review of the Joint Strike Fighter (JSF) acquisition strategy to include looking at potential alternatives. The review is not limited to specific options; rather, any potential option with merit will be considered. The review is not related to the source selection process and will not make specific recommendations. It will only present options for consideration; the current acquisition strategy has not changed. Currently, the winning contractor will be free to subcontract any work under his control as necessary to provide the best value.

Dr. Gansler directed that three industry consultants offer a set of top level, potential acquisition strategy options. A senior government team is reviewing the options and will provide recommendations to him. One of the options will be maintaining the current winner-take-all strategy. Very importantly, the options should have virtually no impact on international industry participation. There are no new factors driving the decision to examine potential alternatives. This is a proper and responsible action to take at this time in light of the fact the program is approaching the down-select to the engineering and manufacturing development (EMD) phase in Spring 2001.

The senior government team is reviewing the implications of these alternatives on the supporting industries to understand the long-term industrial base implications. Maintaining at least two industrial sources for sophisticated weapons systems and subsystems has become a priority in recent years after the defense-industry consolidation of the 1990s. Ensuring future competition and maintaining the military aircraft industrial base is in the best interests of the United States. Dr. Gansler has stated: "We believe special efforts are required to ensure both firms remain healthy and competitive after" the contract is awarded, "and yet we have to declare a sure winner."

The senior government team's outbrief is due within a month. DOD's decision on the JSF acquisition strategy should be made to support the release of the draft solicitation to the JSF prime contractors in June.

UAE F–16/AIR FORCE F–16 DERIVATIVES

Question. Has the Air Force looked at whether a "Block 70" F–16 would provide an affordable option for replacing aging F–16's?

Answer. Response below refers to F–16 Block 60; there is no Block 70.

The USAF remains committed to procuring F–16 Block 50 aircraft to build force structure required for the Expeditionary Aerospace Force and for the attrition reserve. The Air Force will also modernize existing F–16s.

F–16 Block 60 aircraft are very capable but very expensive. These aircraft are an improved version of the current F–16 and are equipped with the following upgraded systems: Agile Beam Radar, Enhanced Improved Performance Engine, Conformal Fuel Tanks, Advanced Architecture Avionics, and 5×7 Color Displays.

Recent briefings to the SECAF and CSAF presented ROM costs of between $44 million and $48 million per copy, in fiscal year 1999 dollars. These prices include Non-Recurring Engineering (NRE) and Support (ILS) costs. The "Basic" Block 60 could be procured for approximately $44.4 million; the more advanced F–16X (U.S. version of UAE F–16) would cost approximately $48.5 million. At these price levels, we believe it would be more advantageous to buy the Joint Strike Fighter (JSF), which provides many more capabilities than the Block 60.

Current USAF F–16 inventory are selectively scheduled to undergo the Falcon STAR (Structural Augmentation Roadmap) modification. This program increases service life to 8,000 hours for all F–16 C/D models and is considerably less expensive overall than "wholesale" replacement of airframes. A subsequent upgrade program might use some Block 60 components to upgrade earlier F–16s.

In summary, ongoing structural and capabilities modifications will enhance the current F–16 fleet until the JSF enters the inventory.

AIR FORCE EXERCISES AND READINESS TRAINING

Question. Can you explain the Air Force decision to absorb contingency costs for 2001 from within your fiscal year 2001 O&M program budget? I understand that this will allow you to execute all of the flying hour resources requested in this budget.

Answer. In the past, the active Air Force requested additional funding for incremental flying hours to support contingency operations. The decision to absorb flying

hour contingency costs within the fiscal year 2001 O&M budget was based on previous years' experience. That experience indicated that, at current operation levels, flying hours required to support contingency operation taskings could be accomplished within the O&M budgeted flying hours and related funding. This policy change promotes full execution of the requested President's Budget resources.

SBIRS HIGH COST INCREASE

Question. So you believe that gapping the SBIRS High production line for a year and completing limited additional testing is worth the program cost increase of $130 million?

Answer. The fiscal year 2000 Appropriations Conference restricted obligation of program funds until "program concurrency risk has been reduced relative to the acquisition strategy proposed by the Joint Estimating Team (JET)." In response to this, the Air Force delayed the Geosynchronous (GEO) 3–5 advanced procurement by one year to fiscal year 2002 and the full-funding to fiscal year 2003. The government estimates this delay will cost an additional $98 million over the JET, but allows for some additional risk reduction before GEO 3–5 advanced procurement. The selected approach minimized production gap costs by maintaining the production schedules at the payload and satellite integration levels, but could not avoid gapping the subcontractor and vendor production lines at the lower piece-part and component levels. During a 13 January 2000 meeting in Sunnyvale, the contractor briefed you that this revised strategy would cost an additional $127 million above the JET. The final price will be known when negotiations are completed this May.

The Air Force did not recommend the revised strategy, but accepted it as a reasonable balance between reduced concurrency risk and increased cost. We participated in the strategy reviews with the Under Secretary of Defense (Acquisition, Technology, and Logistics) and agreed that the additional testing had merit. Although we concurred in the revised strategy for SBIRS High, we acknowledge that many successful space programs have levels of concurrency as great as the original JET program. Therefore, we do not believe that the reduced concurrency decisions on SBIRS High should have a general application to future space programs.

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

JOINT STRIKE FIGHTER—OPEN SYSTEMS

Question. What is JSF doing to achieve a truly open system that delivers on the promise of lower cost, better supportability, and being able to cope with rapidly changing technology?

Answer. Beginning in 1994, the Joint Strike Fighter (JSF) program has evolved a definition of open systems architecture, and open architecture attributes, with our weapon system contractors (WSCs) and the involvement of the DOD Open System Joint Task Force (OS–JTF). Additionally, we have consulted with numerous industry and academic representatives in this area. We have documented this evolving definition of open systems in the JSF Avionics Architecture Definition Document (JAAD), to which each of our WSCs have responded with a JAAD Annex during the Concept Demonstration Phase (CDP) that depicts their detailed response to the JAAD precepts. Both WSCs are currently in the process of transferring their open architecture design into their specification hierarchy.

Fundamentally, the JAAD is consistent with the Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C^4ISR) Architecture Framework (CAF) and defines a complete representation of an open architecture as a series of views: operational, system and technical. Critically, the system view is comprised of five models: hardware, software, functional, information and dynamic. In total, the views and models define a complete, internally consistent architecture that employs a layered software architecture, modular hardware and software, commercially-based hardware and software products that meet the tactical timeline requirements of the JSF missions. Layered, modular software and modular, commercial-off-the-shelf based hardware are key to functional growth, tailorability for foreign military sales (FMS) customers and international partners, achieving and sustaining an interoperable platform, and mitigation of diminishing manufacturing source (DMS) issues throughout the system lifecycle.

Question. What lessons has JSF learned from earlier programs like F–22 and Commanche that use integrated avionics, and what are you doing to benefit from their experience?

Answer. The JSF program has remained involved with many previous programs in order to understand and incorporate lessons learned. For JSF, the key lessons learned regarding open systems are as follows:

—Open systems design without requisite business practices will not work.
—Technical standards alone define neither open-ness nor architecture and do not guarantee interoperability.
—Architecture is about systems engineering process and organizing system structure; functional block diagrams do not define architecture.
—Selection of implementing technologies (e.g., a specific processor type) can occur, and must occur, just prior to production.
—Subcontractors must be completely involved up front and early in Concept Demonstration Phase (CDP); evidence to the contrary is a key indicator that the architecture is undefined.
—Open systems architecture is critical to technology obsolescence mitigation, interoperability, and minimization of regression test requirements.
—Benchmarking of implementing technologies (e.g., installed processor and network performance) prior to Engineering and Manufacturing Development (EMD) is critical.
—Attributes of an open architecture must be viewed as a legitimate system requirement in a performance-based specification.

AIR FORCE PLANS FOR DIRECTED ENERGY

Question. What aspects of the High Energy Laser Master Plan would the Air Force underscore in particular?

Answer. The Air Force sees the Department of Defense Laser Maser Plan as a positive step. For many years, the Air Force has been the only Service funding a significant laser program in its budget. The Air Force has supported the Airborne Laser program since 1994, plus a strong Science and Technology program in this area since the 1960s, with its unique major facility at Kirtland Air Force Base, New Mexico. In addition, the Air Force and the Ballistic Missile Defense Organization have jointly funded the Space Based Laser technology program. This master plan will bring the other Services and Defense Agencies into this key area.

The Air Force will work with the Deputy Under Secretary of Defense for Science and Technology in implementing this plan. Implementation details are currently being worked and have not yet been provided to the Air Force, however, we have been assured the new four-level organization outlined in the plan will deal only with new funding and will not make unilateral changes to the Air Force's strong laser program. The Air Force laser program is designed to meet specific Air Force needs and is a key part of the Air Force's Directed Energy Master Plan currently in final coordination within the Air Force.

The Air Force agrees funding increases in this area will be beneficial and should be aligned with the Department's priorities. Thus, we strongly support the development of Departmental laser roadmaps. We also strongly agree the industrial base in this area needs to be strengthened, but caution that the Science and Technology Program is not the best way to build and maintain a strong industrial base in any area. Our master plan also calls for increased interactions with the national laboratories and we agree with the recommendation that these interactions be based on a cost-sharing arrangement.

Question. What sort of synergies could be leveraged or advantages could be derived for directed energy programs through the recommended type of defense-wide administration and decision-making structure?

Answer. Since the details of the implementation of this decision-making structure have not yet been provided to the Air Force, it is difficult to predict exactly what advantages will be realized from the planned four-level management structure within the Office of the Deputy Under Secretary of Defense for Science and Technology. Since almost all of the laser funding requested in the current President's Budget is in support of Air Force programs, synergies will depend on new sources of funding for laser technology being made available. With new funding, we should see both existing technologies and new technologies being made available for a much wider range of defense applications. This management structure should be able to ensure any new programs will make maximum use of existing resources such as the world-class laboratory at Kirtland Air Force Base, New Mexico.

KIRTLAND'S SPACE VEHICLES DIRECTORATE

Question. There have been some rumors circulating regarding the Space Vehicles Directorate at Kirtland AFB being dissolved and these functions being relocated to

Wright Patterson Air Force Base. I have no official confirmation of any such plans on the part of the Air Force.

Can you verify for me that these are nothing but rumors? Does the Air Force have any short- or long-term plans to radically change the operations of the Space Vehicles Directorate at Kirtland Air Force Base?

Answer. The Air Force has no information regarding any potential relocation of Space Vehicles Directorate functions from Kirtland Air Force Base, New Mexico.

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

C–17

Question. Regarding our airlift capability, as we pull back from overseas bases and expect our military forces to respond quickly to any situation anywhere in the world we have seen the C–17 used over and over again with great success. It appears to me we should be talking about increasing C–17 production and not decreasing it. Will you please confirm for us that next year's budget submission will restore funding to 15 aircraft per year?

Answer. The current multi-year procurement contract remains in place with the procurement of the remaining 35 aircraft complete by fiscal year 2003 (12 aircraft in fiscal year 2001, 15 aircraft in fiscal year 2002 and 8 aircraft in fiscal year 2003). Additionally, the original delivery schedule remains intact ensuring no loss of planned airlift capability.

For future buys, the Air Force is reexamining the C–17 requirements. Mobility study results (Mobility Requirements Study 2005 (MRS–05) and Oversize and Outsize Analysis of Alternatives) are due for publication in Fall 2000. Based on our expected force structure and basing in 2005, we believe MRS–05 will show the requirement for strategic lift and the C–17 is growing. To accommodate these emerging requirements, the Air Force is examining the contractual, programmatic and budgeting issues associated with purchasing additional C–17s in the outyears.

F–15 FOREIGN MILITARY SALES (FMS)

Question. The Administration is supportive of our Foreign Military Sales programs, including such programs as the F–16 and F–15 which help support our critical and dwindling tactical aircraft manufacturing base, am I correct? That is why I am looking for continued support for F–15 FMS to Saudi Arabia and South Korea to ensure we clearly communicate to both these countries the need to make a substantive decision as soon as possible.

Let me update you then on my most recent efforts. I have asked General Zinni, Commander-in-Chief, Central Command, to assist me in determining the status of potential F–15 Foreign Military Sales to Saudi Arabia. His staff told us that Monday morning (27 MAR) the CINC had a conversation with our U.S. Chief of Training in Saudi Arabia. The feedback is that although Saudi Arabia has made no commitment, they are considering the offer of a package of six to 12 F–15s made by Boeing.

I have also asked Admiral Blair and General Gamble to assist me in F–15 Foreign Military Sales to South Korea and I hope to meet with General Gamble next week when he is here in Washington. On April 6, Senator Ashcroft will meet with Lee Hong-Koo, Ambassador of South Korea to discuss F–15 FMS, and he plans to meet with the Saudi Ambassador as soon as the Ambassador is back in country. While our efforts to secure FMS continue, I look forward to working with you and your staff and ask that you be available to assist General Zinni, Admiral Blair, and General Gamble as they work with us in securing FMS for the F–15.

Answer. The Air Force is working closely with the Chief, United States Military Training Mission (USMTM) and the Boeing company to develop a proposal to transfer up to 24 F–15 aircraft through an Foreign Military Sales (FMS) letter of acceptance (LOA), with initial deliveries beginning in October 2003. The LOA is part of a comprehensive Boeing proposal to assist the Saudis in developing an aerospace support industry. A key facet of this assistance will be provision of tooling and training, through the FMS LOA, to perform final assembly of kits in kingdom. This initial training will support other offset programs with Boeing's current joint venture partners.

The proposal is being evaluated by senior levels of both our governments, primarily from the standpoint of affordability. As this assessment continues, we are working closely with USMTM and the Royal Saudi Air Force (RSAF) to encourage the Saudi government to submit a formal letter of request for this program soon enough to allow us to notify the sale to Congress and have the Saudi government

accept the LOA before 31 December 2000. These milestones protect the current price and delivery schedule, based on the U.S. Air Force buy of F–15 aircraft this year.

Answer. (South Korea Interest in F–15E): On 8 April 2000, the Republic of Korea Ministry of National Defense (ROK MND) issued a Request for Proposal (RFP) to foreign competitors for the Future Fighter (F–X) program. The Republic of Korea Government (ROKG) selected competitors are the Boeing F–15E, French Rafael, Spain's Eurofighter 2000, and the Russian SU–35. At this time, the ROK MND is pursuing the procurement of forty (40) F–X aircraft via Direct Commercial Sale (DCS) channels. The RFP requests the contractors submit proposals for both direct purchase and in-country licensed production by 30 June 2000. The ROKG expects the final weapon system selection to occur in July 2001 and to be on contract by December 2001. The ROKG requires delivery of the jets in increments of ten (10) from CY 2004–2007. Boeing has requested the U.S. Air Force (USAF) support the upcoming Test and Evaluation (T&E) phase of the F–X program and to expedite release of classified portions of the proposal. The ROKG requested the F–15E T&E segment occur during the 17 September-13 October 2000 timeframe. USAF support will be needed in October 2000 to satisfy the requirement for approximately twenty flight sorties; site is TBD. Other parts of the T&E include detailed briefings and simulator time at Boeing/St. Louis and tours of USAF depot maintenance facilities and flight-line operations.

The Air Force International Affairs Office will continue to work closely with Gen. Gamble's office (Headquarters Pacific Air Forces), Boeing, and the U.S. security assistance representatives in Korea to support the potential future sale of F–15Es to the Republic of Korea.

F–15E FISCAL YEAR 2000 APPROPRIATION

Question. Fiscal year 2000 Appropriations for F–15E production originally called for procurement of 5 aircraft. It is my understanding a tentative agreement between Air Force and Boeing would allow for procurement of 4 aircraft by using both fiscal year 2000 Appropriations and Advance Procurement F–15E funds for fiscal year 2001. While I understand there is some concern about reprogramming fiscal year 2001 Advance Procurement funds, are you prepared to do all you can to get a contract signed between Boeing and Air Force so that we can obligate fiscal year 2000 Appropriations and get our skilled Boeing workforce back to work while we continue to pursue Foreign Military Sales?

Answer. The Air Force awarded a contract on 3 May 2000 to the Boeing Company for three F–15Es with options for a fourth and a fifth aircraft. This action allows the Service to avoid the immediate effects of contractor-identified cost growth associated with the existing production line break at the Boeing St Louis facility.

QUESTIONS SUBMITTED BY SENATOR RICHARD C. SHELBY

GLOBAL COMMAND SUPPORT SYSTEM (GCSS)

Question. Mr. Secretary, could you please reiterate to the Committee, the overall importance of GCSS to the Air Force's future ability to maintain its warfighting logistics chain and to efficiently operate its bases.

Answer. I would like to recount the words published in the USAF's 2000 Posture Statement: "Global Combat Support System—Air Force (GCSS–AF) is a key enabler of Agile Combat Support (ACS) and provides a framework for integrating our critical combat support information systems and process across functional areas. It will provide the warfighter and supporting elements with timely, accurate, and trusted ACS information to execute the full spectrum of military operations."

GCSS–AF is the means by which ACS Automated Information Systems (AISs) will be modernized and integrated to improve business processes. This will allow Joint Commanders, their staffs, and ACS functional personnel at all ranks and echelons to successfully carry out their assigned missions with the greatest effectiveness and efficiency with the least amount of exposure of our forces to enemy action.

The Air Force has made several specific financial and organizational changes that demonstrate the importance the AF puts on GCSS–AF:

First, the Air Force provided additional funding ($21 million) in the GCSS–AF fiscal year 2001 budget request, more than doubling the fiscal year 2000 funding level. For fiscal year 2002-fiscal year 2007, additional funding of $25 million/year plus inflation has been approved by the Secretary of the Air Force.

Second, a separate Directorate for GCSS–AF was created on 1 November 1999 under the leadership of Brig. Gen. Anthony Bell reporting directly to the AF Chief Information Officer, Dr. Delaney. Also, the Director for Information Dominance Pro-

grams under Dr. Delaney has established a Global Combat Support Division to provide acquisition staff support to the GCSS–AF effort.

Third, within the Department of Defense, we have partnered with the Defense Information System Agency to ensure our Air Force initiative is consistent with the technical architecture being developed for the DOD.

OFFICER SHORTAGES

Question. Would you agree that an additional way to combat the officer shortage is to provide officer candidates with the best and most efficient training facilities available?

Answer. An efficient, safe, and professional training environment is indeed a major factor in motivation and retention for new USAF officer trainees and cadets. These accessions and newly commissioned lieutenants draw their first impression of the world's finest Air Force from their training facilities. Therefore, these training facilities, the first stop on their service path, should be at their finest—first class and top-notch. We believe a quality training installation is an investment in the future that will pay intangible dividends in improved retention of Air Force officers. By building and maintaining high quality training facilities, supporting technology readiness initiatives and infrastructure (including furniture), the Air Force: (1) invests early in talented people by strengthening their service commitment and pride and (2) achieves excellence in training mission capability and accomplishment. We appreciate the $42.1 million in appropriation dollars we have already received to begin building an Officer Training School (OTS) campus. We need your continued support to meet our expanded officer production requirement of 3,700 officer accessions per year through OTS and Air Force Reserve Officer Training Corps (AFROTC). Your support will further emphasize that providing officer candidates with the best and most efficient training facilities available is a very good way to combat our officer shortages.

OFFICER TRAINING

Question. Mr. Secretary, I have been told that the number of officer candidates scheduled to train at Maxwell Air Force Base will continue to rise. In light of that fact, would you agree that the Air Force should continue to place a priority on the completion of the Officer Training School's campus?

Answer. In fiscal year 2000, we will commission approximately 1,200 officers through Officer Training School (OTS). We hope to increase this number to a minimum of 1,700 officers per year beginning in fiscal year 2001. Many of the OTS construction projects are either complete or under construction including: new academic facilities, a fitness center, dining facility, and dormitories. These projects have been added at a cost of $46 million. We believe a quality training installation is an investment in the future that will pay tangible dividends in improved retention of Air Force officers. By building and maintaining high quality training facilities, supporting technology readiness initiatives and infrastructure (including furniture), the Air Force: (1) invests early in talented people by strengthening their service commitment and pride and (2) achieves excellence in training mission capability and accomplishment. We need your continued support to meet our expanded officer production requirement of 3,700 officer accessions per year through OTS and Air Force Reserve Officer Training Corps (AFROTC). Your support will further emphasize that providing officer candidates with the best and most efficient training facilities available is critical to combat our officer shortages.

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

RECRUITING CONCERNS

Question. Mr. Secretary, I understand the Air Force failed to meet its recruiting goals last year and in the first quarter of this fiscal year as well. Can you tell us how you are addressing this problem, and whether you are seeing any improvement?

Answer. The Air Force entered fiscal year 2000 with only 32 percent of our accession goal in the bank, compared to the target of 43 percent. Therefore, we started the year behind the power curve in an already demanding environment. As of 30 April 2000, we are 3,366 accessions behind for the fiscal year; however, we are committed to achieving our fiscal year 2000 accession goal of 34,000. Through our newly formed Recruiting and Retention Task Force, we are evaluating and have started implementing 120 initiatives to help meet the fiscal year 2000 goal. We have aggressively worked to increase the number of Air Force recruiters in the field; we began

the year at 1,085 total production recruiters, are currently at 1,199, will have 1,450 in the field by September 2000, and 2,000 by the end of calendar year 2001. In the meantime, we deployed 169 former recruiters and 101 recruiters serving on the recruiting staff to the field for 120 days of temporary duty during April, May, June, and July.

We are also increasing our advertising efforts. The recruiting advertising budget in fiscal year 1999 was $76 million, which included $54 million to launch our paid TV campaign—$17 million for the fiscal year 1999 campaign and $37 million to prebuy fiscal year 2000 advertising spots. The fiscal year 2000 recruiting advertising budget is $65 million. This includes a steady state funding line of approximately $37 million for television advertising (including the Air Force Identity Program) and approximately $28 million for other advertising programs. The recruiting advertising budget remains constant, without reduction, near the $60 million level through fiscal year 2001.

Additionally, we increased the number of career fields eligible for an enlistment bonus, as well as raised the maximum potential bonus to $12,000. For the period of 13 April through 31 May 2000, we added a $5,000 "kicker" to anyone leaving for Basic Military Training during this time frame (these are two of our most difficult months).

Another way we are aggressively addressing this issue is through college loan repayments. For the first time in our history, we are offering eligible new recruits up to $10,000 toward repaying their college loans. We will continue our full court press toward doing everything we can to make our recruiting goal this year.

Question. Mr. Peters, is the Air Force anticipating a decline in quality as it struggles to meet its recruiting goals, and, if so, what will be the expected impact?

Answer. The Air Force is committed to maintaining quality accession standards. Our standard is 99 percent high school graduates and we have not fallen below this standard since fiscal year 1984. In the past 10 years, high school graduates attrit from Basic Military Training at 8.2 percent versus non-high school graduated attrition of 16.1 percent. Also, 54.37 percent of high school graduates complete initial enlistment compared to 37.18 percent of non-high school graduates. So, it makes good economic sense to keep our standards up.

The Air Force recruiting challenges stem from declining retention rates; we must continue to maintain high entrance standards in order to sustain a high quality force. Therefore, we are not anticipating a decline in the quality of our recruits. The Air Force goal of recruiting 99 percent high school graduates remains unchanged.

JSTARS

Question. Mister Secretary, I know we are in agreement that we believe the JSTARS is a wonderful system. Can you tell us what your plans are for future production of this program?

Answer. The JROC-validated Joint STARS requirement of 19 aircraft to support the two nearly simultanious Major Theater War (MTW) scenario has not changed. However, due to fiscal constraints the Air Force supports the fiscal year 2001 President's Budget for fifteen aircraft. The Air Force is also presently evaluating other Ground Moving Target Indicator platforms to augment the JSTARS capability and meet our goal of dominant awareness of the battlefield.

Question. Mr. Secretary, what is your priority for the purchase of more JSTARS aircraft?

Answer. Theater CINCs agree that Joint Surveillance Target Attack Radar System (JSTARS) plays a crucial role in both peacetime and wartime military operations and most recently the platform proved its worth during Operation Allied Force. JSTARS is also considered a low density/high demand asset as its small fleet size is heavily tasked. The Air Force continues to support additional funding and additional aircraft, and supports the fiscal year 2001 President's Budget request for a 15th aircraft. In addition, the Air Force is reviewing other platforms to augment the JSTARS Moving Target Indicator (MTI) capability. Specifically, the Air Force is interested in migrating Ground MTI capability to the Global Hawk High Altitude UAV.

B–2 BOMBER

Question. Mr. Secretary, if it were affordable would you advocate restarting B–2 production?

Answer. Renewed B–2 production would be less cost-effective than improving the capabilities of the existing bombers. The Air Force provided the White Paper on Long-Range Bombers to Congress in March 1999. This White Paper, or Bomber Roadmap, outlines the Air Force plan for improving the combat capability of the ex-

isting bomber force structure. The plan includes upgrades to the avionics and communications subsystems and integration of precision gravity and standoff munitions. The Bomber Roadmap modernization plan is supported by the recommendations of the Congressionally directed Report of the Panel to Review Long-Range Air Power, LRAP. The LRAP report made the following recommendations: (1) Use the additional funding for B–2s to improve its deployability, survivability, and maintainability; (2) Fully exploit the potential of the current B–1, B–2, and B–52 bomber force through more operational attention and additional investment in support and upgrades; (3) Develop a plan to upgrade and sustain the bomber force structure for the longer term to include eventual replacement aircraft. Affordability constraints have precluded full implementation of the Bomber Roadmap in the President's Budget for fiscal years 2001 through 2005. The upgrades outlined in the Bomber Roadmap and the LRAP report will be reconsidered during the process for building the President's Budget for fiscal years 2002 through 2007.

F–22

Question. Mr. Secretary, there have been some hiccoughs in the testing phase on this program including stress tests on the wings. Can you give us a status update on the testing program?

Answer. The F–22 continues to pursue a disciplined testing approach to validate the capabilities of the weapon system. Technical results to date have been exceptional and matched or exceeded model predictions in many areas. Key elements of the test program and their status are:

Flight testing.—Testing at Edwards AFB continues to progress with more than 600 total flight test hours on 3 test aircraft. Capabilities demonstrated thus far include supercruise, high angle of attack flight, and flight testing with both weapons bays open.

Avionics Testing.—In calendar year 2000 the avionics test program moves from the laboratory to flight-testing. Block 1 software, which has been flying on the F–22 Flying Test Bed (FTB) since November 1998, is installed in aircraft 4004 and is being prepared for first flight in June 2000. Block 2 software began flying in the FTB in October 1999. Block 3S software began testing in the FTB in April 2000. Block 3.0 software is currently being tested in the Avionics Integration Laboratory, Boeing, Seattle WA. Block 3.0 software encompasses all of the capabilities of Block 3S as well as adding additional capabilities. Block 3.0 testing in the FTB begins August 2000, and on an F–22 in November 2000.

Static Testing.—Post-test evaluation from static testing of F–22 test article 3999 revealed a failure in Rib #4 of the left hand Flaperon following the 150 percent load testing of the adjacent aileron. Further investigation revealed a delamination of an internal composite structure member. Analysis determined that the failed part lacked sufficient strength for the predicted load. The composite part was replaced with a titanium part with sufficient strength. This fix has since been incorporated into all of the test aircraft and will be part of the production design. Testing resumed on 11 April 2000 and should complete by early November 2000.

Fatigue Testing.—Full-scale fatigue test planning is continuing in preparation for a late August 2000 initiation in fulfillment of the Defense Acquisition Board (DAB) criteria. This planning effort is subject to the same rigorous methodology employed in defining and executing the static test program. The test article (A/C 4000) was moved to the test facility on 1 April 2000 and is currently being equipped with test fixtures. The Durability and Damage Tolerance Analysis (DaDTA) of the Block II design configuration is on-going with an estimated completion date of mid-July 2000.

Question. Secretary Peters, what is the impact of the recently ended strike at Boeing on the F–22, specifically on avionics development?

Answer. The 38 day strike by the Boeing engineering and technical staff was predicted to impact four of the ten program criteria for the low-rate initial production decision. The affected criteria are first flight with block 3.0 software, completion of critical design review of block 3.1 software, completion of static structural testing, and completion of 40 percent first fatigue life test. The following are the status of each of these criteria and our latest assessment of completion this year.

First flight with Block 3.0 Software.—The current program plan is to fly Block 3.0 on aircraft 4004 by December 2000. Flight testing of the Block 3.0 software remains one of the most challenging of the calendar year 2000 program criteria. The recent strike only made this challenge more significant. As schedule risk mitigation, the Air Force recently decided not to certify Block 3S for flight in an actual F–22, although Block 3S will still be extensively tested in the Avionics Integration Laboratory (AIL) and on the Flying Test Bed (FTB). This rescission mitigates some of the

schedule risk incurred during the strike and enables us to start Block 3.0 integration in the AIL on 15 May as previously planned.

Completion of Block 3.1 CDR.—The completion of the Block 3.1 CDR is no longer at risk with the settlement of the strike. The Block 3.1 Mission Software (MSW) Critical Design Review (CDR) was originally scheduled for 18 April 2000. Due to the strike, development work was delayed and the Avionics Team is currently working to select a new CDR date. Boeing has done a preliminary review of remaining work to go and has estimated that CDR will occur in late June 2000 or early July 2000.

Static Structural Testing.—The best available planning data for static test execution indicates that calendar year 2000 DAB criteria for static test remains achievable; however, static testing is the most challenging of the calendar year 2000 program criteria. Five ultimate test conditions have been approved for execution subject to pre-test readiness reviews. Another 10–12 conditions are being evaluated for sequencing and content. Testing resumed on 11 April 2000 and two criteria have already been completed. To ensure that the testing remains on schedule we have directed the contractor to apply increased manpower and use available overtime for test conduct, data analysis, and issue resolution.

Completion of 40 percent first fatigue life test.—The best available planning data for fatigue test execution indicates the calendar year 2000 DAB criteria to initiate fatigue tests, and the goal of 40 percent of the first life cycle testing remains achievable. Full-scale fatigue test planning is continuing in preparation for a late August 2000 initiation in fulfillment of the DAB criteria. This planning effort is subject to the same rigorous methodology employed in defining and executing the static test program. The test article (A/C 4000) was moved to the test facility on 1 April 2000 and is currently being equipped with test fixtures. The Durability and Damage Tolerance Analysis (DaDTA) of the Block II design configuration is on-going with an estimated completion date of mid-July 2000. The status of the analytical effort supporting start of fatigue testing is being monitored on a daily basis (completion of key static test analysis is a precursor to the start of fatigue testing). A series of test readiness reviews to be held over the next two months will also definitize the test execution criteria, planning and culminate in an evaluation of analysis results.

SUPPLEMENTAL REQUIREMENTS

Question. Secretary Peters, the supplemental bill would provide funding for your forward operating locations in support of drug interdiction. What would be the impact if you failed to get this funding prior to fiscal year 2001?

Answer. Forward Operating Locations (FOLs) in support of drug interdiction are not included in the Air Force's supplemental request, nor are they included in the Air Force's program. As FOL Executive Agent, the Air Force is responsible for administering the operation and maintenance of the sites for the Department of Defense and U.S. law enforcement agencies. However, all counterdrug funding and policy coordination is provided by the Department of Defense Coordinator for Drug Enforcement Policy and Support (OSD/DEP&S).

The impact of delaying the fiscal year 2001 supplemental request on continued drug interdiction operations in the southern hemisphere can be addressed more appropriately by OSD/DEP&S and U.S. Southern Command (USSOUTHCOM), through the Office of the Secretary of Defense.

QUESTIONS SUBMITTED BY SENATOR BYRON L. DORGAN

B–52 FORCE STRUCTURE

Question. Last year, Section 8107 of the Fiscal Year 2000 Defense Appropriations Act instructed the Air Force to provide funding for 94 B–52 bombers in the fiscal year 2001 budget. Why aren't you following these instructions?

Answer. The Air Force is complying with Congressional language and maintaining the fiscal year 2000 B–52 inventory at 94 fully funded aircraft. We are operating and maintaining a force of 44 primary mission, 12 primary training, 6 back-up, 31 attrition reserve and 1 test aircraft. The Congressionally added funds allow us to operate, maintain and modify the 18 excess attrition aircraft throughout fiscal year 2000.

These 18 B–52 aircraft are excess to our need. The Air Force requires 76 B–52 aircraft to support the full range of mission taskings. This requirement is documented in the U.S. Air Force White Paper on Long Range Bombers, dated 1 March 1999, and is based on the May 1997 Quadrennial Defense Review and the 1998 Report of the Panel to Review Long Range Air Power. In light of today's tight fiscal constraints and potential START III force structure changes, we must ensure the

required force is capable and prepared to support all wartime taskings. In fiscal year 2001, the Air Force plans to fund 76 aircraft based on operational requirements and place 18 attrition reserve aircraft in inviolate storage at Davis Monthan AFB, AZ.

AIRBORNE LASER

Question. Please give me your thoughts on the capability of the ABL system to provide ballistic missile defense against the long range missiles that North Korea may be developing. Would such a capability be compliant with the ABM Treaty?

Answer. ABL is a theater missile defense system. Thus, ABL is not being designed to counter strategic ballistic missiles, either from North Korea or any other state, nor will it be tested against strategic ballistic missiles. The Air Force believes that ABL will be compliant with U.S. arms control obligations, but the program is not yet sufficiently mature for an ABM treaty compliance certification.

MILITARY CONSTRUCTION AND REAL PROPERTY MAINTENANCE

Question. Your unfunded priorities list includes $437 million in fiscal year 2001 to help relieve Air Force's real property maintenance backlog and $378 million for military construction in fiscal year 2001 to reduce the facilities recapitalization rate from over 200 years to 150 years. The unfunded five-year bill for these efforts totals almost $3.4 billion.

I would like your thoughts on why you seem to consider the maintenance of your infrastructure unaffordable. Aren't you creating an unfunded infrastructure "bow wave" that will cost tens of billions of dollars to fix in the future?

Answer. Military construction, real property maintenance, other base support and family housing are very important to the Air Force. However, due to fiscal constraints and affordability, the Air Force's fiscal year 2001 budget request demonstrates that we have assumed risk in our infrastructure accounts. We are prepared to meet our security commitments and execute national military strategy but are funding our infrastructure accounts at less than optimal rates. Unfortunately we are, in fact, driving a bow-wave of infrastructure requirements to the future.

The Air Force's fiscal year 2001 budget is our best balance of funding people, readiness, modernization, and infrastructure programs within fiscal constraints. However, when focusing on our real property and military construction accounts, our budget request is about $3.5 billion short of what is needed to sufficiently fund the required maintenance and modernization of our physical plant. Across the Future Years Defense Program, this shortfall is $11.7 billion. Bottom line, we have had to assume some risk in our infrastructure in order to fund higher priority modernization and people programs.

QUESTION SUBMITTED BY SENATOR LARRY CRAIG

BED DOWN PRIORITIES OF THE F–22

Question. What factors will the Air Force use in determining bed down priorities of the F–22?

Answer. In 1995, Commander Air Combat Command (COMACC) directed an F–22 Process Action Team (PAT) to study basing options for the operational F–22s. Representatives from HQ USAF, F–22 Systems Program Office (SPO), and Air Combat Command (ACC) evaluated bases for their suitability in hosting the F–22 mission and local training. The analysis concentrated on quality and availability of training airspace.

In 1997, the Air Force focused on factors beyond the earlier study to narrow the list of potential bases into a non-ordered basing candidate plan. The factors used in this determination focused on the mission and infrastructure of hosting the F–22 squadrons. Central to the issue is the similarity of the F–15's and F–22's primary mission. The F–22 will replace three of the four Fighter Wing Equivalents (FWEs) of F–15s on a one-for-one basis. To preclude displacing existing force structure, capitalize on existing infrastructure, and minimize costs, existing F–15 bases were considered the most likely candidates.

Working toward F–22 Initial Operational Capability (IOC) in fiscal year 2005, ACC began work on the Description of Proposed Action and Alternatives (DOPAA) required under the National Environmental Policy Act (NEPA). Langley AFB, VA, was identified as the preferred alternative for the first operational F–22 wing. However, the final basing decision will be contingent upon completion of the Environmental Impact Analysis Process actions. This analysis will include a look at reasonable alternatives to Langley. These include: Eglin AFB, FL; Tyndall AFB, FL; El-

mendorf AFB, AK; Mountain Home AFB, ID; and the "no-action" alternative. Starting in 2000, and estimating two years to complete, the environmental impact analysis will examine issues such as land use, airspace and safety, air and water quality, noise, socioeconomic impacts, biological and cultural resources, quality of training, and cumulative impacts.

QUESTIONS SUBMITTED TO GEN. MICHAEL E. RYAN

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

JOINT STRIKE FIGHTER (JSF) ACQUISITION STRATEGY

Question. Are you concerned that the weight of requirements on JSF, such as vertical takeoff, will force design compromises in the Air Force JSF variant?

Answer. The Air Force, Navy, and Marine Corps have coordinated to produce a set of operational requirements for a family of affordable and capable aircraft that will meet each individual user's needs. Each service brought individual desires to the program when it started. However, the services understood that the aircraft must be affordable if it was going to be produced. The Cost and Operational Performance Trade (COPT) process occurred in tandem with requirements development. The result was that with each successive cost and performance trade, the design trade space was reduced.

While compromises were made by each service, the users have established Key Performance Parameters (KPP) in the JSF Joint Operational Requirements Document (JORD) that ensure the design will meet the warfighters' needs. The Joint Requirements Oversight Committee (JROC) approved the JORD on March 13, 2000, thereby fixing the requirements. This six-year process produced an achievable set of requirements for a family of highly common, affordable aircraft that meet the warfighters' needs for the 21st century.

UAE F–16/AIR FORCE F–16 DERIVATIVES

Question. Can you outline for the Committee the capabilities of the F–16 being developed for sale to the United Arab Emirates?

Answer. In comparison to current USAF F–16s:

Radar.—The UAE Block 60 F–16 will use an active electronically scanned array (AESA) radar similar (but much less capable) than the F–22 radar. It replaces the older technology mechanically scanned radar in the USAF F–16. Radar detection range will be almost twice that of USAF F–16s but less than current USAF F–15s.

Infra-red Detection/Targeting.—The Block 60 uses an internal focal plane array forward looking infra-red (FLIR) for night navigation that is similar in capability to the USAF external FLIR pod. The Block 60 uses an external laser targeting pod similar to the USAF F–16s, with slightly better resolution.

Electronic Warfare.—The Block 60 has an internal EW passive and active jamming system with a fiber optic towed decoy. Advanced digital processing enables this EW system to detect, characterize and accurately locate most radar frequency emmiters and employ advanced jamming techniques, if needed. The USAF F–16 has a less capable passive system (radar warning receiver), carries an external jamming pod, and uses a repeater towed decoy. The USAF F–16 carries the external high speed anti-radiation missile (HARM) targeting system (HTS) pod to locate radar emmiters.

Engines.—The UAE Block 60 F–16 uses the new GE F110–132 engines that produce about 3,000 more pounds of thrust than the current USAF GE engines. With conformal fuel tanks, the block 60 is almost 5,000 pounds heavier than USAF F–16s at takeoff.

Range.—The Block 60 can fly about 40 percent further than a USAF F–16 with the same bomb/missile load. Conformal above wing and 600 gallon below wing fuel tanks plus a centerline 300 gallon tank (centerline used by USAF F–16s for EW pod) give the block 60 about 9,000 more pounds of fuel.

Cockpit.—Three Israeli built 5×7 inch color displays give the UAE pilot a better information display than the two 4×4 inch displays in the USAF F–16.

Weapons Capability.—The UAE F–16 has the capability to carry and deliver all current export USAF missiles and bombs.

Question. Does the Air Force have any plans to modify Air Force inventory F–16's to add systems or capabilities being developed under the UAE program?

Answer. There are no current plans to modify existing F–16's in the Active/Guard/Reserve fleet with capabilities developed for the UAE F–16 Block 60. While the USAF recognizes the inherent value and combat-enhancing capabilities resident in

the Block 60, the Air Force is committed to a modernization schedule that pre-dated the UAE/Lockheed agreement. However, ongoing modernization will not preclude the USAF from leveraging the F–16 Block 60 capabilities in the future if a need arises.

AIR FORCE EXERCISES AND READINESS TRAINING

Question. The fiscal year 2001 budget makes great strides in focusing the Air Force on aircrew training. Have you completed the training backlog of air crews that resulted from the bombing campaign in Kosovo?

Answer. Training backlogs were created in the Combat and Mobility Air Forces as a result of the Kosovo campaign due to the deployment of aircraft and aircrew to, and within, the United States Air Force in Europe (USAFE) area of responsibility. Reconstitution efforts have successfully eliminated the training backlog caused by the Kosovo campaign, with field training unit (FTU) and operational training now at normal (pre-Kosovo) levels.

AIR FORCE PILOT RETENTION

Question. Last year, Congress greatly expanded Aviation Continuation Pay, and added $100 million to retain Air Force pilots. This is a very generous bonus program. Have you seen the increase in pilot retention that you expected?

Answer. The fiscal year 2000 Aviator Continuation Pay (ACP) Program is still ongoing; however, we now have enough returns to make initial projections. We are seeing a positive, upward swing in our pilot inventory. Given current bonus take rates and retention patterns, we can expect to reduce the pilot shortfall to manageable levels within three years. This will go a long way toward helping us "hold the line" until we benefit from the positive effects of the 10-year ADSC in fiscal year 2009 and beyond.

However, we must temper this optimism with caution. First, these are initial projections and we will refine the fidelity as we gather additional data. Second, the current retention environment, especially the unprecedented and sustained airline hiring we are currently experiencing, has the Air Force concerned about the long-term health of our pilot force. The hiring influence is particularly evident in the take rates for our youngest eligible pilots—those just coming off their pilot training commitment. The rate among these pilots is the lowest of our bonus-eligible pilot populations. We are watching this very closely. Finally, ACP is not the only factor driving the decisions of pilots to leave the Air Force; we believe it is a combination of factors. As such, we developed and are pursuing a comprehensive and integrated plan to address pilot retention.

One component of the Air Force's multi-faceted approach to arresting the pilot retention decline is the Expeditionary Aerospace Force (EAF) concept. We are working hard to give some relief to our pilots, as well as other specialties, who are deployed, spending a great deal of time away from home. The EAF kicked off in October 1999 and thus far, input from the field has been positive. The EAF helps manage TEMPO through planning, stability, and predictability. The predictability of the EAF will allow better utilization of our Air Reserve Forces and may result in TEMPO relief for our Active Force. Personnel assigned to our Aerospace Expeditionary Forces (AEF) will know far in advance when their AEF is on call for deployment. We will also continue our postdeployment stand-down programs to ensure deployed members have time to get reacquainted with their families and take care of personal matters. And, whenever possible, we minimized our participation in exercises, and lowered the frequency of our operational readiness inspections so that personnel serve 15–20 percent fewer days in Joint and Air Force exercises.

Additionally, in fiscal year 1998 we increased Aviation Continuation Pay (pilot bonus) rates from $12,000 to $22,000. Then in fiscal year 1999 we raised Aviation Career Incentive Pay (flight pay) for 14-year aviators from $650 to $840 per month. The Fiscal Year 2000 National Defense Authorization Act allowed us to increase annual payments to $25,000 and expand eligibility for ACP, permitting payment through 25 years aviation service.

We have taken other steps to help work through the pilot shortfall as well. We increased pilot production from 650 in fiscal year 1997 to 1,100 in fiscal year 2000 and expanded production throughout the Total Force. We also increased the Specialized Undergraduate Pilot Training commitment to 10 years. The Air Force prioritized requirements, reviewed alternate staff manning, and, with your legislative relief from dual compensation limits in the fiscal year 2000 legislation, we now have vital incentive tools to draw valuable retired rated expertise back to augment our undermanned staffs with retired rated expertise. We are optimistic that the combination of all these efforts will have a significant impact on pilot retention.

Question. Of course, much of pilot retention can't be solved by money alone. What else are you doing to improve pilot retention? How are you easing OPTEMPO for pilots? Are you increasing pilot production?

Answer. The Air Force has developed a multi-faceted plan for dealing with the pilot shortage. The plan focuses on scrutinizing our pilot requirements; increasing pilot production and the commitment for pilot training; managing TEMPO; enhancing quality of life; and improving compensation and personnel programs.

To better manage our TEMPO and improve quality of life for our members and their families, we have changed the way we organize and deploy our combat forces through the creation of the Expeditionary Aerospace Force (EAF) concept. Transitioning to the EAF will improve stability, predictability, and allow a more complete integration of our active, Guard, Reserve, and civilian members. We are also reducing Joint and Air Force exercises, including smaller and/or shorter deployments; restructuring our inspection system; and increasing some weapon system crew ratios.

We have also increased our active duty pilot production from 650 in fiscal year 1997 to 1,100 in fiscal year 2000, which is the maximum sustainable level consistent with proven quality and safety standards. Also, on 1 October 1999, the Air Force pilot training active duty service commitment increased from eight to ten years. These measures should help us begin to close the gap on our pilot shortfall; however, it is still vitally important that we continue to address the retention of our more senior pilots. The increased production creates stresses on the training pipeline and reduces the experience level of units as they absorb more inexperienced pilots. We must maintain experienced pilots to provide the leadership and experience necessary to grow the new pilots into a combat ready force, while at the same time providing immediate operational capability.

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

DECREASES IN RDT&E AND SCIENCE AND TECHNOLOGY BUDGETS

Question. Does the Air Force have any official response regarding the findings and conclusions of that report?

Answer. The Air Force has no official response with regard to the findings and conclusions of the Air Force Association (AFA) report on Air Force Science and Technology (S&T) entitled, "Shortchanging the Future: Air Force Research and Development Demands Investment." However, the Air Force recognizes the historical value of S&T to superior warfighting capabilities and shares some of the AFA's concerns. The Air Force has several ongoing activities that address concerns associated with the S&T Program. Most importantly, the fiscal year 2001 President's Budget (PB) submission represents an increased investment in Air Force S&T of $211 million across fiscal years 2001–2005 over the fiscal year 2000 PB request. The Air Force continues to assess the health of the S&T Program and recently held a "summit" of senior Air Force leaders that addressed future funding levels for the S&T Program. This provided an excellent forum to discuss the need to maintain an effective balance between Basic Research (6.1), Applied Research (6.2), and Advanced Technology Development (6.3), and to better understand the constraints on S&T funding flexibility imposed by Congressional language, Office of the Secretary of Defense direction, and prior program commitments.

Question. Given the long-lead time to develop new weapons and information systems, how does the Air Force plan to maintain U.S. technological supremacy while reducing defense-wide RDT&E budgets?

Answer. The Air Force has structured its budget to maintain a balance between the different investment accounts, with Research, Development, Test, and Evaluation (RDT&E), specifically Science and Technology (S&T), being only one of the many important investment areas. While the Air Force could wisely invest additional funding in all accounts if the topline budget were increased, the fiscal year 2001 President's Budget (PB) represents optimal investment levels across all accounts and is balanced to meet both near-term operational capability needs and far-term technology needs. Although there may be the perception the Air Force S&T Program is underfunded, the Air Force fiscal year 2001 PB is structured to maintain the technological supremacy essential to supporting the Air Force vision of a 21st Century Expeditionary Aerospace Force.

Question. Do you believe that you can maintain the scientists and infrastructure required for success at the present level of resources?

Answer. The Air Force is investigating several initiatives that are focused on maintaining the scientists, engineers, and supporting infrastructure required for a

successful Science and Technology (S&T) Program. In response to recommendations contained in the Science and Technology Workforce for the 21st Century (STW–21) study, the Air Force examined S&T personnel management with the vision to enhance/maintain the excellence and relevance of S&T into the 21st Century. One result was the decision to implement a Government-Owned, Collaborator-Assisted (GOCA) concept of personnel management within the Air Force Research Laboratory (AFRL). GOCA will provide an integrated team of permanent government civilian and military personnel, augmented by a more agile, non-permanent collaborator component. The goal is to provide synergistic benefits neither component can effectively provide alone. Another initiative pursued was high-grade relief to allow AFRL to manage grade/salary levels without artificial constraints. Fiscal year 2000 legislation has already provided AFRL with this exemption and the Air Force thanks Congress for this relief. The Air Force is optimistic these and other potential initiatives will ensure the foundation necessary for the continued success of the S&T Program.

Question. What criteria did the Air Force use to make decisions regarding its funding of specific research programs within its research laboratories?

Answer. The Air Force fiscal year 2001 President's Budget request for Science and Technology (S&T) contains the technology development essential for the Air Force Vision of an Expeditionary Aerospace Force (EAF). In support of this vision, the Air Force committed to restructure/concentrate its S&T investment with a strong focus on aerospace efforts (i.e., integrating air with space) and this shaped the criteria used to make decisions regarding funding of specific efforts within the Air Force Research Laboratory (AFRL). The Air Force reoriented technology areas and eliminated areas that were not supportive of the long-range EAF vision. In fiscal year 2001, this Air Force shift in emphasis to Space S&T included efforts like small satellites and space control, while reductions were taken in non-space technology areas. The Air Force shifted away from S&T already being worked by others, such as weather, aircrew physiology, and environmental remediation. These actions have enabled AFRL to more effectively address future technology needs. The Air Force plans to maintain the core technology areas and technical expertise considered essential for future air and space operations.

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

F–15

Question. The Air National Guard Fleet consisting of 126 F–15 aircraft is being tasked for increasingly sophisticated threat areas throughout the world as part of the Expeditionary Aerospace Force (EAF) employment concept. Lack of robust protection directly affects the combat capability and survivability of these aircraft. I believe it is important that this committee add funding to the fiscal year 2001 budget for this very important upgrade. What are your personal thoughts on this?

Answer. Certainly aircrew survivability is of the utmost priority, and the ANG F–15A/Bs are currently equipped with an electronic protection suite that includes the ALR–56A Pacer Turbo radar warning receiver (RWR), the ALQ–135 electronic jamming system, the ALQ–128 Electronic Warfare Warning System, and the ALE–45 Countermeasures Dispenser (CMD). The ALE–45 CMD gives a "reactive" capability to dispense chaff and flares against radar and infrared (IR) threats. Active duty F–15C/D/Es are equipped with the same electronic suite, with the exception of the more capable ALR–56C RWR.

We realize the unique capabilities the BOL countermeasures dispenser will give our F–15 crews. While our F–15s already possess an effective reactive countermeasures system against a majority of IR missiles; the BOL dispenser, with its associated IR flare, is a preemptive countermeasures system, and augments the ALE–45. It is capable of preventing the lock-on of advanced IR missiles. The synergistic effects of both systems significantly enhance our existing countermeasures capability and increases survivability during a hostile engagement. The testing of this system is ongoing and results have been favorable.

We are continuing to explore long-term funding options among highly competitive modernization programs. Our fiscal year 2001 Unfunded Priority List includes a line item for BOL IR. If funded, it would add resources to expand current integration efforts to include ANG F–15A/Bs and Active AF F–15C/D/E aircraft.

C–17

Question. This committee has supported your C–17 requests in the past. Now more than ever, we think it's the best solution for airlift modernization, but I am

concerned that slipping funding to fiscal year 2003 portends some sort of down trend. Do you intend to complete the current multi-year program for 120 C–17s?

Answer. Yes, the C–17 aircraft is critical to meeting our nation's strategic airlift requirements. As such, the Air Force is committed to purchasing the remaining aircraft of the original 120 planned C–17s with this multi-year contract. The current multi-year procurement contract remains in place with no change to production rate or delivery schedule. In addition, the Air Force has a requirement for 15 additional C–17s to ensure our nation has sufficient strategic lift for a nearly simultaneous two major theater war scenario with concurrent special operations requirements. The Air Force intends to include these required aircraft, and any additional aircraft which may be identified in the emerging mobility studies, as part of the fiscal year 2003 budget submission.

Question. Are 120 aircraft enough for your requirements? The CINCs tell us of the real need for additional C–17s and this committee recommended an additional buy of 60 additional aircraft last year. What are your plans for additional C–17s?

Answer. To ensure our nation has sufficient strategic lift capacity for a nearly simultaneous two major theater war, our existing requirement study dictated a need for 120 aircraft. We programmed an additional 14 of 15 C–17 aircraft for fiscal year 2003 through fiscal year 2005 to accommodate Special Operations missions concurrent with the nearly simultaneous two major theater war scenario. Thus, the current Air Force C–17 program is for 134 out of 135 required aircraft.

We are currently re-examining C–17 requirements. Mobility Requirements Study 2005 (MRS–05) is underway and publication is due this fall. Based on expected force structure and basing in 2005, we believe MRS–05 will show a requirement for strategic lift, and specifically the C–17, is growing. To accommodate these emerging requirements, the Air Force is examining contractual, programmatic, and budgeting issues associated with additional C–17s in anticipation of the MRS–05 release.

SUPPRESSION AND DESTRUCTION OF ENEMY AIR DEFENSES (SEAD)

Question. General Ryan, I am told that the Suppression and Destruction of Enemy Air Defense (SEAD) mission in the Air Force is one of the most overtaxed. Do you support an initiative to procure new F–16s for the Air Force which would then cascade some older F–16 aircraft into the Air National Guard and enable the Air Guard to help with the SEAD mission?

Answer. The F–16 Suppression of Enemy Air Defense (SEAD)/Destruction of Enemy Air Defense (DEAD) units are indeed in high demand around the world and are one of the first units to be deployed in crisis situations. The current Air Expeditionary Force (AEF) construct identifies a requirement for 10 SEAD/DEAD capable squadrons. Presently, there are nine active duty F–16–CJ squadrons that are programmed for these AEF rotations, leaving a requirement for one additional squadron. In order to alleviate the high operation tempo (OPTEMPO) currently being experienced with these units, the Air Force has already budgeted for the procurement of additional F–16CJs allowing for a stand-up of a 10th active duty SEAD/DEAD squadron. This would also cascade the older block 30 aircraft (currently in the Active Duty squadrons) to the Air National Guard. However, this 10th squadron will not be activated until fiscal year 2007 under current planning. The USAF fiscal year 2001 Unfunded Priority List (UPL) identifies a requirement to accelerate the planned block 50 procurement and the stand up of a 10th SEAD/DEAD squadron which would cascade block 30s to the ANG.

While the procurement of a 10th F–16CJ squadron will have an immediate effect on the OPTEMPO of the current SEAD/DEAD units, it will not be due to the fact that the Guard will receive "cascaded" aircraft. F–16CJ block 50/52 aircraft are preferred for the SEAD/DEAD mission as opposed to older block 30 aircraft. The F–16C Block 30's they will replace, while able to provide some measure of SEAD support, are not sufficiently capable to completely replace the F–16CJ. The F–16C Block 30's will be able to reduce OPTEMPO in the Precision Attack AEF mission area. With the addition of the LITENING II targeting pod and Combat Upgrade Plan Integration Details (CUPID) modification, the Block 30 will achieve a dramatic increase in warfighting lethality.

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

RECRUITING CONCERNS

Question. General Ryan, we have heard a lot about your pilot retention problem and the impact this is having on your recruiting difficulties as well. Can you tell

us what is the current shortage, has it affected the flying units or simply headquarters activities, and are you seeing any improvement in the trend?

Answer. Our end of fiscal year 2000 shortfall is projected to be 1,190 out of a requirement of 13,570. This represents a 9 percent shortfall. In terms of the readiness of the force, we have made a conscious effort to fully man our operational cockpits at the expense of our pilot staff positions. Fully manning our cockpits minimizes the impact of the pilot shortage on the operational readiness of our warfighting units. Therefore, it is our warfighting staffs who are experiencing the tremendous pilot manning shortages. We are pursuing rated staff manning alternatives to relieve workload pressures caused by the pilot shortage. Your repeal of the dual compensation law has helped us to exercise options such as the hiring of civilians with aviation experience into rated staff positions. We also are permitting active duty recall of reserve and retired rated officer volunteers.

We have instituted an aggressive and integrated set of initiatives to address pilot retention. In the compensation arena, in fiscal year 1998 we increased Aviation Continuation Pay (ACP) rates from $12,000 to $22,000. Then in fiscal year 1999 we raised Aviation Career Incentive Pay (flight pay) for 14-year aviators from $650 to $840 per month. The Fiscal Year 2000 National Defense Authorization Act allowed us to expand eligibility for the ACP and increase annual payments to $25,000, permitting payment through 25 years aviation service. We plan to continue utilizing the full ACP authority and have $157 million budgeted for this program in 2001. As a result of these and other initiatives, we project the pilot shortage to fall to within manageable levels by 2003. From that point on, shortfalls will be approximately 5 percent or less of requirements. We do not expect to meet aggregate pilot requirements until approximately 2010.

READINESS

Question. General Ryan, I understand approximately $2 billion was added to your readiness budget for fiscal year 2001, including an increase of $500 million for fuel, spare parts and supplies. Is this enough?

Answer. With the help of Congress, the Air Force has made considerable progress in funding spare parts requirements. The fiscal year 2001 President's Budget (PB) fully funds the flying hour program for consumption based spare parts requirements; however, additional funds would further enhance spare parts support for contingency operations. The fiscal year 2001 Unfunded Priority List (UPL) addresses two Readiness Spares Packages (RSP) initiatives. The first requires $75 million for RSP demand adjustments for fiscal year 2001. These changes occur each year in response to mission and inventory changes. The second requires $115.7 million to increase the fighter Direct Support Objective (DSO) from 63 percent to 83 percent availability and "right-sizes" RSP kits to better support the mobility airlift enroute structure. The DSO increase reflects lessons learned in Kosovo and will reduce aircraft cannibalization actions for deployed units during contingencies.

Question. General Ryan, in previous testimony you have indicated that you are unable to fix serious infrastructure shortfalls in your budgets. What is the shortfall this year and how much would be required to turn this around?

Answer. The Air Force fiscal year 2001 total force backlog of real property maintenance is $4.3 billion. In our Unfunded Priority List (UPL), we have asked for $437.7 million to fund the most critical of these real property maintenance requirements.

We also have asked for $349.5 million to arrest the backlog of deferred housing maintenance and repair requirements and to improve or replace failing infrastructure systems and support facilities essential to maintaining viable housing communities.

To address only the most serious infrastructure problems in the MILCON program, we must attain a 150-year recapitalization rate by funding MILCON at $974 million per year. The fiscal year 2001 request is $378 million short of that level, as identified in the UPL.

Question. I understand you fully funded spares in order to turn the corner on aircraft and engine readiness. Is this accurate?

Answer. Yes, we fully funded the validated requirement in the fiscal year 2001 President's Budget (PB). This action continued our earlier efforts, along with those of the Office of the Secretary of Defense (OSD) and Congress, to mitigate the impacts of constrained funding from earlier years. Funding fluctuated from fiscal year 1991 to fiscal year 1999; the low point was 70 percent, the high point was 94 percent. Over the same period, mission capable rates declined from 83.4 percent to 71.9 percent. However, fiscal year 1999 was a turning point, declining trends had to be reversed—Air Force funded the validated spare parts requirement at 95 percent, unfortunately a bow wave of $382 million had accumulated over the lean years, with

$279 million related to engine shortfalls. The bow wave was addressed with OSD, they approved obligation authority, and orders were placed to put spares on the shelves and arrest the decline in readiness. Acquisition lead time is 18–24 months, but anecdotal evidence indicates spares are slowly arriving and improvements are underway—total non-mission capable for supply (TNMCS) metric decreased (improved) from 16.1 percent in September 1999 to 13.5 percent in February. We're optimistic, however continue to watch engines closely as they have a history of pop-up technical surprises that can be expensive and difficult to support.

Also, while Air Force fully funded the validated requirement in the fiscal year 2001 PB, we have since assessed our lessons learned from Kosovo and determined there are updates to Readiness Spares Kits that need to be funded. In the fiscal year 2001 unfunded priority list (UPL), we have included an unfunded requirement for RSP Kit Updates for $75 million. Air Force appreciates past and continued Congressional plus-ups to ensure the Readiness momentum for spare parts.

Question. General, DOD and the Congress have both indicated that fixing readiness is required. What has been the impact on modernization and research with the emphasis on readiness?

Answer. Overall, the Air Force is about $3.5 billion short in fiscal year 2001 of what we believe is a good mix between people, readiness, modernization and infrastructure. As we emphasize today's people and readiness requirements, we only fund the minimum infrastructure support and find ourselves modernizing at less than optimal rates. Without a sustained across-the-board increase in funding over the Future Years Defense Plan, we cannot substantially improve on the readiness gains made in last year's budget. This means that infrastructure and modernization will continue to suffer.

JSTARS

Question. General Ryan, what is your total requirement for JSTARS aircraft, and how many will you have purchased after fiscal year 2000?

Answer. The Joint Requirements Oversight Council (JROC)-validated Joint STARS requirement of 19 aircraft to support a two Major Theater War (MTW) scenario has not changed. The Quadrennial Defense Review (QDR) reduced the programmed Joint STARS force structure from 19 to 13 due to fiscal constraints. The Air Force supports the fiscal year 2001 President's Budget (PB) for 15 aircraft. There are currently 7 operational aircraft located at Robins, AFB, GA. The 8th aircraft is scheduled for delivery on 31 August 2000. After fiscal year 2000, the 15th aircraft is in the fiscal year 2001 budget and is scheduled for delivery in fiscal year 2003.

B–2 BOMBER

Question. General Ryan, I have long advocated the B–2 bomber and would like to see a way that we could purchase more bombers. What is your view of the B–2 following its performance in Kosovo?

Answer. The B–2 and the Air Force men and women who fly and maintain the aircraft performed superbly. The B–2 flew 49 combat missions, dropping 652 Joint Direct Attack Munitions (JDAM) with 83 percent of targets hit. B–2 reliability and stealth maintainability were excellent throughout the operations with 100 percent on-time takeoffs. B–2 operations demonstrated a shift in operational thinking from "number of sorties per target" to "number of targets per sortie."

Question. General Ryan what is your priority for enhancing the capability of the B–2 Bomber?

Answer. The Air Force is committed to enhancing the capabilities of the B–2 bomber as outlined in the Bomber Roadmap. This plan, also known as the USAF White paper on Long-Range Bombers, includes upgrades to B–2 avionics and communications subsystems and integration of precision gravity and standoff munitions. In addition to budgeted upgrades, the Air Force has placed Mk–82 JDAM, EGBU–28, LINK 16/Center Instrument Display and EHF connectivity risk reduction upgrades on the Unfunded Priority List (UPL) due to limited Air Force Total Obligation Authority.

F–22

Question. General Ryan, last year there was some strong disagreement within the Congress regarding the advisability of proceeding with the purchase of the F–22 program. In your opinion, is the F–22 ready for production?

Answer. Yes, the F–22 will be ready for a production decision in December 2000. Its development continues to meet my expectations. The F–22 weapons system meets or exceeds each of its Key Performance Parameters. The F–22 test program

continues to demonstrate increased levels of technical performance and the required operational capabilities. Following the completion of the calendar year 2000 program criteria, the F–22 will have demonstrated the maturity required for a low rate initial production (LRIP) decision. In fact, by the December 2000 production decision, the F–22 test program will have flown more test hours than any other fighter development program prior to an LRIP decision.

SUPPLEMENTAL REQUIREMENTS

Question. General Ryan, I understand the Air Force has more than $200 million pending in the supplemental request. There are some who believe we don't need to take action on this until we enact the appropriations bills for fiscal year 2001. What is your view on this matter?

Answer. "Cash flowing" contingency requirements does not place significant strain on readiness, training, infrastructure, and overall combat capability in the early parts of the fiscal year. Not having full supplemental funding in the third and fourth quarter of the year drives decisions to defer critical training and infrastructure programs. Deferring budgeted programs reduces readiness and exacerbates shortfalls within the Operations and Maintenance budget. Having supplemental funds by early June should minimize the impact to on-going Air Force activities.

QUESTION SUBMITTED BY SENATOR PATRICK J. LEAHY

SUPPRESSION AND DESTRUCTION OF ENEMY AIR DEFENSES (SEAD)

Question. With little likelihood that the Joint Strike Fighter will replace the F–16s in the Air National Guard for at least the next ten years, I would like to know what the Air Force is doing to deal with both the immediate need for Suppression of Enemy Air Defense assets for its Air Expeditionary Forces, and the longer-term possibility of the block obsolescence of the F–16 inventory.

Answer. In order to ensure the fundamental combat task of Suppression of Enemy Air Defenses (SEAD) remains robust, the USAF is proactively pursuing various avenues in this mission area. The Air Force's primary weapon system in the fight against Enemy Integrated Air Defenses (IADs) is the F–16CJ Block 50/52 fighter. The aircraft is specifically designed to employ the AGM–88 High-Speed Anti-Radiation Missile (HARM). In the fiscal year 2000 Defense Budget the Air Force included 30 additional F–16CJ's. We plan to procure 10 in fiscal year 2000 with delivery two years later in fiscal year 2002. The remaining 20 aircraft will be procured on the following schedule: fiscal year 2003—6; fiscal year 2004—7; fiscal year 2005—7 with delivery coming two years following each buy. The USAF has determined the next step in the battle against enemy IADs is a mission known as Destruction of Enemy Air Defenses (DEAD). In order to facilitate this, the USAF has begun a program to equip the F–16CJ with an Advanced Targeting Pod (ATP) that will further increase lethality with a broad range of precision weapons. Furthermore, the F–16CJ is undergoing a series of modifications known as the Common Configuration Implementation Program (CCIP) that will give the aircraft additional capabilities. CCIP includes the following individual modifications: Color Multi-Function Displays (CMFDs); Link–16 Digital Data Link; Modular Mission Computer (MMC); Joint Helmet Mounted Cueing System (JHMCS); APX–113 Air-to-Air Interrogator. The USAF is placing strong emphasis and positively enhancing the SEAD mission. Through a combination of extensive modifications and procurement of additional equipment, the Air Force has made its SEAD platforms much more lethal.

SUBCOMMITTEE RECESS

Senator COCHRAN. As Senator Stevens stated earlier, the next hearing for the subcommittee will be next Wednesday at 10 a.m.

[Whereupon, at 12:04 p.m., Wednesday, March 29, the subcommittee was recessed, to reconvene at 10 a.m., Wednesday, April 12.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2001

WEDNESDAY, APRIL 12, 2000

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 9:55 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Cochran, Domenici, Shelby, Inouye, and Byrd.

DEPARTMENT OF DEFENSE

BALLISTIC MISSILE DEFENSE ORGANIZATION

STATEMENT OF LT. GEN. RONALD T. KADISH, USAF, DIRECTOR

OPENING STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. General Kadish, it is nice to see you here this morning. We are actually getting started a little early, which is nice. We welcome you to your first appearance here in this new role, and we will welcome your assessment of the status of tactical theater and national missile defense programs.

As you know, Senator Inouye and I recently went out to the Pacific missile range. We look forward to other members joining us here very soon.

Under your leadership and that of General Lyles, the past year has demonstrated outstanding success, in my judgment, for the Ballistic Missile Defense Organization (BMDO). The record speaks for itself. The first intercept of a national missile defense (NMD) target, two successful theater high altitude area defense (THAAD) interceptions, and three successful Patriot advanced capability-3 (PAC–3) intercepts.

I will not read my whole statement, because we want to listen to you, but I do think that the Department, the key industry partners, Lockheed Martin, Boeing, Raytheon and TRW, have demonstrated how the science and technology of national missile defense works, and I believe that we must continue on the course that whatever system we perfect will be able to defend all 50 States as effectively as we protect our deployed forces overseas.

I know that you realize we look forward to working with you, and your complete statement will be made part of the record. I will ask Senator Inouye if he has any opening remarks to make before we start.

STATEMENT OF SENATOR DANIEL K. INOUYE

Senator INOUYE. I thank you very much, Mr. Chairman. I want to join you in welcoming General Kadish to discuss this very important topic.

We all know that our military forces in the field are increasingly within the range of adversarial ballistic missiles. It is also likely that rogue nations may soon be capable of targeting the United States with these missiles. As of this moment, none of the systems sponsored by the Organization are in the field, but I hope that they will be in the field soon, so a lot of things that have to be done, and as the chairman indicated to you, we are with you. We want to see you succeed. After all, the best interest of our Nation is at stake.

So with that, Mr. Chairman, I join you in your statement, and welcome the witness.

[The statement follows:]

PREPARED STATEMENT OF SENATOR DANIEL K. INOUYE

Mr. Chairman, I want to join you in welcoming our witness, General Kadish, here today to discuss this very important topic.

We know that our forces in the field are increasingly in range of ballistic missiles held by adversaries.

It is also likely that rogue nations may soon be capable of targeting the United States with ballistic missiles.

As of today, none of the systems sponsored by the Ballistic Missile Defense Organization—THAAD, PAC–3, ME-ADS, and Navy ballistic missile defense programs—are in the field.

Today we are likely to hear about problems with the Patriot program and the latest failure in national missile defense testing.

General, I know you are doing everything you can to get these programs under control.

And, we sincerely appreciate your efforts.

However, it is hard not to get frustrated by the continued delays and failures.

General, in light of these facts, and the billions of dollars annually invested in missile defense, we really need to hear your candid views today on the status of our nation's missile defense programs.

We need to know what we can do to help improve the situation to ensure that our defense dollars are being spent wisely and to assist in whatever way we can in getting these new capabilities fielded.

I look forward to hearing your responses to these critical issues.

Senator STEVENS. Thank you very much. We will be pleased to have your statement, General.

General KADISH. I am absolutely delighted to come here this morning, Mr. Chairman, and explain the ballistic missile defense program and its status, and if I might I would like to summarize my prepared statement and request that it be entered into the record.

Senator STEVENS. It has been, yes, sir.

General KADISH. Mr. Chairman, it is helpful to view the ballistic missile defense as one program made up of several interdependent elements. As you will see, this interdependence is essential to our success, and one of my most important challenges.

First, let me describe the whole program that is ballistic missile defense. First, national missile defense for our homeland, upper tier systems for theater and regional defense, and those are THAAD and Navy theater-wide, lower tier systems for the local or area defense, and those are PAC–3 and Navy area, our inter-

national programs to share the burden, programs to achieve interoperability for layered defense effectiveness, and the technology investment for the future-evolving threats.

LAYERED DEFENSE

This BMDO program structure is built on the concept of a layered defense. A layered defense in depth is preferable to a simple perimeter defense wherever possible. The consequences of allowing a single weapon of mass destruction through a defensive system would be catastrophic. Let me explain.

Two layers, for example, each with a theoretical 80-percent effectiveness would provide a 96 percent confidence of a successful defense. Three such layers would provide over 99 percent confidence. I know that last month the Director of the Central Intelligence Agency (CIA) testified before Congress that, quote, over the next 15 years our cities will face ballistic missile threats from a variety of actors.

As alarming as a long-range missile threat is, it should not overshadow the immediacy and the seriousness of the threats that U.S. forces, interests, and allies already face from short and medium-range missiles. You are well aware of the challenges we face in the development of ballistic missile defense systems to counter that growing threat in recent years.

I am pleased to report, however, that last year was a good year. Since March 1999 we have had seven successful intercepts, with six of them using the hit-to-kill technology. One national missile defense intercept, two THAAD intercepts, three PAC–3 intercepts, and one using focused warhead technology, the Arrow system that the Israelis produce.

Our testing program has convinced me that the hit-to-kill technologies can work. We have made significant progress, but I do not wish to minimize the immense challenges that are before us. In the months ahead, there are several more tests scheduled in our national and theater missile defense programs that will involve increasing levels of system complexity and integration. Lots of hard work is ahead.

Now I would like to briefly describe the budget request for our program. Our total request for ballistic missile defense over the future years defense program is $23.5 billion, up from $19.8 billion last year. We request $4.5 billion in fiscal year 2001, an 18-percent increase over last year's $3.8 billion. This includes $3.9 billion for research, development, test, and evaluation (RDT&E), $444 million for procurement, and $103.5 million for military construction activities. This increase reflects our heightened recognition of the growing threat and the considerable progress we have made in our test development efforts.

NATIONAL MISSILE DEFENSE

Mr. Chairman, let me discuss our national missile defense program and the changes we have made. Initial operational capability, consisting of 20 interceptors, still occurs in fiscal year 2005. In light of the fact that we expect some States to acquire capability to launch more missiles with simple countermeasures in the 2005

timeframe, we will enhance the initial system to what we call an expanded C–1 architecture, having 100 interceptors.

The expanded C–1 deployment option builds on the revised program announced last year by the Secretary of Defense. The full 100 interceptors can be deployed by fiscal year 2007. Consequently, we have added $1.9 billion to the future years defense program to support this change.

In addition, we added funds to our test program to reduce schedule risk. Last summer, we asked General Larry Welsh to conduct a second independent review of our program. He did so, and I found his recommendations to be most valuable, so we added some $285 million across the future years defense plan (FYDP) in response to those recommendations. I also might add that we have asked him to come back to the program and be involved in evaluating our progress as we speak.

Now I would like to discuss how our national missile defense program is designed to reach the 2005 initial capability. Our greatest challenge continues to be to make sure that all the national missile defense elements work together as an integrated system so they can defeat the projected threat to our homeland. A successful test program and timely execution of the system element schedules will provide the answer to the question of greatest interest to us this year: are we technically ready to deploy a national missile defense program?

DEPLOYMENT READINESS REVIEW (DRR)

We now plan to conduct a deployment readiness review, or DRR, in July of this year. We recently adjusted the schedule for the DRR, delaying this technology readiness assessment of NMD by approximately 1 month. We believe the delay is prudent, given our rescheduling of our next integrated flight test, number 5, for the 26th, or late June of this year. We do not believe that a July review will materially affect the time available to the President to make a decision later this summer or fall. We can still meet the current schedule to field an initial capability in fiscal year 2005.

Although the DRR starts a key decision process, it is the first of at least three major decision milestones in the program over the next 5 years. Each decision will be based on the progress of the program at that time, and will give authority to proceed on key activities. This DRR will take place at the defense acquisition executive level, with full participation from all the DOD stakeholders.

The DRR will not constitute the actual decision to deploy the NMD system. Rather, it will assess the technological progress to support a deployment decision. A deployment is a Presidential decision that may occur sometime this summer.

The administration will assess the current state of the program, the threat, the affordability of the system, and take into account the implications for the overall strategic environment and our arms control objectives. If a decision is made to proceed, we will simultaneously seek approval of our recommended NMD site and the award of the construction contracts for those sites.

In fiscal year 2001, we will conduct a Defense Acquisition Review Board to again assess the status of the program. Based on program performance, we would seek approval to initiate upgrades to the

early warning radars, begin building the X-Band ground-based radar and missile site, and start integrating the battle management command and control and communications system.

In fiscal year 2003, we will conduct a second Defense Acquisition Board review to seek approval to procure and deploy the ground-based interceptors as well as the necessary spares and test rounds. All of these decisions will depend on an assessment of our technical and programmatic progress.

Although I continue to be optimistic about the system's eventual capabilities, we should guard against being either overly optimistic or unduly pessimistic about the deployment readiness of the NMD system. The NMD program is still a high-risk program. The schedule is so compressed that a significant setback in one element can delay the entire program. To date, however, we have been able to meet our commitments, but it requires aggressive management and constant attention. We recognize there is a long road ahead.

INTERCEPT FLIGHT TESTS

So far, we have had two intercept flight tests (IFT) to support the DRR decision process. The October 2, 1999 test demonstrated the ability of the kill vehicle to locate, discriminate, engage, and destroy a reentry vehicle above the atmosphere.

As you know, IFT–3 had a remarkable finish, one which helped convey the technical complexity of colliding directly with a missile warhead traveling in space at a closing velocity of more than 15,000 miles per hour. The ability to do this becomes even more awe-inspiring when one considers a target warhead may be less than 5 feet long and surrounded by decoys and debris.

We accomplished all of our test objectives in flight test 3. The physical destruction of the target warhead speaks for itself. We now know our interceptor concept works. It worked the very first time we tried, a fact that has helped build our confidence that we can maintain our aggressive schedule.

Much attention has been given to integrated flight test 4, which occurred on January 18 of this year. It was the second time we attempted an intercept, but IFT–4 is one in a long line of testing events we have planned through 2005. While many have called that flight test a failure, I take exception to that characterization of this very valuable test event.

Viewed in a mission context, IFT–4 failed to hit the target. We missed the reentry vehicle, and the miss speaks for itself. However, in the context of testing, IFT–4 was a successful developmental test that proved under stressful conditions the X-Band radar, the upgraded early warning radar, and the battle management command and control and communications capability of our proposed system architecture worked.

We wanted to have two successful intercepts early in the test program to support a Presidential deployment decision. To date, we have had one successful out of the first two flight attempts. One more integrated flight test, our third attempt at a successful intercept, is now scheduled for the end of June. We decided to delay this test by 2 months in order to deal satisfactorily with the problems we encountered with the krypton cooling system in our last flight test.

In the 2 months that followed the flight test, we worked to understand why the failure occurred. In the end, we decided that our kill vehicle systems did not require design changes, but nevertheless we wanted to ensure that we thoroughly reviewed all the test hardware and processes prior to proceeding with IFT–5. A test delay at this point in our program is prudent from a technical standpoint.

The NMD system is one of the most complex systems our country has ever attempted to develop and produce. The interception phase of the mission is clearly the most visible phase, and it is key to our success, yet we must not lose sight of the fact that successful integration of the highly interdependent elements is no less critical. The integration and support aspects of our testing events are transparent to most people but I assure you we could not do the job without them.

We will continue to test our NMD system based upon strict, proven, and scientific methods learned over the last four decades of missile development, deployment, and operations. Our tests are designed to weed out flaws. While we strive for success on every test, we do not expect that we will always have it. Very often problems occur and elements of our tests fail, yet we learn a lot from our testing successes as well as failures before they go into deployed weapons systems. We must ensure that the NMD system we eventually deploy will work with a very high level of confidence, and our testing program is designed to do just that.

UPPER TIER PROGRAMS

Now let me turn to the upper tier programs that will provide us important theater defense capabilities. The Army THAAD and the Navy theater-wide systems are aggressively moving from demonstration to development phases. THAAD is now fully funded in the FYDP. The Navy theater-wide is fully funded through fiscal year 2002 with further funding to be reviewed after an important series of upcoming flight tests.

Last year, many in Congress were dissatisfied with the proposed upper tier acquisition strategy. Indeed, 1 year ago we were in a very different position regarding our upper tier programs. THAAD had no intercepts, and the Navy theater-wide program was not well-defined. We were proceeding along a leader-follower path to choose one upper tier system over the other.

Since then, THAAD has had two successful intercepts, which will allow us to move that program into the engineering and manufacturing development phase. Navy theater-wide is now progressing towards an important series of ground and sea-based flight tests. In light of these very positive results, we have followed congressional direction and put in place a strategy that takes advantage of this progress. Our goal today is to deliver both programs as soon as practical.

LOWER TIER PROGRAMS

The PAC–3 and the Navy area systems are the backbone of our lower tier systems, and will provide local and area defense. We request $2.9 billion across the FYDP for these systems, with three-quarters of this amount going to procurement. This plan reflects

how much these systems have matured, and our commitment to move smartly from development into production. PAC–3 will initially be deployed in fiscal year 2001, and Navy area under fiscal year 2003 under current schedules.

INTERNATIONAL PROGRAMS

Our international programs will foster important missile defense cooperation, interoperability, and burdensharing. We have made significant commitments to these programs this year. Most of the funds we request were for the medium extended air defense system (MEADS) program, which we are developing cooperatively with Germany and Italy. MEADS has now been fully funded in the future years defense program by adding $714 million from fiscal year 2001 to 2005. The program has been restructured beyond the 3-year risk reduction effort, with first unit equipped now planned for fiscal year 2012.

The Arrow program with Israel has made much progress, a fact highlighted by last November's successful intercept. Our funding request for $124 million from fiscal year 2001 to 2005 will allow Israel to procure components for a third Arrow battery and help us ensure that Arrow is interoperable with U.S. systems.

Cooperation with Russia remains an important objective. Accordingly, we have fully funded the Russian American observational satellites (RAMOS) program in the future years defense program, and $317 million to support a revised two-satellite project should the United States and Russia agree to proceed.

TECHNOLOGY PROGRAM

We also signed a memorandum of understanding with Japan last August to help develop critical interceptor technologies that we expect will enhance our Navy theater-wide capabilities. A key element of our technology program is a spaced-based laser (SBL). This SBL program, which we share with the Air Force, currently is funded at $138 million in fiscal year 2001. BMDO assumes more than half of the total funding.

In the near term, the SBL work will focus on ground-based efforts to demonstrate component and subsystem technologies. In full operation, we envision an interdependent system that works with ground, sea, and air-based missile defenses where boost-phase intercepts could thin out missile attacks and reduce the burden on midcourse and terminal phase defenses. As I reported earlier, the more layers of defense, the more likely we are to succeed.

Our fiscal year 2001 request of $206 million for our technology program will go into applied research and advanced development. These programs will enhance the effectiveness of our current and future systems, and reduce the cost of our acquisition programs. Although we programmed $1 billion over the FYDP for this important area, it has become increasingly difficult to maintain an aggressive technology program in the face of the competing demands of our major BMDO programs.

Most of our financial resources are focused on development, production, and deployment of our family of systems. We continue to examine ways to ensure we focus our future technology funding to pace the threat.

I want to assure the committee that we are continuing to study ways to improve our management and stewardship of the ballistic missile defense (BMD) systems under our development. Therefore, I am taking action to restructure BMDO to face the challenges we have ahead of us.

This budget has no requested transfer of research and development (R&D) or procurement funds to the services for execution of BMDO programs. My recent reorganization reflects our transition from an organization oriented towards early R&D technology and demonstrations to an acquisition-focused agency responsible for balancing early R&D management with introducing advanced technology and proven systems to our combat forces.

As we look forward to the deployment readiness review, we have achieved several notable and reassuring successes in our NMD testing program, and we are making substantial progress in our upper tier systems, moving them from development towards production, and we are on the verge of achieving major milestones leading to the deployment of our lower tier systems. Our international commitments are adequately funded, and our technology program is focused with the resources we have available.

PREPARED STATEMENT

Mr. Chairman, in my short tenure as Director of BMDO, I am more convinced than ever that an effective missile defense is crucial to the defense of this Nation and our Armed Forces. The missile threats facing our country, our Armed Forces, and our allies are immediate and growing and, while I expect significant conflicts, technical, and management challenges in our program, we are demonstrating increasing success. I am confident that we are aggressively addressing the right issues at the right time, and am funding our program accordingly, and I look forward to working with the committee and its members in this important mission area.

Mr. Chairman, that concludes my remarks and I would be happy to answer questions.

[The statement follows:]

PREPARED STATEMENT OF LT. GEN. RONALD T. KADISH

Good morning. Mr. Chairman and Members of the Committee, it is my pleasure to appear before you today to present the Department of Defense's fiscal year 2001 missile defense program and budget.

The Ballistic Missile Defense Organization (BMDO) is chartered within the Department of Defense to manage, direct, and execute the BMD program in order to achieve the following objectives: develop options for, and deploy when directed, an anti-ballistic missile system to defend the United States; develop effective, rapidly relocatable Theater Missile Defenses to protect forward deployed and expeditionary U.S. armed forces as well as friends and allies; demonstrate advanced technologies to enhance missile defense systems; and continue basic and applied research to develop follow-on technologies.

As the Director of the Ballistic Missile Defense Organization, I have identified five major priorities. My first priority is the National Missile Defense (NMD) Deployment Readiness Review (DRR), now scheduled for July of this year. This review will assess the technical progress on National Missile Defense in support of a subsequent Administration decision on whether and when to deploy the system. The DRR will assess whether enough technical progress has been made to enable the Administration to proceed with the deployment of the National Missile Defense system.

The second priority is the development of the Theater Missile Defense (TMD) Upper-Tier Strategy. Working with the U.S. Army and U.S. Navy, we have restruc-

tured the Theater High Altitude Area Defense (THAAD) and the Navy Theater Wide (NTW) programs to posture them for deployment upon demonstrating continued success.

Third, we must contain production costs of the Lower-Tier TMD systems. While PAC–3 is making significant progress, technical problems and weather conditions at the test range have contributed to delays and increased costs. Navy Area systems are approaching scheduled flight tests, but are experiencing technical problems. I remain committed to finding ways to reduce and contain the costs of delivering these systems.

Fourth, our research and development is crucial to the continued health of our missile defense programs. I see the need to focus and intensify efforts in this area. Every scarce dollar in the technology budget must be optimized to meet future requirements of missile defense.

Finally, I am focusing on the reduction of decision- and action-cycle times within BMDO. I want to ensure that we are organized in a way that minimizes the layers of communication and authority so we can focus on our core responsibilities. Toward that end, I have reorganized the Ballistic Missile Defense Organization by eliminating layers of management to flatten the organization.

This past year we demonstrated considerable progress. Since March 1999, missile defense has had seven successful intercepts, with six of them using hit-to-kill technology-one National Missile Defense intercept, two THAAD intercepts, three PAC–3 intercepts—and one using focused-warhead technology, the Israeli Arrow system. Based on these tests, we know that hit-to-kill technologies can work. We have, however, many more steps to take as we move towards fielding effective missile defense systems. In the months ahead, we have several more TMD and NMD tests scheduled that will involve increasing levels of system complexity and integration.

Because of this progress in our test program in 1999, the Department of Defense has significantly increased funding for the missile defense program. As a result of this increase, we are better able to reduce program risk and take advantage of cost-reduction opportunities and move our programs to the next stage of development and production.

Fiscal Year 2001 Program and Budget

The total fiscal year 2001 budget request for the Ballistic Missile Defense Organization is $4.5 billion. This includes $3.9 billion for research, development, test, and evaluation (RDT&E), $444 million for procurement, and $103.5 million for military construction (MILCON) activities. Combining these three budget categories, National Missile Defense represents $1.92 billion, or 43 percent of the budget. Theater Air and Missile Defense programs account for $1.95 billion, also roughly 43 percent of the budget. We request $37.7 million for Applied Research and $93.2 million for Advanced Technologies, which together represent about 2.9 percent of the budget. BMD Technical Operations accounts for $272.6 million and is about 6 percent of the budget. We request $22.6 million for Threat and Countermeasures efforts and $117 million for International Cooperative Programs, which together represent 3 percent of our overall budget. The following chart breaks out the fiscal year 2001 budget request by program element for BMDO-managed programs.

[In millions of dollars]

Then Year	Fiscal year 2000	Fiscal year 2001
National Missile Defense:		
NMD Dem/Val [1]	950.248	1,740.238
NMD Procurement	.....	74.530
NMD MILCON	15.000	101.595
Theater Air and Missile Defense:		
PAC–3 EMD	179.139	81.016
PAC–3 Procurement	343.773	365.457
Navy Area EMD	307.274	274.234
Navy Area Procurement	18.143	.....
THAAD Dem/Val	523.525	.....
THAAD EMD	79.462	549.945
Navy Theater Wide Dem/Val	375.764	382.671
TMD BM/C[3] Procurement	.....	3.975
Joint TAMD Dem/Val	196.566	.....
FoS E&I	145.657	231.248
MEADS Dem/Val	48.594	63.175

[In millions of dollars]

Then Year	Fiscal year 2000	Fiscal year 2001
Support Technologies:		
Applied Research	88.365	37.747
Advanced Technology Dev	212.837	93.249
Boost-Phase Intercept	4.961	.....
Space Based Laser [2]	.....	74.537
BMD Technical Operations:		
BMD Tech Ops	214.445	270.718
BMD Tech Ops MILCON	1.372	1.923
International Coop Programs	81.560	116.992
Threat & Countermeasures	19.343	22.621
Pentagon Reservation Maintenance Fund	.....	4.775

[1] $590 million in fiscal year 1999 funding is being applied to fiscal year 2000 requirements.
[2] SBL (included under Advanced Tech Development in fiscal year 2000), which has a separate PE in the fiscal year 2001 PB, represents $74 million or 1.7 percent of the budget and represents more than half of the total required funding in partnership with the U.S. Air Force.

National Missile Defense

Based on recent threat assessments, my program guidance is to be in a position, technologically, to support a decision later this year on whether to deploy a National Missile Defense (NMD) system capable of defending all 50 states against limited ballistic missile attack from states that threaten international peace and security. Recent intelligence estimates indicate that we must be concerned about the possibility that ballistic missile threats from states that threaten international peace and security will increase as they acquire a capability to launch more and longer range missiles with simple countermeasures in the 2005 to 2010 timeframe. As a result, we are enhancing the NMD program beyond the original Capability 1, or "C1," architecture by developing an "Expanded C1" architecture to meet this expanded threat. The Expanded C1 architecture will be capable of defending all 50 states against expected near-term threats larger than the initial C1 architecture was designed to handle.

The Expanded C1 deployment option builds on revised program guidance announced last year by the Secretary of Defense. For planning purposes, the Expanded C1 system will incorporate 100 ground-based interceptors based in Alaska and an advanced X-Band radar based at Shemya Island, also in Alaska. Our NMD architecture plans incorporate upgrades to the existing ballistic missile early warning radars and, for the purposes of initial launch detection, use the Space Based Infrared System (SBIRS) High, which eventually will replace the existing Defense Support Program satellite constellation. Initial Operational Capability (IOC) for the C1 architecture, consisting of 20 interceptors, still can take place in 2005. The full 100 can be deployed by fiscal year 2007. Since the President submitted the fiscal year 2000 budget to Congress, the NMD program has been increased by $2.3 billion over fiscal year 2001–05. Between fiscal years 2001 through 2005, we have programmed $10.375 billion (in then year dollars) for the NMD program.

In 1999, BMDO commissioned a second independent panel headed by retired General Larry Welch to review the National Missile Defense (NMD) program in light of the program's new structure. The panel's charter was to determine the effects of extending the NMD program by two years and to review the adequacy of the resulting test program. The panel concluded that, although the revised NMD program reduced program risk, it remains a high-risk program. The panel made 18 specific recommendations to reduce program risk further. I support the panel's recommendations and have added $285 million across fiscal year 2001–05 to augment the NMD testing program. This funding will pay for additional hardware for the NMD Kill Vehicle, additional test equipment and testing.

Our greatest challenge continues to be to make sure all NMD elements work together as an integrated system so that it can defeat the postulated threat to our homeland. A successful test program and the timely execution of system-element schedules will provide the answer to the question of greatest interest to us this year: Are we technically ready to deploy an NMD system?

NMD Decision Time Line

We plan to conduct a Deployment Readiness Review (DRR) in July of this year. We recently adjusted the schedule for the DRR, delaying this technology readiness assessment of the NMD program by approximately one month. The DRR is a review

internal to the Defense Department that will be led by the Under Secretary of Defense for Acquisition, Technology & Logistics. We think the delay is prudent given our rescheduling of Integrated Flight Test 5 (IFT–5) to take place on June 26 of this year. We do not believe moving the DRR to July will materially affect the current schedule which supports fielding an initial capability in fiscal year 2005.

Although the DRR starts a key decision process, it is the first of at least three decision milestones in the program over the next five years. The technological assessment of the NMD program will take place at the Defense acquisition executive level—with full participation from all Department of Defense stakeholders. The DRR will not constitute the actual decision to deploy the NMD system. Rather, it will assess the technological progress to support a deployment decision. The Administration's decision will be based on an assessment of four factors: (1) the nature of the threat; (2) the status of the technology based on an initial series of rigorous flight tests, and assessment of the proposed system's operational effectiveness; (3) system affordability; and (4) assessments of the impact of NMD deployment on the overall strategic environment and U.S. arms control objectives, including efforts to achieve further reductions in strategic nuclear arms under START II and START III.

If a decision is made to deploy, we will simultaneously seek approval for our recommended NMD site and award of the construction contract for that site. A decision to deploy would lead us to conduct a Defense Acquisition Board review to assess the status of the program in late fiscal year 2001. Based on program performance, we would seek approval to initiate upgrades to the current early warning radars, begin building the missile site, and start integrating the Battle Management/Command, Control and Communications (BM/C^3). In fiscal year 2003, we would conduct a second Defense Acquisition Board review to seek approval to procure and deploy the ground-based interceptors as well as the necessary spares and test rounds. All of these decisions will depend on an assessment of our technical and programmatic progress.

NMD System Description

I would like to take a moment to explain how we envision the individual NMD system elements will operate when combined as a fully operational and integrated system. Let us assume a hostile launch to begin the engagement process. Space-based sensors make the initial detection and report a threat launch. DSP, and eventually SBIRS-High, will alert the entire system of a potential ballistic missile attack, cue the radars to erect "search fences" to detect the incoming missile, and start evaluation of engagement options at battle-management centers. When the threat missile crosses into the range of ground-based early warning radars, these radars confirm target missile flight and tracking information. Upon data confirmation, the BM/C^3 center cues the X-Band Radar and directs the launch of a ground-based interceptor. The ground-based X-band radar provides high-resolution target tracking data to the BM/C^3 system, which sends an update to the interceptor in flight through an In-Flight Interceptor Communications System. This data will be used by the interceptor to maneuver close enough to the target missile for the on-board kill vehicle sensor to discriminate the warheads from decoys and debris. Sensors on the kill vehicle provide final, precise course corrections to enable the kill vehicle to destroy the target. Multiple interceptors launched at each incoming reentry vehicle, either in salvo or in waves (a "shoot-look-shoot" scenario), are expected to increase dramatically the probability of a successful intercept.

NMD Flight Testing

In June 1997 and January 1998, we conducted two very successful seeker "fly-by" tests that allowed us to demonstrate key elements of the kill vehicle. Last October, we also successfully conducted the first of our interceptor tests—destroying a target vehicle in space over the Pacific Ocean. On January 18, 2000, we conducted a second intercept test. Though our Kill Vehicle did not intercept the target warhead, the test successfully demonstrated the compatibility of critical system elements. There are 17 developmental flight tests remaining, all of which will incorporate intercept attempts, in addition to other very important integrated system tests designed to unite the NMD elements into an operational "system of systems." We also will conduct extensive ground testing of hardware and demonstrate the integration of system elements.

The October 1999 integrated flight test, IFT–3, culminated in a remarkable finish. It conveyed to the public the technical complexity of colliding directly with a missile warhead traveling in space at more than 15,000 miles per hour. The ability to do this becomes even more awe-inspiring when one considers the target warhead may be less than five feet long and surrounded by decoys and debris. We accomplished

all of our test objectives in IFT–3—the physical destruction of the target warhead speaks for itself. We now know our interceptor concept works technically, and that one test helped to build our confidence that we can maintain our schedule.

A great deal of attention has been given to the integrated flight test that occurred on January 18 of this year. It was one in a long-line of testing events we have planned through 2005. While many have called IFT–4 a failed test, I take exception to this characterization of this very important and valuable test event.

Viewed in a mission context, IFT–4 was a failure—we missed the RV. The miss speaks for itself. However, in the context of testing, IFT–4 was a successful developmental test that proved under very stressful conditions the X-Band Radar, the Upgraded Early Warning Radar, and the BM/C^3 capability of our proposed architecture. The NMD system is one of the most complex systems our country ever has attempted to develop and produce. The interception part of the NMD mission is clearly the most visible and highly regarded phase, yet we must not lose sight of the fact that the successful integration of the system elements is no less critical. The integration and support aspects of our testing events are transparent to most people, but I assure you that we could not do the job without them.

We will continue to test our national missile defense system based upon strict, proven scientific methods learned over more than four decades of missile development, deployment, and operations. Our tests are designed to weed out flaws. While we strive for success on every test, we do not expect that we will always have it. Very often problems occur and elements of our tests fail. Indeed, we should expect failure from time to time, sometimes spectacular failure, as the price of ultimate success in this highly challenging endeavor. We learn a lot from our testing successes and failures. We gain knowledge and pick up important information from problems and mistakes discovered during testing and incorporate the necessary changes into our systems before they go into our deployed weapon systems. We must ensure that the NMD system we eventually deploy will work with a very high level of confidence—our testing program is designed to do just that.

One more Integrated Flight Test, our third attempt at a successful intercept, is scheduled before the DRR in July. IFT–5, now scheduled for June 26, will meet the requirements of an integrated system test in which all the elements of the NMD system will participate together in the engagement and destruction of the target. We decided to delay this test by two months in order to deal satisfactorily with the problem we encountered with the krypton cooling system in IFT–4. In the two months that followed this anomaly, which caused the EKV to lose track of the target cluster six seconds prior to impact, we examined the failure options comprehensively. In the end, we decided that our EKV systems did not require design changes, but nevertheless we wanted to ensure that we thoroughly reviewed all test hardware and processes prior to proceeding with the IFT–5. A testing delay at this point in our program was prudent from a technical standpoint. We believe that we will have enough technical data from this test in order to move forward with the DRR in July.

From fiscal year 2001 through fiscal year 2005, we will conduct three intercept flight tests each year. This will allow us to demonstrate the increasing sophistication of the kill vehicle and integrated system. Flight Test 7, scheduled to take place in fiscal year 2001, will be the first flight test to incorporate both the exo-atmospheric kill vehicle and the proposed operational booster. Flight Test 13, scheduled for fiscal year 2003, will fly the production-configuration ground-based interceptor—including the kill vehicle and booster.

The NMD Flight Test Program follows a very specific path to allow an initial operational capability (IOC) in fiscal year 2005. This path includes a number of milestones that, in effect, postpone the need to freeze the interceptor design until the latest possible time dictated by lead-time to the 2005 deployment date. The interceptor remains the element with the highest risk within the NMD architecture. Therefore, by waiting to lock in the interceptor design until after we have tested the production-configuration "round," we can be more confident in the system we will deploy.

The NMD program has been executed along a high-risk schedule. High-risk has a very specific meaning—we are executing this program at such an accelerated pace, that significant failure in any of the program elements may well cause us to slip our development timelines. Our recommended approach, however, is designed to handle this schedule risk by phasing our decisions based on test and programmatic performance, allowing more time to develop, demonstrate and, ultimately, deploy the system elements in a prudent manner. We have a demanding challenge and we are managing aggressively to meet it.

Deployment Planning Activities

While we have been developing and testing the system elements, we also have been proceeding vigorously on deployment planning activities. We have conducted fact-finding and siting studies for two potential site locations—Alaska and North Dakota. We have initiated site designs for the X-band radar, weapon sites, and BM/C^3 facilities. On October 1, 1999, we published in the Federal Register a Notice of Availability of the NMD Program's Deployment Draft Environmental Impact Statement (EIS), inviting the public to review and comment on that document. The public comment period ended on January 19, 2000. In October and November of last year, over 650 people attended public hearings on the draft EIS in Alaska, North Dakota, and Washington, D.C. We are considering the input received as we prepare the Program's Final Environmental Impact Statement, which we have scheduled for completion later this spring. As required by law, the results of the EIS will represent one of many inputs into the deployment decision process.

We initiated ground-based element facility planning and design in fiscal year 1999 and have completed the 65 percent design for the weapon system and X-band radar facilities. We will start the design of the BM/C^3 facilities later this year. For fiscal year 2001, we are submitting a request for construction of the tactical and support facilities for an Expanded C1 capability. This will consist of an X-Band Radar Complex, a Ground-Based Interceptor Missile Launch Complex, and a series of dispersed facilities for Battle Management/Command, Control, and Communication. We request a fiscal year 2001 MILCON appropriation of $101.6 million to begin construction of the X-band radar, conduct site preparation of the interceptor site, and continue planning and design work.

In accordance with budget guidance, we will further define the facility and systems requirements associated with potential deployment of 100 interceptors in an Expanded C1 architecture by fiscal year 2007, including the installation of 80 additional missile silos and non-tactical facilities. In order to remain on schedule for the deployment of the first 20 missiles in fiscal year 2005, we plan to issue a Request for Proposal this summer and award the contract(s) this fall, if approval for deployment is given.

We have made important technical progress in many areas in the National Missile Defense program. Nevertheless, this is an extremely complex program and we still have many significant challenges ahead of us.

Theater Missile Defense—the Family of Systems

The Family of Systems (FoS) concept is a flexible configuration of highly interoperable theater missile defense systems capable of joint and combined operations that allows the joint force commander to tailor the right mix of systems and capabilities according to resources, situation, and threat. We request $231.2 million in fiscal year 2001 to enhance the effectiveness of our FoS. FoS seeks to link the TMD core programs so that they fight as one system and obtain a force multiplier advantage. The program builds interoperability by conducting assessments to identify weaknesses, define architectural and engineering solutions, and integrate and test those solutions. BMDO has a disciplined acquisition approach for addressing warfighter interoperability requirements that builds on a foundation of legacy and developmental systems acquired by the Services. The near-term FoS effort is more of a development and integration effort than a traditional acquisition program insofar as it is expected to define software and hardware changes to existing systems to enable them to interoperate effectively.

Upper-Tier TMD Strategy

The medium- and long-range theater ballistic missile threat is emerging very rapidly. More countries are acquiring ballistic missiles with ranges between 1,000 and 1,300 kilometers. North Korea has developed the No Dong-1 missile. In July 1998, Iran conducted a partially successful flight test of its Shahab-3 missile, which could significantly alter the military equation in the Middle East by giving Iran the capability to strike targets in Israel, Saudi Arabia, and most of Turkey.

DOD studies have consistently validated the need for two Upper-Tier systems. The Theater High Altitude Area Defense (THAAD) program provides endo- and exo-atmospheric capabilities to engage a full spectrum of Theater Ballistic Missiles (TBMs). It is able to provide inland area defense for those scenarios where this is required. The Navy Theater Wide (NTW) program enhances these capabilities by providing early exo-atmospheric engagement opportunities in the ascent phase (i.e., the portion of the ballistic missile trajectory after boost and prior to apogee), which increases battle space and area covered, and negates weapons of mass destruction at greater distances from the intended target.

Late in fiscal year 1999, the Department of Defense (DOD) embarked on an intensive review of the THAAD and NTW programs, two programs that, once deployed, are intended to defeat the growing medium- and long-range theater ballistic missile threat. The purpose of this review was to meet Congressional guidance and to reduce risks and costs.

The Upper-Tier Strategy complies with the law. THAAD was fully funded in the FYDP based on the successful completion of the demonstration phase. NTW was fully funded through fiscal year 2002. The decision to provide full outyear funding for an fiscal year 2006 contingency capability has not been made pending results of AEGIS LEAP Interceptor (ALI), flight-testing. The decision to fund, and at what level, will be made on performance. Embedded in the acquisition strategy for both programs are opportunities to add funding or accelerate the release of an early capability based on success.

Based on two successful THAAD intercepts, we revised the Upper-Tier guidance during the summer of 1999 to cancel the remaining THAAD Program Definition/Risk Reduction (PD/RR) flight tests and shift emphasis from flight-test execution to missile redesign and planning for the Engineering, Manufacturing and Development (EMD) phase of the program. Additionally, we developed an alternative acquisition approach to provide a phased introduction of capability rather than initially fielding the objective system.

Prior to this review, the THAAD program was pursuing a standard acquisition approach to field an objective capability by defining requirements, designing and fabricating hardware, conducting ground- and flight-testing and eventually fielding a capability to meet threshold operational requirements. In order to pace the threat and obtain early capability with reduced risk, an evolutionary approach was proposed in accordance with current DOD policy. This resulted in a First Unit Equipped (FUE) for an initial configuration (or C1) in fiscal year 2007. C1 will include the capability to defeat all Upper-Tier threats expected by 2007, and it will meet the key performance parameters outlined in the Operational Requirements Document (ORD). Sophisticated countermeasures and battalion operational software are deferred to the next configuration (termed C2) that is planned for fielding in 2011.

We are reviewing options for reaching the objective NTW capability. NTW has consistently pursued a block upgrade approach to acquisition, meaning that a Block II objective system, which has yet to be fully defined, may follow a Block I initial capability. The Navy will continue this evolutionary approach, through an initial system flight test program (ALI), followed by three developmental increments of the Block I system. These increments, Block IA, 1B, and 1C, provide the warfighter with ascent-phase TBMD capability that evolves toward the Block II objective system using a "block-within-a-block" (BWB) methodology.

Since the Standard Missile 3 (SM–3) missile will mature more quickly than the AEGIS Weapons System software, the NTW program can deliver a warfighting capability earlier through the use of a reconfigurable ship. Such a ship, which can shift computer programs to accomplish either the Upper-Tier TBMD mission or conventional missions in accordance with the tactical situation, will reduce the development complexity of the software. Under the revised Upper-Tier Strategy, we will be positioned to pursue an NTW contingency capability (Block IA) in the 2006 timeframe, with a Block I reconfigurable ship (Block IB) FUE in the 2008 timeframe. The Block IB capability is designed to pace the threat expected at that time. The FUE for the fully ORD-compliant Block IC multi-mission ship could occur in 2010. We are also considering going straight to Block II.

Complementing this program is our cooperation with Japan on research aimed at improving four key components of the SM–3 missile. This cooperation was initiated when we signed a Memorandum of Understanding with Japan in August 1999 to govern the first phase of this collaborative activity. Preliminary planning is already underway for follow-on work with Japan to demonstrate and validate the products of the initial research. We will integrate this cooperative work into NTW program planning.

Current NTW funding allows the program to complete ALI flight-testing through fiscal year 2002 that is key to determining whether the system works, continuing the U.S./Japan cooperative project noted above, and assuring an industrial capability throughout the FYDP that continues to advance key technologies required to field an NTW capability.

When we initiated the review of its Upper-Tier Strategy, there were not sufficient funds to enable both programs to field a capability in 2007. In a fiscally constrained environment, we had to balance requirements, benefits, and risks in order to provide a highly effective layered-defense against emerging threats. The revised Upper-Tier Strategy conforms to the three tenets of the Fiscal Year 2000 Defense Authorization Act, Section 232. The current strategy also provides opportunities for accel-

erating each program later should the programs demonstrate success. This is a key feature of our strategy. Both Upper-Tier programs should proceed based on demonstrated success. Although we have funded THAAD adequately in the FYDP, out-year funding for the NTW baseline program will be reviewed on successful ALI flight-testing.

Theater High Altitude Area Defense.—In June and August 1999, the THAAD system conducted two very successful intercepts. These successes were a welcome development after a series of disappointing failures. The THAAD and PATRIOT PAC–3 intercepts gave us very strong confirmation of the hit-to-kill technologies we have been pursuing. We reported last year that we were confident that the basic THAAD system and missile designs were sound, and that the failures resulted from poor quality control during production of the original Program Definition/Risk Reduction (PD/RR) missiles. Based on all THAAD testing, to include the success of those two hit-to-kill intercepts, the Under Secretary of Defense (Acquisition, Technology & Logistics) determined that the key exit criteria for the PD/RR phase were met and waived the requirement for three intercepts before entering EMD. As required by the Fiscal Year 2000 Defense Authorization Act, we are providing the Report to Congress on the rationale for waiving the third intercept.

Consequently, we have shifted the THAAD program's emphasis from flight test execution in the demonstration phase, and we are now preparing to enter the EMD phase using lessons from PD/RR. The Milestone II decision to enter the EMD is currently planned for April of this year. As we prepare to enter EMD, we are making use of the lessons learned during the Program PD/RR phase, and expect to avoid problems encountered with the PD/RR missiles.

The $549.94 million in fiscal year 2001 for the THAAD program will continue the design and development of the C1 hardware and software. System Preliminary Design and segment Critical Design Reviews will be conducted. Part of this development will include lethality studies and advanced algorithm development. Key test facilities such as the System Integration Laboratory will be prepared for system-level testing. Integration activities with the Air and Missile Defense Command and Control System will be continued. Finally, preparations begin for EMD flight-testing.

Navy Theater Wide.—The NTW program has experienced several successes over the past year. In September 1999, the Navy Theater Wide program successfully demonstrated the first shipboard launch of a Control Test Vehicle. Follow-on flight tests are scheduled for later this year leading up to the first Navy Theater Wide intercept attempt during the first quarter of fiscal year 2001. Additionally, the Navy Theater Wide Program has successfully completed significant developmental ground-testing of the third stage rocket motor, full-scale and sub-scale lethality testing, and demonstration of significant interoperability potential through data exchange with THAAD and PAC–3 during recent missile test events.

Over the next few years, a significant amount of testing is planned. These tests will mitigate the higher risk in many areas and obtain valuable data to support system-engineering requirements. The $382.67 million in fiscal year 2001 for NTW will continue ALI flight-test activities as well as the Block I system engineering, program management, risk reduction, and test planning efforts. Lethality requirement definition and performance testing also continue. Funds are included to procure target assets to support flight-testing. Finally, funding will continue research, analysis and development efforts with the Government of Japan on selected NTW Block II technologies.

Lower-Tier TMD Strategy

The Lower-Tier strategy focuses on enhancing currently fielded systems (PATRIOT, AEGIS) to provide capability as soon as possible. The strategy also exploits emerging technologies to develop a highly mobile defense for maneuver forces under the Medium Extended Air Defense System (MEADS) program. The overarching goal of the near-term Lower-Tier systems is to deploy an effective and affordable TBM capability as soon as technically possible.

Increasing costs, driven primarily by technical challenges, have been a problem for the Lower-Tier systems. The delivery dates for the PATRIOT Advanced Capability 3 (PAC–3) and Navy Area systems have moved to fiscal year 2001 and fiscal year 2003, respectively. The PAC–3 and Navy Area programs still require further development and testing, and still have challenges to face to meet the dates we have set for them.

In order to optimize resources and coalition forces effectiveness, we are aggressively pursuing international cooperative participation in the Lower-Tier programs. This will include the MEADS program and the potential for extensive foreign military sales of PATRIOT and, possibly, Navy Area systems. We must, of course, bal-

ance the sharing of the systems and technical capability with safeguarding of critical technologies.

Patriot Advanced Capability 3 (PAC–3).—This has been a busy and successful year of activity on the PAC–3 program. Every time the system has been tested, it has been successful—all five of the PAC–3 tests have met their goals, including intercepts on the last three: March 15, 1999; September 16, 1999; and February 5, 2000.

The majority of the flight test program still lies ahead. The remaining PAC–3 missions will consist of 14 PAC–3 missiles intercepting different classes of targets. Follow-on tests include developmental and operational tests, which are designed to test the incremental hardware and software upgrades to the PAC–3 system using increasingly complex scenarios.

On October 12, 1999, we conducted a review and verified that all the exit criteria for entering low-rate initial production were met. The ensuing Acquisition Decision Memorandum officially authorized the award of a contract for the assembly of the first 20 PAC–3 missiles. On December 3, 1999, this contract was awarded to Lockheed-Martin. In parallel to this, a second contract to build three additional missiles for Air-Directed Surface-to-Air Missile (ADSAM) testing and conduct of an engagement against a long-range target was awarded on December 8, 1999.

I remain fully committed to reducing production costs of the PAC–3 missile. My goals for the overall program are to reduce costs, procure as many missiles as possible, deliver an operational capability on time, and live within the current budget estimate.

In October 1999, we established a joint government-industry missile-production cost-review team. This team focused on government and contractor costs related to missile production. The team established the baseline missile cost, developed a prioritized set of cost reduction initiatives, and produced an implementation plan to execute the cost reduction initiatives. The results of this work look promising. In the next few months, I will be adjusting our PAC–3 strategy to incorporate the team recommendations, which have the potential to substantially increase missile quantity for the same funding. I have commitment from Lockheed-Martin to make it work, and I look forward to telling you more about our progress in coming months.

The PAC–3 program request for fiscal year 2001 is $81 million in EMD and $365 million in procurement. This funding will complete the engineering, manufacturing, and development and testing of the PAC–3 Configuration-3 system, including the PAC–3 missile. The procurement funding will buy up to 40 PAC–3 missiles and spares and upgrade six Configuration-3 ground systems.

Navy Area.—The Navy Area sea-based missile defense capability consists of modifications to the AEGIS combat systems and the SPY–1 radar to enable the ship to detect, track, and engage theater ballistic missiles using an updated version of the Navy's Standard Missile. The Navy Area program is currently in the EMD phase and is nearing the first series of 8 flight tests. These tests are scheduled to begin in May at the White Sands Missile Range (WSMR). The program recently completed a rebaselining effort to field the system within the available funding. First Unit Equipped will occur in December of 2002. This program still has challenges. I had an independent review group examine the program cost risk. We understand these risks better, but I will not feel confident until the technical risks are retired by successful intercepts.

In the Fall of 1998, two AEGIS cruisers, the U.S.S. *Port Royal*, and the U.S.S. *Lake Erie* were augmented with TBM software and the ability to test-fire the new TBM missile using their new LINEBACKER User Operational Evaluation System. These ships are now providing critical feedback to influence the tactical design improvements and modifications to the AEGIS combat system. They will conduct a variety of at-sea tests, develop core doctrine and tactics, and support our flight-testing activities.

The Navy Area program request for fiscal year 2001 is for $274.2 million in EMD funding. This will permit completion of the White Sands Missile Range and Linebacker, at-sea, flight-test events. Successful WSMR flight intercepts provide the technical basis to begin low-rate initial production using the Navy's weapons procurement funding. This funding also pays for continued development of the Aegis ship systems, including software development.

Medium Extended Air Defense System.—We recognize the need for maneuver force protection, added mobility, and the value of international cooperation. We previously had restructured the MEADS program to include a three-year Risk Reduction Effort for the design and development phase ending in 2002. We have now augmented the 3-year risk reduction effort and fully funded the MEADS program by adding $714 million from fiscal year 2002 to fiscal year 2005. MEADS is currently scheduled to achieve FUE in fiscal year 2012.

The MEADS request for fiscal year 2001 is for $63.2 million in Dem/Val funding. This funding, combined with funding from our international partners, Germany and Italy, will enable continued development of prototype launcher, mobile fire control radar, and BMC^{4}I hardware and associated software and digital end-to-end simulation of the MEADS system.

Integrated Technology Program

Technology development has played a crucial role in the recent successful trials of the BMD systems. Today's missile defense systems rely heavily on technology matured and demonstrated by BMDO and the Services. Our Integrated Technology Program continues to focus on enhancing the effectiveness of our current major defense acquisition programs (MDAPs) and reducing associated costs while also strategically investing in advanced concepts and capabilities to defend our nation against future missile threats.

Our spiral development strategy relies on an integrated technology program to demonstrate and mature technology for insertion into the MDAPs. We are accomplishing this integrated approach through increased communication between our technology developers and our MDAP program managers and the development of coordinated transition plans. These transition plans detail the development, transition, and insertion strategies for all component technologies supporting spiral development.

While seeking to develop technologies to counter future threats, our Advanced Interceptor Technology program, along with our other technology programs, are developing cost-saving components for some of our acquisition programs. These near-term cost-saving technology programs should allow us to reduce per unit costs, thereby enabling us to procure increased numbers of interceptors and other ballistic missile defense system components within available fiscal resources.

It has become increasingly difficult to maintain an aggressive technology program in the face of competing demands presented by the MDAPs. In the past, we were able to fund more robust technology programs, such as the Lightweight Exo-Atmospheric Projectile (LEAP), which is now the basis for the Navy Theater Wide and NMD interceptors. At current funding levels, we are able to fund far fewer programs for next-generation weapon systems. Since most of our financial resources are focused on development, production, and deployment of our family of systems, we need to invest in technology development if we are to keep pace with the emerging threat. We will continue to examine ways to insure technology funding in the future.

Space-based Laser Project

The key focus of our Advanced Technology directed energy program remains the chemical Space-Based Laser (SBL). The SBL project is designed to investigate whether, at some point, it would be possible to provide the United States with a highly effective, continuous boost-phase intercept capability for both theater and national missile defense missions. Working with ground-, sea-, and air-based missile defenses, boost-phase intercepts by the SBL could "thin out" missile attacks and reduce the burden on mid-course and terminal-phase defenses.

In the near-term, the SBL project will focus on ground-based efforts to develop and demonstrate the component and subsystem technologies required for an operational space-based laser system and the design and development of an Integrated Flight Experiment (IFX) vehicle that could be tested in space in 2012.

The SBL project is jointly managed by BMDO and the U.S. Air Force, and is executed by the U.S. Air Force on our behalf. Both BMDO and the Air Force request funds in the fiscal year 2001 budget for the SBL project. We are working jointly, pooling resources and ensuring the program is following a clear direction. The BMDO budget contains $74.5 million and the Air Force budget has $63.2 million, for a combined request of $137.7 million.

Ballistic Missile Defense Technical Operations

The BMD Technical Operations program manages capabilities to assure the execution of the NMD, TMD and FoS, and Technology programs. This includes BMD systems architecture and engineering analysis, test resources and facilities, modeling and simulation, and phenomenology data collection and analysis. Although it provides this foundation for the entire missile defense program, Technical Operations represents only 6 percent of the budget.

International Cooperative Programs

I have touched on some of our international activities with allies. The Department fully funded the MEADS program and added $714 million from fiscal year 2002 to fiscal year 2005 towards the design and development of the system. Our collaborative work with Japan has been funded at $36 million through fiscal year 2001.

Now let me look at two other International Cooperative Programs—one with Israel and the other with Russia.

Cooperative Programs with Israel

The U.S.-Israeli Arrow Program has made significant progress toward the deployment early this year of a contingency-capable Arrow Weapon System. On November 1, 1999, Israel successfully conducted a fully integrated system intercept test against a ballistic missile target. The Arrow II interceptor was controlled to a successful intercept by the other elements of the Arrow Weapon System—the surveillance/fire control radar (Green Pine), fire control center (Citron Tree), and launcher control center (Hazel Nut Tree). The successful test satisfied Israeli Air Force requirements for initial operational capability. Once training and equipment inventory requirements are met, I expect the Israeli Air Force to declare the system operational as a contingency capability. Additional funds were provided to allow Israel to complete the procurement of a third battery of the Arrow system.

Bilateral activities continue toward development of an Arrow Weapon System that is interoperable with U.S. TMD systems. Interoperability initiatives will result in the Arrow Weapon System having a demonstrated capability to interoperate with U.S. PATRIOT and Navy Area TMD systems. We are continuing efforts to use the Israeli Test Bed (ITB) and the Israeli Systems Architecture and Integration (ISA&I) analysis capabilities to assist with the deployment and future upgrades of the Arrow Weapon System.

The $81.2 million in fiscal year 2001 for the Israeli Cooperative Project continues the Arrow Deployability Program, which includes funding to adjust the U.S. cost share of development so that Israel can procure components for a third Arrow battery. On-going Arrow flight tests will continue to validate and expand the Arrow battlespace. Improved threat models and an Arrow II update are incorporated in the ITB that support U.S. and Israeli standard operating procedure development and CINC EUCOM exercise requirements. Finally, evaluation of Arrow performance continues in conjunction with future emerging threats.

Cooperative Programs with Russia

The Russian-American Observation Satellites (RAMOS) program currently is my agency's most significant cooperative effort with Russia. The program originated in 1992 to develop and test space-based surveillance technologies jointly. Early in 1999, the associated technology objectives were assessed to be lower in priority than other critical technologies needed to address future ballistic missile threats. We then proposed an alternative aircraft-based cooperative program, which the Russians did not accept as a substitute for the two-satellite concept.

In 1999 we reviewed the program and determined that continuing the development of a space-based experiment would better support our proposed program of cooperation with Russia. Therefore, we are proposing a revised two-satellite project, similar to the original RAMOS concept. If the United States and Russia agree to proceed, we envision that the revised RAMOS program will cost about $347 million over fiscal years 2000–2006.

Threat and Countermeasures

Our threat and countermeasures program provides us with intelligence data on current and evolving foreign missile threats. This information is critical to the planning and execution of the TMD and NMD programs and serves as the basis for the threat specifications against which current and future defensive systems are designed. The program produces a series of carefully constructed illustrative missile attack scenarios reflecting adversaries' systems and operating concepts—including simulated flight trajectory information—for use in missile warfare engagement modeling and simulations. Wargames using this information are conducted at the Joint National Test Facility in Colorado Springs, Colorado. We request $22.6 million for this activity in fiscal year 2001.

BMDO Charter and Reorganization

While I am accountable for providing for the procurement and fielding of TMD, NMD, and other antiballistic missile systems as they may be assigned to me, I am also responsible for the transition of BMD systems to the Military Departments and ultimately to the Combatant Commands for operational use. Interest has been raised recently about how we are implementing guidelines in our charter provided by DOD to transfer procurement funds for major defense acquisition programs, in this instance our lower-tier systems, from BMDO to the military services. The challenge before me is to strike the right balance of oversight. We are continuing to study ways to determine the appropriate timeline for the transition of responsibilities for each system to the Services in light of my obligation to maintain a robust

acquisition strategy within our Family of Systems architecture. There is no request to transfer these programs in this year's request.

Recognizing that ballistic missile defense systems soon will enter limited production and be delivered to the operating forces, we are reorganizing to meet the challenge of managing both the R&D and the acquisition responsibilities spelled out in our charter. I share the concern of the Congress about technology management and have begun instituting significant changes in our technology programs. My reorganization initiative reflects a transition from an organization oriented towards early technology R&D and demonstrations to an acquisition-focused agency responsible for introducing advanced technology and complex proven weapon systems to combatant forces. Moreover, I have flattened the BMDO management structure in order to reduce decision and action cycle times, which I believe is necessary if I am going to achieve my goal of delivering what we promise.

Summary

As we look forward to the DRR, we have achieved several notable and reassuring successes in our NMD testing program. We are making substantial progress in our Upper-Tier systems, moving them towards development and production. And we are on the verge of achieving major milestones leading to deployment of our Lower-Tier systems. I believe our missile defense programs can and will contribute significantly in the very near future to our national security, and that we are funding them accordingly.

Mr. Chairman, I am more convinced than ever that effective missile defense is crucial to the defense of the nation and its armed forces. The missile threats facing our nation, our armed forces, and our allies are immediate and growing. While I expect significant complex technical and management challenges in our program, it is demonstrating increasing success, and I am confident that we are aggressively addressing the right issues at the right time.

Mr. Chairman, that concludes my remarks. I would be delighted to address the Committee's questions.

Senator STEVENS. Thank you very much. That is a very full statement.

Gentlemen, Senator Inouye and I made short statements. I would like to see if anyone who has come in later would like to.

Senator Cochran.

Senator COCHRAN. Mr. Chairman, I appreciate the opportunity.

BALLISTIC MISSILE DEFENSE PROGRAMS

I want to commend General Kadish and also General Nantce for the very strong efforts you are making to move forward on the development of our ballistic missile defense programs. I think in spite of the very slow start by this administration, dating back to 1993, when it returned completed proposals for the national missile defense ground-based interceptor, for example, to the contractors unopened, we are seeing at least a higher rate of funding being requested as reflected in this year's budget.

But in the past the administration has been notoriously culpable in slowing down the progress that has been authorized by the Congress on these programs. Just look at the overwhelming support reflected in the passage of the National Missile Defense Act, for example. It shows that Congress wants to move forward with a robust effort to develop not only a national missile defense program, but theater missile systems as well.

And it looks like every key program in this budget request is underfunded. If you look in the THAAD program, the deployment schedule has slowed down because of a lack of funds, same thing for Navy theater-wide and others. In the airborne laser (ABL) program, even though that is an Air Force funded program, there is not enough money. That has been cut by this administration's budget.

But as you observed, the funding request is also low for the Ballistic Missile Defense Organization's work on future technology programs, so we have got our work cut out for us if we are going to keep on track and fulfill the goals that you just said you shared, and that is the development and deployment of these theater and national missile defense systems.

Thanks, Mr. Chairman.

Senator STEVENS. Senator Domenici, do you have an opening statement?

COST

Senator DOMENICI. Mr. Chairman, I just want to make sure that I am on record saying that I support this effort, but I remain rather skeptical as to whether you really know how much national missile defense is going to cost. I believe the costs are going to continue to escalate. I do not think we are going to be able to rely on the estimates that have been given so far.

That has been the case for this program from the beginning, and I close with the hope that as we proceed, that you will still, even while moving ahead, have some stopover points when you take a real look at the technical parts of the system. See whether the system works, and honestly evaluate it for us. That way, we do not wait until we have spent a great sum of money, and then discover it is not going to work unless we double or triple the funding.

Now, I may be the only one saying this, but I believe what I have just described is a real probability. Until we started this debate the American people assumed we had some defense against intercontinental ballistic missiles, and now as this debate becomes more public they are very shocked to discover we have none. America may be enthusiastic about building a national missile defense system, but it does not mean we know how to do it within a reasonable cost line.

You are nodding. I hope you are nodding to indicate that you will keep us apprised of the costs on a regular basis and not wait until it is too late to tell us the system is not going to work.

Thank you, Mr. Chairman.

Senator STEVENS. General, I have got a whole series of questions. I am going to wait and see if others have basic questions.

NATIONAL MISSILE DEFENSE TESTING

I am concerned about one thing, and that is, if I understand what you have just told us, you believe that this next test scheduled for June 26, I believe, is really the keystone of whether we should proceed with the national missile defense as currently anticipated, is that right? If that test is a failure, are you saying we should do what Senator Domenici says, review the whole program before going further?

General KADISH. Well, Senator, no one test should be that critical to a decision in my view, from a developmental standpoint, and IFT–5 gives us another opportunity early in the program to get more test data, and for those of us who develop systems, more test data is always better, but we have an awful lot already in our ground testing, and the flight tests we have already done, to do the

initial assessments that we are going to be asked to do on this program.

What IFT–5 gives us is another opportunity to add to that data base and give us as much confidence as we can have, given the early nature of this program. So I would caution against IFT–5 begin a binary event, if you will, either for or against.

Senator STEVENS. But would you disagree with the statement that we have the technology base? The problem is integrating the systems that are to be portions of this total national defense program.

General KADISH. I would agree with that statement. Our challenge is the integration, to make it work.

Senator STEVENS. Senator Inouye.

Senator INOUYE. I would like to give you an opportunity to respond to some of the criticism that we have been receiving here, that first, your testing program is not realistic enough, and second, some have further suggested that testing may be rigged to improve the chances of success.

I need not tell you, because we all know that testing data is very important, you will have to make a recommendation to the President this summer. Now, do you have any response to that?

General KADISH. Yes, Senator. Let me take it one at a time, and if you bear with me, these become complicated in explanation. I will try to simplify it.

REALISTIC TESTING

First, the idea that our testing is not realistic, let me say a few things about that. If you look at our program, where we are asked to deploy 20 missiles by 2005 and have this system effective by then, we laid out a test program that includes early testing to prove the elements of our system, and demonstrate the integration capability. That is happening now, and in the last year especially.

We laid our operational testing as we understand it, against more realistic threats and combinations of those later in the program, and this is not unusual. This is what is done in most development programs.

What is difficult for us now is that in the early phases of this program, were we are trying to demonstrate the fundamentals of the system, where we can only demonstrate the fundamentals, people are sometimes asking us to go a bridge too far, and ask us to test against an operational set of conditions that we are just not ready to test against, but what we are able to do is to demonstrate the functionality of the system early on in the maturity of the program.

Let me give you an example of why we do that, and it comes from aircraft testing, if you will. Early on in a program, and for many decades now on aircraft testing, the first thing you do with a brand-new aircraft is, you do a high-speed taxi test. You do not even take off. The next thing you do, when you take off you do not even raise the landing gear, and the reasons why you do not do that is to go through a fundamental test program to prove the basics. Can it fly, and can it safely return to Earth, and that is the reason why you do not put out the landing gear.

In the national missile defense program, early on what we are trying to do is to demonstrate basically two things. One is, can we hit a target going 15,000 miles per hour at closing speed, and do it in a circle about that big, on a 5-foot ice cream cone.

DISCRIMINATION

The second thing we are trying to prove is that the different radar elements and software command and control systems that allow us to do the hit to kill can discriminate generally what it ought to hit, out of a complex of debris and potentially some decoys.

So the program is a stepping-stone, if you will, set of criteria on a test program to get increasingly complex over the years, and in the early stages we are walking before we run.

TEST SCRIPTING

In response to the second issue that the tests are rigged in some way, shape, or form, the tests are scripted to get what we need to know, as I just described, walking before we run: the fundamentals of hitting the target, which has been very difficult to do, and major technological leap ahead, and the fundamentals of making sure we hit the right target out of a narrowly developmental set of target suites, and we script the test to do and come up with those kinds of test objectives.

That does not mean to say that these things are arranged such that we can actually hit these targets because we have rigged the test, if you will.

Now, when you put that all together, where we are in this program is that early on in our tests, we are walking before we run in our major technologies. The test results out of this part of the program will give us confidence that we can do the engineering later on in the program to make it work reliably, and be operationally effective, and our program is designed that way.

And as we move from the early tests, where we have a few objects to go after in our threat constellations, to the latter phases, where we will have many, and threat representative, we believe we have the right test program put together to make it happen.

I hope that helps, Senator.

Senator INOUYE. Are you satisfied that test data that you are acquiring now would be appropriate and sufficient to make recommendations to the President?

General KADISH. Yes, Senator.

Senator INOUYE. Thank you.

General KADISH. For the phase of the program we are in right now. Now, I cannot guarantee you operational effectiveness determinations to the degree we will have 4 or 5 years from now. We are just not there, not with two or three flight tests, but as we gain more flight test data and move into the operational testing, at that point we will prove what we suspect to be the case now on the operational effectiveness.

Senator INOUYE. Thank you. Thank you, Mr. Chairman.

Senator STEVENS. Senator Shelby.

Senator SHELBY. General, I, too, would like to compliment you on your hard work on the national missile defense program. It is a difficult assignment, to say the least.

We all know that there are people who question this program. There are a lot of nay-sayers in the media, in the Government, in this body, who pointed to the failed intercept that you mentioned as proof that this system is not a viable missile defense program. If you could talk to them, and you have the chance, what would you say to these people?

General KADISH. Well, as I said earlier, no one test ought to be the keystone of judging whether a particular system ought to work, but what I would say to them is that the very first time we tried to do an intercept—and that is all we tried to do the very first time we put this weapons system up in an intercontinental challenge—we were able to successfully destroy the target.

That does not happen very often, and it does not happen by accident. There is an awful lot of technology at work, and American capability that went into making that happen, and the point at which we are at right now is that we could—I guess the best way to say it is that we do not have to invent things at this point to make this system effective.

What we have to do is engineer it, and we are in the very early stages of putting this system together, with just a few flight tests, an awful lot of data and technology work that has already gone into it and as we progress, on a very aggressive schedule, to do the engineering, we are getting increasingly confident that we are going to be able to make this work the way we designed it.

Senator SHELBY. But integration is the key to it, or the dynamic, is that correct?

General KADISH. The integration is the key.

BMD ACQUISITION MANAGEMENT STEAMLINING

Senator SHELBY. General, I understand that the Department of Defense (DOD) has directed that the service program managers and program executive officers who are responsible for the execution of BMDO acquisition programs will report directly to you. What prompted these changes, and how has the Army responded to that?

General KADISH. Well, I think what we are looking at is this idea that we need to continuously improve how we do our management of these very important systems, and I think that across a broad front we have come to realize, especially in the last year or so with the test results that we have, that we are moving these programs into very different phases from demonstration, if you will, into development, and from development into production, and it requires us to relook at how we actually manage these programs on a day-to-day basis.

And what we are trying to do now is to do streamline activities so that the people doing what I call real work in the field have less oversight, if you will, and are able to do their jobs more effectively by cutting down decision cycle times, and provide the proper amount of oversight rather than intrusive oversight, and what we are trying to do now is to cooperatively make the services and BMDO cut out duplicative efforts——

Senator SHELBY. Make it work better.

General KADISH. Make it work better, streamline, and quite frankly make the program manager's life a lot better, and let them concentrate on managing the program as opposed to talking with us, and it has been very difficult to do this, because BMDO is a different kind of organization in the sense of bringing together a very disparate set of programs, so it does not fit the culture very well, and we are trying to make it better for the program, and I think we are making some pretty good progress.

TECHNOLOGY INVESTMENT

Senator SHELBY. General, are we short-changing our future, as far as investment in technology development? Has it been underfunded?

General KADISH. A lot of the success we have enjoyed in the last year results directly from the investments that have been made over the past 15 or 20 years. I think we can say that with great confidence.

Where we are today, as I alluded to in my opening statement, is that in order to fund the programs into the development from technology and into production, we are spending less resources on our technology base, and so although it may not threaten us today in terms of discoveries in a technology sense, we will probably begin paying the price later on, many years downstream.

Senator SHELBY. I understand you are in the process of continuing your evaluation of sites for the space-based laser test facility. That is an ongoing deal, is it not, and where are you there?

General KADISH. We have just completed our site visits. I went out personally to look at all the sites under consideration, and right now I am asking some fundamental questions that are driving the analysts basically crazy at this point.

Senator SHELBY. Good.

General KADISH. But I want to make sure that we have a clear idea of how to proceed here, and I am not confident enough right now that we do, so we may be a little bit more delayed by a month or two, or even longer, to make sure I get the right answers to the questions.

Senator SHELBY. Thank you, General.

Thank you, Mr. Chairman.

Senator STEVENS. Senator Byrd.

NMD TESTS

Senator BYRD. General, I voted for the National Missile Defense Act of 1999. I believe it may be a prudent necessity to deploy a national missile defense.

I share the concerns that were ably expressed by the chairman of our Budget Committee, Senator Domenici. I am concerned about the cost increases, but before I get into that, I want to discuss the two interceptor tests. Only one missile has been a kill. The test in January was a miss. Another test is scheduled for June. What if the June test is a miss?

General KADISH. Well, Senator, it depends on why it missed, and if I might, let me speculate for a minute. I do not often have the luxury of doing that in my business.

But it could be a failure because the target did not show up, which would have nothing to do with the system. It could be a failure internal to the test apparatus that we use, because of the range restrictions, or it could be a fundamental failure in the design of the system, which we do not expect right now.

So it depends on why we failed, and what effect that would have to our overall technological evaluation, and again, that is why I caution against having the flight test, any single flight test be the touchstone of whether we should proceed in any program, whether it is this program or others.

Senator BYRD. Which of these failures would concern you most?

General KADISH. What would concern me most is if we had a fundamental design failure.

Senator BYRD. What if we have a fundamental design failure?

General KADISH. If we have a fundamental design failure, we have to do basically what we did after the last failure of the flight test. We went in an intensive evaluation of the system to find out what the problem was.

Once we concluded that effort, we would decide what to do about it, and that could range anywhere from a temporary design change that we could effect in our next flight test, to a longer term design change that we would have to stop and remanufacture some parts of the system.

So there is a whole series of disciplined activities that we would have to undertake to fix the problem, and depending on how long it took, it may delay our test program, and if it delays our test program, we would have to evaluate whether or not we could meet the end date that we are asked to meet.

Senator BYRD. There are 17 developmental flight tests remaining, all of which will incorporate intercept attempts. What is your view of making a decision to proceed or not proceed after only three intercept tests?

General KADISH. Well, as I said earlier, Senator, the three tests—and by the way, we have done a lot of ground testing that is added to this. What we can tell you is whether or not the technology exists to take the risk of proceeding on our program requirements, but I cannot tell you that we are doing operational testing, as some would ask us to do.

Since we are running what we call a concurrent program, and that is a program to do things simultaneously in order to meet an end date in 2005, we are constructing sites, we are building hardware, all at the same time that we are testing, I cannot design a program to get operational testing any time sooner than what we already have planned in the program, which is 2003, 2004, 2005 timeframe.

If the country wants to wait until we get that level of testing, after many more flight tests, then we would have to extend the deployment schedule accordingly from 5 to potentially 10 years, and that has to be judged in relationship to the threat.

So early on in the testing, what we can tell you is whether or not there are any inventions that present such a high risk to the program that we cannot make it happen on schedule, and that is about all we can say.

Senator BYRD. How early on would that be?

General KADISH. We are able to do that this summer.

NMD COST ESTIMATE

Senator BYRD. This summer. Does the official estimate of cost include the 100 interceptors planned for 2007, or does it stop at the 20 antimissile interceptors planned for 2005?

General KADISH. We include the cost of 100 interceptors in our program selected acquisition reports to the Congress. Now, I have to say that we added the 100 interceptors late in the budget cycle last year, and the cost estimating process, if you will, is not as scientific as we would like it to be in the timeframes that we are talking about, so we are redoing the cost estimate for the summer's review process, and I would expect the numbers to change to reflect our better understanding of what we are delivering, but the cost of what we are submitting in the budget today, as well as in our reports, reflect the 100 missile program.

Senator BYRD. Does the official estimate include the $4.6 billion planned for 2005 through 2010?

General KADISH. If I understand the question correctly, yes.

Senator BYRD. Well, the question was, does the official estimate include the $4.6 billion planned for 2005 through 2010?

General KADISH. Oh, 2005–2010. Yes. We planned a life cycle estimate for this program for 20 years, to include the missiles that will be in the program from 2005 to 2007, the 100-missile program.

If you have the cost of that 100-missile program for a 20-year cycle from, I believe, 2001 to 20 years later, the cost in our reports is for about $36 billion in then-year dollars, and that equates to a $30.2 billion program in constant year dollars, so the answer is yes.

Senator BYRD. Does the statement of cost include the $3 billion spent between 1991 and 1998?

General KADISH. Yes, I believe it does.

Senator BYRD. One final question. The same report, which was a news report, that put the cost at $20.2 billion, almost 60 percent more than has been publicly stated, that same report indicates that the Pentagon has done nothing to dissuade the press from calling NMD a $12.7 billion system, even though that is just the cost between fiscal year 1999 and 2005. What about that?

General KADISH. It is an unfortunate situation. It depends on whether you talk about what the cost parameters are.

We could talk about it in the future years defense program sense, we could talk about it in acquisition dollars, or we could talk about it in life cycle dollars. Those numbers are all different, and then when we give you those numbers, we can either give them in then-year dollars with inflation, or with constant-year dollars.

So my view is, it is not an attempt to misrepresent the cost of this program, but we have to be precise in what question is being asked, and we have all those numbers, and I would be more than happy to provide them in any format to the committee for the record.

But the idea that the cost increase, because we went from 20 to 100 missiles, is a factor of the fact that we changed the program to 100 missiles, and—we are not trying to attempt to misrepresent the cost, but we have to be precise, what we are asked to give in terms of numbers.

[The information follows:]

Data displayed is extracted from the Selected Acquisition Report to Congress, and arrayed in the various groupings of years, type costs, and dollars as described above.

[In millions of dollars]

	Then Year	Base Year (fiscal year 1999)
Future year's defense program (fiscal year 2001-fiscal year 2005):		
RDT&E	4,751.7	4,465.1
Procurement	5,149.3	4,724.2
Milcon	473.7	438.1
O&S	.....	.....
Total FYDP	10,374.7	9,627.4
Program Costs (fiscal year 1991–2026):		
RDT&E	11,961.5	11,502.1
Procurement	7,792.3	6,770.4
Milcon	498.4	462.0
Total Acquisition	20,252.2	18,734.5
O&S	15,993.0	11,492.0
Total Life Cycle	36,245.2	30,226.5

Senator BYRD. Mr. Chairman, I have gone well beyond my time. I thank the chairman and the committee for its indulgence.

Senator STEVENS. Yes, sir. Thank you, Senator.

Senator Cochran.

Senator COCHRAN. General Kadish, in today's New York Times, Elizabeth Becker writes an article describing a group of scientists, some at the Massachusetts Institute of Technology (MIT), that call themselves the Union of Concerned Scientists, who criticize the national missile defense program. This is the same crowd that in October said that the intercept, the hit-to-kill was a lucky result that was achieved in the test of the program, the system under development.

Do you agree that that intercept was lucky? They say it was lucky because it wouldn't have occurred if a balloon decoy had not alerted the kill vehicle to the target's location. Do you agree that this intercept was lucky?

General KADISH. No, I do not, Senator.

COUNTERMEASURES

Senator COCHRAN. Well, this same group in today's paper go on to say that any nation capable of fielding a long-range ballistic missile will also be able to equip it with countermeasures that will overcome the NMD system. Is that a valid argument against the system under development?

General KADISH. If I might take a little bit of time to discuss this issue, I think it is important to frame the debate properly.

I think it is fair to say that countermeasures concern us. They do. We have been working at it for many years. We have a lot of technology associated with it. But let me say three things about

this. First, even though we are concerned about countermeasures, the idea that those that can do missile technology can—which is a fundamental assumption, those that can do missile technology can therefore do countermeasures, I would say on the surface is true.

But you have to say, what is the rest of the story? Even though those technicians are capable of doing these types of things, you have to ask the question whether or not they will be effective once invented, and this country has much experience in developing countermeasures that I cannot go into here, and it is not a trivial exercise to make them effective, so from a scientific basis you can invent, using scientific principles, almost any kind of countermeasure you want to invent to defeat a particular system.

The real question is, can they make them effective, and in order to make it effective, it brings me to my second point. You have to do a lot of testing. Recognize, there have been many questions this morning that, how much testing have we done to assure ourselves this system would work.

We could ask that question about any system in our inventory, and those that ask us those types of questions ought to be asking whether or not the rogue nations, if you will, as capable as they might be, even if they are primitive, how effective will those countermeasures be, and that is the rest of the story from the second point.

The third point is a more macro issue that I would point out, without getting into classified information. The challenges of the discrimination problem have been evident for many years, and from a technology standpoint there are basically three things that affect our countermeasure capability.

One is the quality of our sensors to pick out different features of the countermeasure. The second is the size of our weapons, miniaturization, if you will, and the third, which is controlling in my view, is computers. We have made advances across a broad front in all of those efforts in this country, and American technology has given us computer systems today we only dreamed about 10 years ago, or even 5 years ago, and what happens in countermeasures in regard to these technologies is, if you have high numbers of incoming warheads, all of the Soviet Union, if you will, during the cold war, combined with countermeasures that are postulated by our critics, you can overwhelm our systems and eventually be defeated.

We do not have that case, in my view, with national missile defense, because right now we are designing this against a limited threat, a few tens of warheads, and when accompanied by simple, or what we call complex countermeasures, the technologies that we have in these systems I believe is able to handle that problem very well.

And so the rest of the story is that the issue is valid, but we have ways of getting into the counter-countermeasure activity that we believe will be very effective.

NMD TECHNOLOGY DEMONSTRATION

Senator COCHRAN. Have you successfully demonstrated the technology necessary for an effective limited national missile defense system?

General KADISH. Senator, that is what the deployment readiness review is designed to assess, and we are well on our way to putting that review together this summer, compiling all our flight test results, so I am confident that this summer we will be able to answer that question formally.

Senator COCHRAN. Do you have any doubt about the technological feasibility of your approach to national missile defense?

General KADISH. At this point we are gaining great confidence in our ability to assess this technology.

Senator COCHRAN. Do you have any reason to believe that the testing program may yet show that building this system is not technologically, or technically possible?

General KADISH. Our test program is proceeding very well to build the evidence.

Senator COCHRAN. There is a part of the Welch panel—which the Department got to examine the national missile defense program, saying that this was a program that was hardware-poor and lacked sufficient spares and components for ground and laboratory testing. Do you have sufficient resources in this budget request to ensure adequate hardware for your test program?

General KADISH. As a developer, more is always better, but we have a responsibility to balance out the cost of our programs, so the simple answer to your question is yes, because we added about $285 million to handle the Welch recommendations, and we took them in total.

We are continuing to evaluate the needs for our test program as we learn more about our challenges, and I would expect that we would have to balance that out in the future budget request as well, but right now our current assessment is we have adequate resources in the present program to do what we are asked to do.

Senator COCHRAN. Thanks, Mr. Chairman.

Senator STEVENS. Thank you, Senator.

Senator Domenici.

Senator DOMENICI. First let me say to you, General, I have seen a number of Generals that run technical programs and I believe you are one of the best managers that I have read about and listened to in my years in the U.S. Senate. Whenever there were big problems in managing a big program, they called on you. For example, there was the C–17. You do an admiral job.

General KADISH. Thank you, sir.

Senator DOMENICI. You are very skilled at taking a program that was kind of confused and not on target and fixing it. I think those in the Senate, led by Thad Cochran, who have pushed very hard for us to move expeditiously with this defense system, are on the right track, and I wholeheartedly support what they are trying to do.

NMD TESTING CRITICISM

I believe we have to utilize whatever resources we can to fairly analyze this program. We hear from you, but make sure that others who have science and technological knowledge in this field are listened to also. Along those lines, I want to talk for a little bit about what the Director of the Operational Test and Evaluation, Dr. Coyle, has written. He has been a critic of NMD in terms of

the quickness of these tests, and last year he stated that the tests are too close together to learn from each one to the next.

He stated that the proposed tests lacked realism. BMDO has been using targets that are not realistic, and there has been no use of multiple simultaneous targets.

I guess I would first ask, am I correct in assuming you are familiar with the critique?

General KADISH. Yes, Senator.

Senator DOMENICI. It would seem to me that most of the criticism that is being levied by the Department of Defense's own Director of Operational Test and Evaluation is not being followed by you. Therefore, you must see another side to it, and believe that what Coyle is recommending should not control this program. Is that a fair statement, and if so, why?

General KADISH. Well, if I could change the character of the statement a little bit for explanation, the issues that Mr. Coyle raises are legitimate issues. In any program that we monitor, operational effectiveness is key to our success in the long run, and they do a good job of holding our feet to the fire on that, and we should not ask that this program be exempt from the same type of intense testing and looking at it.

The problem we have right now that you alluded to, the closeness of the testing, the realism issues, and the test geometries, are problems stated as if we could do something about them, and we are not doing it. The issue here is, that is not the case.

As I explained earlier, when we set the date of 2005 there is no way we can physically construct a program to do operational testing in the first two tests, or three tests of the program. That comes later. So the issues that we bring up on multiple simultaneous launches, and those types of issues, are later in the program, in 2003, 2004, 2005 and beyond, as we have this program fielded.

We cannot transport that forward in time to 2000, the year 2000. We just do not have that capability. So if we wait to do those type of realistic tests that we would all want to do, and stretch our program to do that, then we miss the 2005 date. If that is the assessment against the threat, and acceptable, we can certainly do that. That is not what we are asked to do today.

The other charges about the way we are doing our tests, the geometry, how the missiles come in, are a function of the fact that this problem is intercontinental in range. We have to launch our targets out of Vandenburg Air Force Base, California, over Hawaii, into the Kwajawlan Range, 4,300 nautical miles away.

We have range restrictions for safety issues. We have placement of our assets in the test geometry. They are very expensive to change, so to do the full-up operational testing of this that we would like to do at the system level, we run into some very real stops to do that, and we end up doing it by simulation.

So I guess to summarize it is that the concerns that Mr. Coyle and the operational testers have are valid, and we will address those as the program progresses, but in the framework we are in today we cannot do those types of things that we are being asked to do in this area as if we were a mature program, ready to go into massive deployment and production tomorrow.

NMD SYSTEM INTEGRATION

Senator DOMENICI. I have two questions, and I will tie them together. Would you explain briefly to us what it means when you say this is a matter of integrating systems and you are not having to start from scratch with a new series of technologies? Does that mean that we are now using some of the strategic defense initiative (SDI) expertise that was garnered over the years, or does it mean something different?

And second, you just explained that you are motivated in your scheme of activities by a 2005 deadline. I am not one that wants to change the deadline, but I think I would like to ask you, if the deadline was not 2005, would you be doing some of the things that Dr. Coyle has suggested before you reach the decision points that are scheduled for a 2005 deployment?

General KADISH. Let me take the integrating the system, and what does it mean, and it may be helpful to describe the tool kit that we are using to make this system work, and why we think it is up to the challenge.

In order to do an effective missile defense, even the limited numbers we are talking about, you have to have a detection system that detects the launch, you have to have a radar or a sensor system that tracks this vehicle, and can tell the interceptor where it is, and you have to have a vehicle, an interceptor fast enough to go out and get it, and then you have to have a kill vehicle that can discriminate, using all that other data provided to it, to actually hit the thing without a nuclear explosion of some sort, and then you need a very complex set of software to do this almost automatically, because this war is over in 20 to 30 minutes, and so launching 100 interceptors in 20 minutes against a broad range of reentry vehicles (RV's) measured in tens, to get our performance up is a very complex set of integrations.

Now, when you put all these things together, where the Commander in Chief of Space Command out in Colorado says rules of engagement have been met, launch the missiles, it has to happen very rapidly, and the communications, the software decisions, the missile launches, the in-flight communications activity that is almost global in nature, have to work together, so our challenge, then, is to integrate these system elements so that they can work together in an operationally effective way, eventually, and not just in a scientific way.

Now, having said that, we have demonstrated in many different forums pieces of these things, the radars, the X-Band radars, the ultra high frequency (UHF) radars, and specifically the kill vehicles that we are using, and in fact the kill vehicle that we are using that is 121 pounds and 54 inches long, that destroys these warheads just by the force of impact, has been under development for over 10 years, and we have taken these tools and put them together in a system that we believe, given that the elements have been tested individually, can be put together to work as a whole, and that is our challenge, and we are well on our way to showing that we can do that.

NMD 2005 DEADLINE

Now, in regard to being motivated by 2005, we intend, at least in our planning purposes, to do what Mr. Coyle wants to do even within the restriction of 2005 deployment. We will do operational testing later on in the program, in 2003, 2004, 2005. If we should lengthen that schedule and take on less risk by doing so, that is less risk meeting our date, it gives us more time to do that, and as a developer, just like more resources is always better, more testing is always better for us, but that has to be balanced with what we are asked to do, and that is the art of program management.

Senator DOMENICI. Thank you very much, General.

Senator STEVENS. General, my mind goes back to I think 1996, when we were first presented—only Senator Inouye and I were here. We were presented with testimony concerning a new concept of national missile defense that would cover 48 States, the contiguous States. I do not want to repeat that conversation we had with one of your predecessors, but it was obvious, Senator Inouye from Hawaii and me from Alaska, that was not an acceptable proposal.

We later had Dr. Perry come and tell us he had a new scheme, and that was the three-plus-three. It was 1997 then, and we were going to deploy in 2003. We have subsequently slipped that by 2 years to 2005. I think as we go into these questions we ought to keep that in mind. We have already adjusted this twice now, and the procedure and the timeframe has been lengthened.

NMD MILITARY CONSTRUCTION

I do have a question to ask you about the military construction aspect. Senator Byrd asked you about the billions of dollars involved. As I understand it, we have before us now for 2001 a request for $103.5 million for military construction, primarily to start with the X-Band radar at Shemya. I further understand from your previous answer to my question that even that is contingent upon the next test. That does not seem to me to be really very wise, because of construction time out on the Aleutian Chain and other things.

Part of this system is going to be at Shemya and part of it probably at Fort Greeley. That is like starting in Baltimore—or let us put it around—a relay starting in Alameda with the X-Band and having the system located in Baltimore. Most people do not realize the distance between Greeley and Shemya.

Why would we delay the military construction aspect of this relatively—I am not here saying $103.5 million is not a lot of money. It is a lot of money. But compared to the overall program, it is not a lot of money. But that one facility there is going to be essential no matter what you do, as I understand it, to the future planning for missile defense. Why would we delay Shemya based upon the test in June?

General KADISH. Well, Senator, it may be helpful to explain why we have to do military construction next year. Given that we have 2005, and you correctly pointed out we went from 2003 to 2005 in our current plan last year, I believe it was, if you back up the things we need to do because of construction seasons in Alaska and Shemya, or for that matter even North Dakota, it turns out that

the first thing we need to do to build this system is not to build the boosters, it is not to build the communications systems, so much as it is to start construction of the X-Band radar in Shemya, Alaska, in the Aleutians.

Senator STEVENS. You do agree, then, we should proceed with the military construction aspect of this program as requested for 2001, without regard to the success of the June test?

General KADISH. If we do not start the construction in the spring of next year, as currently planned, I cannot guarantee that we will meet the 2005 date.

Now, the decision on whether to award those contracts for spring of next year, given the construction seasons and how we intend to build that very big radar at Shemya, is in the fall of this year, so given that there are treaty issues associated with the construction of that radar, and the legal community is trying to tell us what that definition really is of when we actually break the treaty legally, we have to have a decision to do that by the administration sometime this summer or fall to meet our time lines.

If we do not meet our time lines, then we cannot guarantee that we can have this ready by 2005.

Senator STEVENS. I thought the decision to construct is one thing, the decision to make it operational in Shemya would be a violation of the treaty.

General KADISH. We have been using for planning purposes on the treaty side the fact that when we do construction other than earthworks, which can be interpreted many different ways, from a planning standpoint when we actually dig a hole in Shemya it could be the earliest time we would break the treaty.

There are other discussions on how that fits into the legal framework past that date, and that would happen next year under those conditions.

Senator STEVENS. Well, there is a radar at Shemya now. It is not an X-Band, but there is a radar there now. That never violated the Anti-Ballistic Missile (ABM) Treaty. I do not quite see dancing on that legal pin. I hope that we will proceed with that construction because of the timeframe and because of the delays that could be encountered in construction at Shemya of that new radar.

General KADISH. Our current plan, Senator, is to press ahead aggressively on building that radar, but we do need authority to proceed to do it.

Senator STEVENS. Yes. Senator Inouye.

NAVY TESTING OF PACIFIC MISSILE TEST RANGE

Senator INOUYE. General, you are planning to conduct six tests of the Navy's missile defense program at the Navy's Pacific missile range. Is that achievable?

General KADISH. To the best of my knowledge it is, yes, Senator. It is achievable to do it in the Pacific out there.

Senator INOUYE. So you will proceed late this year to begin the program?

General KADISH. We have an important series of tests coming up on both the Navy area and the Navy theater-wide programs, and we are watching those extremely carefully, and they are really im-

portant to our ability to proceed on those programs. I am hopeful that the results will be successful later this year.

THAAD

Senator INOUYE. The next question is one of those that came up as a result of criticisms that you have received about some of your testing programs. THAAD has had seven misses, and you have had two successes, and as a result of the two successes you have been approved to go to the next developmental step in engineering.

Two years ago, General Lyles, your predecessor, warned this committee against random success. That is the word he used, and that is the possibility of approving a system that has a fundamental flaw because of one or two successful tests. With all the setbacks that THAAD has experienced, do you think that we should have more tests before you proceed to take the next step, or would the two successes be sufficient?

General KADISH. We need to recognize where THAAD was in this test program, and rather than go into the lengthy history, let me oversimplify it by saying it was in a demonstration phase—that is, could we actually make it work—and then there was an excursion, if we could make it work, we would have an initial very limited capability we could deploy off of that.

What these two successes out of the nine attempts I think we ended up having told us was that we did not need to invent anything any more, if you will, to make the demonstration work, and that provided us confidence, with those two successes, to move it into what we call the development phase. The engineering and the manufacturing development phases take out the flaws that we found in the demonstration phase, because it tended to be a scientific project as opposed to an engineering project at that time, and we intend to do that with the program we have structured coming up.

So in the next few months it is my intention to take to the Department a decision to enter into that next phase, the development engineering manufacturing phase, based on the data we got out of the demonstration phase.

Now, this phase that we go into, we will commit to an initial operational capability, what we call first unit equipped, in 2007, so we will have a redesign of many elements of that system to make them more reliable. We will do an extensive set of testing on the system in an operational sense, getting to Mr. Coyle's type of concerns, and then we will deploy it in 2007.

It is disappointing to all of us that we cannot deploy a system of this nature like we intended to with THAAD on the demonstration phase, but we have a very rigorous program, now, that we have laid out to take care of those concerns and those two successes give us confidence that we are not inventing anything. We have made it now an engineering problem, so we can make it reliable and operationally effective and deploy it in the timeframe I talked about.

Senator INOUYE. So you move into the next phase with great confidence?

General KADISH. Yes, sir, and that testing program we have laid out should prove that confidence, and bear the fruit of that confidence.

Senator INOUYE. General, I would like to submit for your responses questions on the Arrow system.

Thank you very much, Mr. Chairman.

Senator STEVENS. Senator Cochran.

Senator COCHRAN. Mr. Chairman.

NATO CONCERNS

General Kadish, you mentioned in your testimony that the budget requests funding for the MEADS theater missile program that involves Germany and Italy. Some of our North Atlantic Treaty Organization (NATO) allies have expressed concern that our national missile defense program might make European countries more vulnerable because it would destabilize our relationship with Russia, and for other reasons.

Would the construction of a ground-based interceptor site in Europe protect our NATO allies from missile threats and contribute to the defense of the United States from Middle Eastern threats?

General KADISH. Senator, we do an awful lot of studies on how to protect both theater-and national-level requirements, and your question inherently indicates that we blur the distinction sometimes. What is national to us, or what is theater to us is national to other people, and especially our allies.

We have done an awful lot of work in analysis to see what we could do to contribute to the defense of our allies, and have made a lot of strides in that area, and one of the excursions that we do is how we would be able to protect our allies in Europe, specifically NATO countries, from threats to themselves as well as use their facilities for our national side, and those are definitely feasible alternatives, given what we understand the technology to be today of what we are developing in both theater and national level, and I could take answers for the record, because some of it does get classified, and I would rather be precise in answering that question.

[The information follows:]

High speed, exo-atmospheric interceptors such as the Ground-Based Interceptor (GBI) design currently being developed under the National Missile Defense (NMD) program are inherently capable of defending very large geographic areas against long range ballistic missile threats. This broad area defensive coverage from a GBI site is central to our current NMD plans to provide defensive coverage for all of the United States, initially from one site and potentially expanding subsequently to a second site. Therefore, by analogy, one or two GBI-class interceptor sites with appropriate sensor support could theoretically provide some defensive coverage against long range missile threats over a geographic area the size of NATO Europe.

SOUTH KOREA AND JAPAN

Senator COCHRAN. Thank you very much.

On another theater missile defense subject, according to the unclassified summary of the current national intelligence estimate the North Korean No Dong missile has a range of about 1,300 kilometers, sufficient to reach U.S. forces throughout South Korea and Japan, and it has been deployed for several years.

Does the United States currently have any theater missile defense systems capable of reliably intercepting this missile?

General KADISH. Those systems are currently in development, and we hope to have PAC–3 out in 2001, as I said, to deal with those types of threats coming up, but the answer at this point in time, with our lower and upper tier, they are still in development.

Senator COCHRAN. What are the systems, can you tell us, that are in development now that will be capable of intercepting the No Dong?

General KADISH. The THAAD and the Navy theater-wide systems.

Senator COCHRAN. According to the Army, the first unit-equipped date for THAAD could be moved up from 2007 to 2005, if $400 million in additional funding were provided in fiscal year 2001, 2002, and 2003, with $150 million of that in 2001. Do you agree with that assessment?

General KADISH. I would agree that with additional dollars from a schedule standpoint, with the addition of about $150 million in 2001, I would say that we could accelerate our first unit equipped (FUE) by 9 months or thereabouts.

I would caution, however, that, given the answer I gave to Senator Inouye, that we need to be careful about making sure that we do the right types of things in developing this particular program and THAAD, and capitalize on our success but plan for difficulties in the program, and I think that is what we have done right now, and putting additional risk into the program by accelerating schedules, we have to take very good counsel of our previous experience here and make sure we do not repeat past mistakes.

Senator COCHRAN. In the semantics of the word risk, to some that means risk of failure of the program, or risk that the program, once it is deployed, will not work. That is not what that means, though. You are talking about risk in meeting a predetermined target in the program schedule, are you not?

General KADISH. That is correct.

NAVY THEATER-WIDE

Senator COCHRAN. What is the soonest the Navy theater-wide could reach the field, and what funding is required to accomplish that?

General KADISH. Right now we have not fully funded, as you know, in our budget the Navy theater-wide program, primarily because we have an important series of tests coming up later this year and next year to prove the concepts properly. We have not fully funded that program.

Our current projects are that we are going to have what we call capability, single mission capability on the Aegis vessels in 2008, and that is what we are planning, too, and if we want to accelerate that it would depend on the test successes that we have in what we call our Aegis leap integration (ALI) test program over the next year to 18 months, so to define that in any greater detail, I would like to take it for the record, because we would have to show you the excursions off of a successful test program that would give us confidence to proceed rapidly with that program.

[The information follows:]

Using an evolutionary acquisition approach, the Navy Wide (NTW) system capable against the full Block I threat set could be deployed using the spiral development (Block IA, IB, IC) process. Our spiral evolutionary strategy allows the sequential fielding of capability, with new capabilities being phased in over time. The intent would be to get an initial NTW capability to the fleet as soon as possible and then upgrade the system to pace the threat. The Block IB capability includes 50 SM–3 missiles deployed in 2 AEGIS cruisers with an FUE in fiscal year 2008. The full multi-mission capability of 4 cruisers and 80 missiles FUE is fiscal year 2010. Depending on the pace and success of initial flight tests, some contingency capability might be available before 2008. The objective NTW Block II system is not yet fully defined, but given full and stable funding, it would likely be available between fiscal year 2112 and fiscal year 2114. Adopting a spiral evolution approach for NTW Block II could yield some increased capability (notionally NTW Block IIA) over Block I a few years earlier. Assuming successful completion of primary test objectives in the first two ALI intercept attempts (i.e. kinetic warhead hits the target), the current NTW program could be accelerated by one year given $160 million in fiscal year 2001, and fully funding the program in fiscal year 2002 and beyond.

Senator COCHRAN. Does the administration's out-year budget contain sufficient funds to deploy Navy theater-wide?

General KADISH. No, it does not Senator. It depends on the testing results that we expect over the next 18 months as to what we are going to do with that program.

Senator COCHRAN. Thank you, Mr. Chairman.

Senator STEVENS. Senator Byrd.

Senator BYRD. General, this is a question which is outside your direct responsibility, but I would like your views. I am very, very concerned about defending against other types of weapons of mass destruction. I think especially of biological weapons that could be targeted at U.S. agriculture, the largest agricultural market in the world.

Attacks on U.S. agriculture would offer huge financial rewards to terrorists through international future markets manipulations. They would be risk-free as far as the terrorists are concerned. I am advised that Iraq had large stocks of biological weapons that cause severe disease in humans and animals and that these agents have been made into weapons by Iraq.

Genetic engineering technologies allow creation of new pathogens with enhanced toxicity that may cause a biological weapons surprise to agriculture. I am concerned about our water supply, very concerned about it. I do not know what our Government is really doing about such weapons of mass destruction. There are great elements of surprise involved in these.

I do not know what is being spent by our Government in this respect. I am concerned that as we concentrate on national missile defense—I am not implying that I am not concerned about that also—I wonder if we may be blinded to other, perhaps even greater, more imminent threats of sabotage, and we may be short-changing other necessary initiatives to protect our national security.

As I say, that is outside your area, but do you have any thoughts on this?

General KADISH. Well, Senator, to the broader issues, I think all of us in the national security business are concerned about those types of threats, but let me focus my response on NMD, and even our theater missile defenses.

One of the great advantages of this hit-to-kill technology, this idea that we have kinetic energy destroying the warhead rather than explosive forces by chemical or even nuclear means such as

the Russians use in their defensive systems, is that we are concerned about the chemical and biological warheads that are there.

With hit-to-kill technology, especially in the exoatmosphere outside 100 kilometers and above, where we do these intercepts, or try to do these intercepts on the national side in outer space, we believe that these chemical and biological submunitions, should they be present, versus not only a nuclear warhead but a chemical or biological warhead, can be destroyed by the force of that impact, so we are not disregarding this threat from a ballistic missiles standpoint. Quite the contrary. It is part of our overall threat space, and challenging from a hit-to-kill standpoint, and the reason why it is challenging to us, and useful in hit-to-kill, is again we want to hit within this kind of a target space, mass on mass, if you will, to make sure that we destroy that chemical and biological agent, or render it useless in outer space, and that is one of the major objectives of this program. So we are not ignoring it at all.

Senator BYRD. Thank you, General. Thank you, Mr. Chairman.

AIRBORNE LASER

Senator STEVENS. Yes, sir. Senator Domenici.

Senator DOMENICI. Mr. Chairman, I just have one question. General, the ABL measure is one of the very good examples of technology in a missile defense system. I wonder, is it not true that the ABL has been on-schedule and performing as it should, and if that is the case, why is that reduced by $92 million this year and over 5 years by $900 million. I understand this is going to delay the shoot-down tests by 2 full years. People around here thought that was a very exciting system and we voted for it. We have increased the President before to keep it on schedule. Can you explain why there is a $92 million reduction in this program.

General KADISH. Senator, that is a little bit of an awkward question for me to answer, because that program is not within my purview.

Senator DOMENICI. All right.

General KADISH. It is an Air Force program. However, I will say this. The ABL has continued to be a part of our layered defense architecture, as I explained in my opening statement, and we have analyzed the goodness of that weapons contribution to our overall architecture, and very much support the ABL program from that standpoint, and let me tell you why. The ABL system, the airborne laser system, would be our only boost-phase-capable system in our architecture.

If you look at our systems, they tend to be in what I call the catcher's mitt mode, where in the terminal or mid-course phases we are trying to stop the warheads. In the missile defense business, it is always better to get them as far forward as possible, but the problems become very difficult, even more difficult than the catcher's mitt approach to the problem.

So the ABL, using the speed of light, if you will, laser activity, and being in boost phase, is very useful in our architecture of layered defense, and it is disappointing when any program is slipped, and we support the program, but they have their challenges, and the Air Force had to make trade-offs against other systems.

Senator DOMENICI. Thank you, Mr. Chairman.

Senator STEVENS. General, I am going to submit—some of the questions that I have relate to materials we might need for the markup, but I do have two concepts. I want to congratulate you on articulating the layered concept of these systems we are working on.

I know that there are some proponents of one as opposed to another that would like to hold up one and move the other forward. This committee has taken the point of view that we ought to try and move them all forward as they can make progress, but not to try and set one aside to accelerate the other.

And I do share the feelings, however, of Senator Byrd about the chemical and biological warheads that we face. That is why we continue to support the hit-to-kill concept. Although on that last test, if you had an explosive type of contact rather than a hit-to-kill, that would have been a success, so I think people ought to keep that in mind.

PATRIOT II AND PATRIOT GEM

I do want to ask one thing, though, and that is, you know, we have had press reports about the problems of Patriot II and the Patriot Gem missiles. This subcommittee at one time urged the Department to utilize the Patriot as an antimissile rather than an antiair-breathing aircraft system. What would you do if we asked you now to accelerate PAC–3 so it could be an option in the arsenal to deal with not only air defense but antimissile requirements that might develop in this time before we can deploy any one of these layered systems? Is that possible, now, to accelerate and boot that up to another generation?

General KADISH. Yes, Senator, it is. The PAC–3 missile primarily focused on the theater ballistic missile problem, and I think from the test results we have seen so far is doing that very well. It also has——

Senator STEVENS. Pardon me. Would you give us the funding requirement that would be necessary to put that on an accelerated course and pull it out? I do not think this is a system, part of the layered system. I think it may be an operational concept that could be brought into a new phase sooner than all these other systems we have been discussing today.

General KADISH. Yes, Senator. We can give you those numbers. I would provide them for the record and make sure that we got it right.

[The information follows:]

As I understand your question, Senator Stevens—how much additional funding is required to accelerate fielding of PAC–3 missiles and to correct the PATRIOT reliability/GEM+ upgrade issue? I will address the PAC–3 acceleration requirement in detail, but the PATRIOT reliability/GEM+ conversion is an Army program that I will cover summarily but would be most appropriately be addressed in detail by the Army.

A recent reliability discovery in some fielded PATRIOT missiles drastically reduces the quantity of available missiles well into the next decade. Under current procurement schedules there will be a window of vulnerability for a considerable time. The Army and the Ballistic Missile Defense Organization have worked together to develop an integrated solution through enhancements to both the PAC–2 and PAC–3 missile programs. The solution fixes some of the older PAC–2 missiles, accelerates the upgrades of PAC–2s to the Guidance Enhanced Missile Plus (GEM+) configuration, and accelerates the PAC–3 procurement. Initial funding is

required in fiscal year 2000/01 to jumpstart this solution. Since the PAC–2 issue surfaced after the publishing of the Defense Planning Guidance and Fiscal Guidance, the solution is not part of the Department's Program Objective Memorandum. BMDO is discussing options with OSD.

To cover current program shortfalls and properly position the PAC–3 program for accelerated missile fielding requires an increase of $156 million in fiscal year 2001 to produce 32 missiles, or an increase of up to $341 million in fiscal year 2001 for 72 missiles. Such enhancements position the program to achieve the Initial Operational Capability of the first battalion up to one year earlier, given additional out-year funding.

Production line enhancements to allow procuring more missiles per year in the future have a lead-time of a year and a half, so we cannot have an instant fix. An increased production rate capability is more cost efficient, so we should establish a higher production rate capability, of up to 20 missiles per month. We recognize that our allies using the PAC–2 missile are also affected by the recent developments, and thus have potential requirements. Foreign Military Sales (FMS) purchases concurrent with U.S. procurement provide economic benefits to both the U.S. and our allies through reduced unit costs during those years. This offers potential for allowing larger quantities to be procured, or a lower price for the baseline quantity. A limited production capacity will limit the U.S. fielding rate and FMS opportunities.

The PATRIOT system provides an effective defense against Aircraft, Cruise Missiles and Theater Ballistic Missiles (TBM). To accomplish this mission, the PATRIOT force must have a combination of PAC–2 missiles that provide robust anti-air and anti-cruise missile capability, and PAC–3 missiles that provide antiballistic missile and anti-cruise missile capability, especially against weapons of mass destruction and future threats.

The Army has a variety of PATRIOT missiles to meet various threats. The older PAC–2 missile configurations counter the aircraft and basic cruise missile threats. But, these older PATRIOT missiles are well into their service life. While that life can be extended through the Service Life Extension Program, their age and reliability leave them less than pristine. The GEM and GEM+ provide an upgrade to the older PAC–2 design with increased capability against slower TBM threat and the cruise missile threat. These PAC–2 missiles all use blast fragmentation warheads—with associated limitations against certain TBM warheads. TBM warheads span from simple unitary high explosive warheads to submunition warheads with chemical or biological weapons. The TBM threats are best defeated with Hit-To-Kill warheads. The PAC–3 missile provides the best capability against TBMs, and sophisticated cruise missiles. PAC–3 provides a significant increase in the probability of warhead kill for TBMs over the GEM missile.

SHORT TERM (FISCAL YEAR 2000/01) PROPOSED ENHANCEMENTS

PAC–2 Component:

To address the immediate capability shortfall, 724 PAC–2 missiles need to be immediately repaired. The remaining two-thirds of the PAC–2 missile fleet will be demilitarized at the end of their life, or converted to the PAC–2 GEM+ configuration. To help alleviate the near-term capability shortfall, this GEM+ conversion should be accelerated one year. This acceleration will provide out-year savings that can help accelerate PAC–3 procurement. The PAC–2 family of missiles will remain the primary Anti-Air Breathing Threat missile. The fiscal year 2000/01 requirement for the PAC–2 component of this solution is $134 million.

[TY$, Millions]

	Fiscal year—									Total
	2000	2001	2002	2003	2004	2005	2006	2007	2008	
PAC–2 retrofit	50	40	.....	.....	.....	.....	.....	.....	.....	90
Accelerate GEM+ Upgrade	16	28	14	21	(46)	(6)	(5)	(43)	(42)	(63)

PAC–3 Component:

To accelerate the PAC–3 procurement at the lowest risk, both the R&D and Procurement programs will require a series of enhancements, ranging between a minimum and maximum as shown in the table:

[TY$, Millions]

	Min	Max
EMD	47	47
Launcher Procurement	35	35
Facilitization	30	85
Missile Procurement	44	174
Total	156	341

Complete the Engineering and Manufacturing Development (EMD) Expeditiously.—The EMD program will focus on the most critical capabilities of the system, maintain the fielding schedule, and defer future needs, if necessary, for later development and insertion into the PATRIOT system. The missile hardware is in its final design, but the software still requires some development. A significant aspect of the software still to be developed and tested is Electronic Counter-Counter Measures (ECCM) against future threats. This capability can be logically deferred into a future upgrade to the system. The EMD flight test program must be completed and should provide a demonstration of the warfighter's needs of Anti-TBM, Anti-Cruise Missile defense and Anti-Air capability. Expeditiously completing the EMD and flight test program at low risk will require an increase of $47 million RDT&E funding.

Maintain launcher procurement.—In addition, $35 million ($11 million in RDT&E plus $24 million procurement) is required to replace funds realigned within the program to maintain the launcher procurement in fiscal year 2000.

Invest in Initial Production Facilitization.—A facilitization investment of $30 million is needed to provide a production capability of 12 missiles per month. But, the most effective and efficient way to accelerate production rates is to invest in production line at all production facilities. This provides the least recurring cost option and provides surge capacity for non-forecasted requirements. It is also important that we be able to respond to our Allies needs for a PAC–3 missile. Investment of an additional $55 million of procurement funding will result in a production capability of 20 missiles per month. Thus, a sum of $85 million additional facilitization funding will result in an efficient high production capability sufficient to meet any foreseen needs.

Increase missile procurement quantity.—The PAC–3 program is currently in Low Rate Initial Production for 52 missiles (fiscal year 1998 and fiscal year 2000 buys). The current Baseline plan procures only sixteen PAC–3 missiles in fiscal year 2001. Fielding can be accelerated by providing an additional $44 million for 32 missiles, thus, maintaining the fiscal year 2000 production level. The fiscal year 2001 production could be increased to a level of 72 missiles for an increase of $174 million vice $44 million.

Summary

A minimum funding increase of $156 million ($58 million in RDT&E plus $98 million in procurement) in fiscal year 2001 results in a solid base program with accelerated PAC–3 production to 32 missiles. To maximize the first year accelerated production to a level of 72 missiles, a funding increase of $341 million ($58 million in RDT&E plus $283 million in Procurement) is needed in fiscal year 2001.

LONG TERM (FISCAL YEAR 2002 AND BEYOND)

BMDO is pursuing out-year funding options as part of the Department's ongoing discussions.

Summary of Near Term PATRIOT requirements:

[TY$, Millions]

	Fiscal year—	
	2000	2001
PAC–2	66	68
PAC–3	.....	156 to 34.1

Senator STEVENS. We do not want to push you to do something you do not want to do. Would you agree with that strategy?

General KADISH. Yes, Senator. In fact, we are ready to move PAC–3 into production, and we have constraints from facilities and other areas that if they were lifted we could move much more rapidly into production.

Senator STEVENS. It would be helpful to us if you could detail those restrictions, see if there is anything else we can do to accelerate that. I think particularly from the point of view of the increasing fear of the biological and chemical theater-type missiles, we probably could move into sort of a stop-gap system that might be rapidly deployable in an area of conflict, potential conflict. I think we would like to help you with that, if you would give us the information as to what do you need us to do to be able to achieve the goal.

General KADISH. I would be happy to, Senator.

[The information follows:]

A facilitization investment of $30 million is needed to provide a production capability of 12 missiles per month. But, the most effective and efficient way to accelerate production rates is to invest in production line at all production facilities. This provides the least recurring cost option and provides surge capacity for non-forecasted requirements. It is also important that we be able to respond to our Allies needs for a PAC–3 missile. Investment of an additional $55 million of procurement funding will result in a production capability of 20 missiles per month. Thus, a sum of $85 million additional facilitization funding will result in an efficient high production capability sufficient to meet any foreseen needs.

Senator STEVENS. Senator Inouye, do you have——

SPACE-BASED INFRARED SYSTEM

Senator COCHRAN. May I ask one more question? I know I have asked a lot of questions, and I will submit a few, if it is all right, Mr. Chairman, for the record. The other day we had before our committee the Air Force Secretary. He said he believed that management of the space-based infrared program should be transferred to the Ballistic Missile Defense Organization.

Congress had suggested that a few years ago. The Air Force opposed it at that time. What is your view? Do you think this would be a wise move at this point, and are there advantages to moving the responsibility for the program to BMDO?

General KADISH. Senator, the answer to that question is probably yes, but there is more work to do, and let me explain why things have changed in our thinking about the space-based infrared system (SBIRS) program, especially what we are talking about is SBIRS low, which is a low constellation of sites that help us with discrimination and tracking of our targets.

The situation we have had in previous years is that SBIRS has always been an important part of what I call the tool kit of missile defense, just like our X-Band radars and other sensors. Up until the point at which we moved NMD from a technology effort into a real program effort that we have discussed today, having SBIRS managed by the Air Force, being requirements-based, made a lot of sense.

Now that we are moving into actually constructing the architecture for our national missile defense program, SBIRS becomes a very real, programmatic element to our program, especially as we

move beyond the expanded C–1 architecture, so having it totally requirements-based, that the Air Force would manage separately, presents us some integration problems with our other elements within the NMD system, and what we are trying to decide now is how best to manage that interface, because it becomes complicated to keep it a separate service management process, although we followed the direction of Congress and set up some management arrangements that bridge that gap, at least initially.

So the idea now that we have changed the emphasis causes us to reevaluate the management of this particular program, and that is why the Secretary I believe said what he said.

AIRBORNE LASER

Senator COCHRAN. As a follow-on to Senator Domenici's question about the airborne laser, it is pretty clear that the laser would be capable of taking down a missile of any range launched from North Korea. Is that a correct assessment of the capability of that system?

General KADISH. That is what our assessment is.

Senator COCHRAN. Therefore, if we could keep that on track, on schedule, which means that it would be ready for testing by 2003, given the fact that NMD is not going to be even programmed for deployment until 2005, there would at least be a contingency capability against a North Korean threat if we keep the ABL on schedule.

In that connection, would you support that, or would you agree that it would be a good idea for this committee to be sure that we provide the funds necessary to accomplish that goal?

General KADISH. If the program is executable that way, that would lend a lot to our architecture and keep that program stable. They have their challenges, however, technically.

Senator COCHRAN. I know. I heard you say that a while ago.

General KADISH. They have the same integration challenge on the aircraft that we do on some of our systems to get that laser pointed right, but everything is pointing in the right direction on that program.

Senator COCHRAN. Thank you, Mr. Chairman.

Senator STEVENS. Well, thank you very much, General. We do appreciate your candid response to our questions. Coming from where I do, with the potential that is developing in North Korea, that is a very serious subject for us.

I would not want to indicate any reluctance to state that if they ever fired a missile at us, that would be the last thing that North Korea would do, but I do not think that threat is really something that should drive a change in our program, but it is a substantial threat to us, and I think the threat of our instant retaliation ought to be reasserted again and again, if they ever fire one of those at our country.

ADDITIONAL COMMITTEE QUESTIONS

We do appreciate your cooperation and look forward to working with you, particularly on the PAC–3 initiative. We would like very much to help you on that. Thank you very much.

General KADISH. Thank you, Senator.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

PATRIOT PAC–3 CAPABILITIES

Question. Can you outline for the committee the PAC–3 missiles' capability against aircraft and cruise missiles and any associated flight test plans?

Answer. The performance charts (2) for the PATRIOT PAC–3 SYSTEM versus aircraft and cruise missiles are classified and will be provided as a separate attachment. The DOT&E approved Test and Evaluation Master Plan (TEMP) will demonstrate the capability of the interceptor against aircraft and cruise missiles as represented by the QF–4 and MQM–107, respectively. There are four flight tests planned against full-scale aircraft and cruise missiles targets. Two tests involve engaging low altitude cruise missiles in background clutter environments. Two flight tests are planned against aircraft in an electronic countermeasure environment. The cruise missile tests are scheduled for July 2000 and March 2001. The aircraft flight tests are scheduled for January and June 2001.

Question. As we look to the future and the possibility of modifying and upgrading Patriot missiles, is the Defense Department considering procurement of greater quantities of PAC–3 missiles to meet its needs?

Answer. Yes, recent reliability discoveries in some fielded PATRIOT missiles drastically reduces the quantity of available missiles well into the next decade. The Ballistic Missile Defense Organization has developed a missile acceleration option to augment the production program and build a capability as rapidly as possible. This option requires an investment in both facilities and hardware. To accelerate the PAC–3 procurement at the lowest risk, both the R&D and Procurement programs will require a series of enhancements:

—Complete the Engineering and Manufacturing Development as expeditiously as possible (+$47 million RDT&E)
—Maintain launcher procurement (+$11 million in RDT&E plus $24 million in procurement)
—Invest in Initial Production Facilitization (+$30 million to $85 million in procurement)
—Increase in missile procurement quantity (+$44 million to $174 million in procurement).

Implementing the production enhancements will enable not only a PAC–2 solution, but will also position the program to be more acceptable to Foreign Military Sales.

NAVY THEATER WIDE FOR NMD

Question. Secretary Danzig has indicated that Navy Theater Wide is a long term development effort. Would you agree that Navy Theater Wide is not a near term NMD option?

Answer. The Navy Theater Wide system is not a near term option for obtaining an NMD capability. A significant development effort remains to be accomplished in order to deploy a single mission system by 2008 which can intercept theater ballistic missiles, with a multimission capability following in 2010. Given a significant increase in program funding, a more robust Navy Theater Wide Block II system could be fielded some time after that date, but significant upgrades would be required to the radar, missile and kinetic warhead to provide the system with the capability to intercept ICBMs. These upgrades are neither currently defined from a systems engineering point of view, nor currently funded.

Question. What is your estimate of the time and funding required to develop and procure a sea-based NMD system?

Answer. The Report to Congress delivered in June 1998 made a rough order of magnitude cost estimate of $16 billion to $19 billion (in fiscal year 1997 dollars) for a stand-alone (i.e., no land-based NMD interceptors) sea-based NMD architecture. Within that estimate, BMDO included the cost of procuring 3 to 6 additional AEGIS ships and the cost of the land-based radars (upgraded early warning radars and the X-band radars) and the battle management/command, control and communications systems (BM/C^3). BMDO and the Navy are currently studying how a sea-based NMD system could complement, not replace, the planned land-based NMD architecture. Cost and development schedule estimates are going through a more detailed review in this study and are not yet available.

Question. Would you agree that the cost to operate and maintain a sea-based NMD system would be substantially higher than the cost of a land-based NMD system? Does BMDO have an estimate of the O&M cost for a Navy Theater Wide NMD system?

Answer. The cost to operate and maintain a sea-based NMD system is subject to a number of variables. The most critical cost driver is whether a sea-based NMD system would be employed in a full-time, 365 days per year mode, or in a crisis surge mode. A second cost driver would be whether the sea-based NMD capability would be incorporated on a current multi-mission Naval combatant or on a new ship dedicated to the NMD mission.

For an equivalent capability to the land-based NMD architecture, where a force of new dedicated NMD ships would be employed to a full-time NMD mission, one would expect the costs to be somewhat higher than the land-based NMD architecture. However, if an NMD capability were incorporated on a current multi-mission Naval combatant, and employed in a crisis surge mode, one would expect the operating and maintenance costs of the sea-based NMD force to be lower than the dedicated land-based NMD architecture operating and maintenance costs.

BMDO does not currently have an estimate of the O&M costs of a sea-based NMD architecture.

NAVY AREA PROGRAM OPTIONS

Question. Will the Navy Area program's interceptor be as effective against chemical and biological submunitions as the PAC–3 interceptor?

Answer. There is not an absolute answer to this question since the answer depends on the engagement scenario and the requirements for each of the systems. PAC–3 has a higher effectiveness against these targets in its required area of protection than Navy Area for this same area of protection. The Navy Area provides a larger area of protection.

Recent live-fire testing and performance analysis indicates that the Navy Area interceptor, SM–2 Block IVA, design will result in high percentage of direct hits and a very robust lethality with a fragmenting warhead in near hits, including good capability against submunitions.

Question. Has BMDO evaluated the potential for the Navy to use the PAC–3 interceptor for the Navy Area Defense mission?

Answer. Yes, DOD policy requires an Analysis of Alternatives (AOA) prior to entering Engineering and Manufacturing Development (EMD). For the Navy Area program, the AOA study evaluated the cost-performance-schedule benefits and risks of Navy Area SM–2 Block IVA missile against an Enhanced-Hit-Capability SM–2 Block IV missile and a marinized PAC–3 missile. The analysis concluded that, when considering the entire mission requirement for the ship and missile, the SM–2 Block IVA missile is the preferred alternative as the Navy Area TBMD interceptor.

Selection of a Navy Area TBMD interceptor design is driven by operational requirements. These requirements have driven the approach to continue with the evolution of STANDARD Missile to provide the earliest TBMD capability, while maintaining anti-ship cruise missile capability. This also required that the Navy Area interceptor design employ a blast fragmentation warhead.

Question. In most scenarios, would the Navy Area program protection be augmented by the deployment of Patriot or THAAD as soon as those systems could be deployed?

Answer. In most scenarios involving Navy Area program protection, the Navy Area TBMD system would be the only available protective system to defend critical assets against ballistic missiles as forces move ashore during the crucial first days of a forced entry operation or at an undeveloped point of entry. As the theater of operation matures, deployment of Patriot and THAAD would augment the Navy Area TBMD system, eventually taking over the protective mission. This augmentation supports a layered defense and would be beneficial in allowing for the Navy ships the flexibility to respond to other CINC requirements once the land based systems are in place.

NMD MILITARY CONSTRUCTION

Question. Assuming the President makes a deployment decision this summer, what is the largest concern regarding the military construction schedule for National Missile Defense?

Answer. The largest concern regarding the military construction schedule for the National Missile Defense system is the X-Band Radar. The deployment construction schedule was developed based on achieving the NMD System Initial Operating Capability (IOC) of twenty Ground Based Interceptors (GBIs) by the end of fiscal year

2005. The X-Band Radar facility takes the longest to construct and test and therefore drives the construction schedule. The X-Band Radar construction timeline requires contract award in November 2000 with the Notice to Proceed (NTP) for construction start in April 2001 in order to achieve our directed initial NMD capability in fiscal year 2005.

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

ARROW PROGRAM

Question. How would you assess the status of the Arrow program?

Answer. The Arrow program is proceeding well. Integration of the cooperatively developed Arrow missile and launcher with the other, Israeli-developed components of the Arrow Weapon System (Green Pine fire control radar, Citron Tree battle management center, and Hazelnut Tree Launcher Control Center), is largely complete. The Arrow Weapon System has performed successfully in its last two flight tests. On November 1, 1999, Israel conducted a successful Arrow Weapon System intercept test in which, for the first time, the Arrow interceptor was launched, tracked, and controlled to a successful intercept by the other system elements of the Arrow Weapon System. A follow-on test is planned for summer 2000 and an initial operational capability is expected to be announced by Israel before the end of the year.

Question. What do you see as the next steps in the program?

Answer. Once the U.S./Israel cooperative Arrow Deployability Program is completed in fiscal year 2002, Israel is planning block upgrades to provide intercept capability at higher altitudes and against longer-range threats. In addition, approximately two flight tests per year will be conducted to verify and extend the current Arrow battle space.

Question. Is the United States considering undertaking an Arrow Systems Improvement program with Israel?

Answer. Israel has identified a requirement to upgrade the Arrow Weapon System in response to the potential emergence of longer-range threats and of countermeasures. At Israel's request, the United States has helped Israel evaluate some of the preliminary concepts and improvements that could be introduced into the Arrow missile to enhance its effectiveness against the emerging regional threats. There are areas of technical interest to the United States, but BMDO's other TMD programs are higher priority and no funds are available to support a follow-on effort with Israel.

Question. Apart from our undertaking to help Israel procure a third Arrow battery, has the Defense Department included any funds for future missile defense cooperation in your future budget plans? If not, why?

Answer. The Arrow Deployability Program will be completed in fiscal year 2002. The fiscal year 2002 program includes funding for completing our obligation under the Arrow Deployability Program agreement and completing funding the Israeli requirement for the third Arrow battery. At this point, the Department of Defense has not included any new funding other than funds to complete the Arrow Deployability Program and funding for the third Arrow Battery. Since the United States has no plans to deploy Arrow, or any of its components, we have chosen to fund systems planned for deployment with U.S. forces as a higher priority.

Question. Hasn't Israel been a significant partner with the United States in pursuing missile defense cooperation for more than a decade?

Answer. Israel has been and will continue to be a significant partner with the United States. We continue to conduct exercises with Israeli missile defense forces to work on concepts for combined missile defense operations. We will also continue to maintain an active technical dialog with the missile defense community in Israel.

Question. Won't we get real value from further international cooperation?

Answer. Israel has been and will continue to be a significant partner with the United States. We continue to conduct exercises with Israeli missile defense forces to work on concepts for combined missile defense operations. We will also continue to maintain an active technical dialog with the missile defense community in Israel.

Question. In 1997, the United States and Israel negotiated an Enhanced Arrow Deployability Program which I am told is not funded in your budget request. This program was supposed to further interoperability between the United States and Israel. Do you believe it would be beneficial if the Congress were to add funds for this purpose?

Answer. Work continues with Israel to insure theater missile defense interoperability between deploying U.S. forces and Israeli forces. Initial work concentrated on interoperability between PATRIOT systems employed by both nations. At this

time, with the introduction of Arrow and the impending introduction of missile defense capability to U.S. Navy Forces, more needs to be done to ensure effective interoperability.

Question. Israel has proposed undertaking a new cooperative program with the United States, the Boost Phase Launch Intercept program. I understand you will be reporting to us your views about this program this spring. Do you have any preliminary assessment at this time?

Answer. We will present the details of our assessment in a report. We can say that from a technical and operational point of view, this Israeli concept appears to be feasible.

Question. What are the prospects that the United States will be interested in undertaking this program?

Answer. There is interest in several aspects of this program, however, at this time, other funding shortfalls preclude a DOD investment in this concept.

QUESTIONS SUBMITTED BY SENATOR TOM HARKIN

NATIONAL MISSILE DEFENSE

Question. In response to concerns about the lack of testing of the NMD system against realistic countermeasures before the decision on deployment, you stated that we have to walk before we run. I agree that it makes sense to determine if the system can hit a sitting duck before trying to hit an evasive target. However, the NMD deployment decision is scheduled to take place this fall, before the NMD system has really begun to crawl. Is it prudent to start pouring concrete and deploying a system before we know whether it can run, or even walk?

Answer. Yes, it is prudent to start pouring concrete and deploying a system because the NMD system has proven its ability to "crawl" and is beginning to demonstrate the potential to "walk." Earlier NMD system test results proved that we could acquire, distinguish, and intercept the right target from a set of our early development target sweeps. We plan to progress from earlier tests with few objects to more complicated tests with threat representative target sets. This ongoing and additive test feedback gives us confidence that we can do required engineering later on in the program to make the system work reliably and operationally effective.

Question. The 1999 Annual Report of the Pentagon's Director of Operational Testing and Evaluation states, in reference to the October 1999 flight test, IFT–3, "The large balloon aided in acquisition of the target. It is uncertain whether the EKV could have achieved an intercept in the absence of the balloon." In light of the uncertainty whether the intercept would have been achieved had it not been helped by the proximity of the decoy balloon, on what basis do you call the test a success? Should we rely on a defense system that may need a large shiny object to guide it to its target?

Answer. The EKV would have intercepted the target without the decoy balloon being present. When the EKV did not acquire the target complex after a preset amount of time had passed it automatically transitioned to a step stare operation to continue searching. The step stare sequence is a pre-programmed maneuver intended to enlarge the EKV's field of view if for some reason the target complex does not appear within it. The step stare examines a 2×2 grid around the original field of view, effectively quadrupling it. During the step stare operation in IFT–3, the EKV noted the balloon in the lower, left-hand image, established a track file on it, and used its discrimination algorithms to classify the balloon correctly. The EKV continued its search and observed the Multi Service Launch System (MSLS) target deployment front section, established a track file on it, and correctly classified it. The EKV then transitioned to track and intercepted the target. Had the balloon decoy not been there, the EKV would still have executed the step stare, acquired the MSLS target deployment front section and reentry vehicle, and completed the intercept. It did not rely on the decoy balloon for its success.

Furthermore, the test was a success on many levels. The other test elements—the target vehicle, the surveillance sensors, the BMC^3, and the payload launch vehicle—all functioned properly to form the framework for the EKV's intercept attempt. The EKV successfully performed every function needed to accomplish the intercept, despite an unexpected amount of error that accumulated during the planned star sightings. The step stare function overcame the error, exactly as intended by the software designers, enabling the EKV to acquire and track all of its targets. The discrimination algorithms correctly selected the reentry vehicle and discarded the decoy balloon and MSLS target deployment front section. The guidance and propulsion systems worked together correctly to home the EKV on the reentry vehicle. And

the aimpoint selection algorithms worked correctly to guide the EKV to impact within the correct region of the reentry vehicle. The successful intercept was confirmed by various radars and airborne sensor platforms, as well as by loss of telemetry signals from the EKV and reentry vehicle.

Question. I am concerned that the NMD system could be deployed based on tests against one kind of threat, but then have to face a very different threat with effective countermeasures once it is deployed. Given that the 1998 Rumsfeld Commission Report states that biological weapons delivered by submunitions are within the technological reach of emerging missile states, and the 1999 National Intelligence Estimate states that such states could develop countermeasures such as decoy balloons by the time they test flight their first long-range missiles, what is the basis for BMDO's assumption that the emerging missile threat will not include such countermeasures before 2005?

Answer. [Deleted.] BMDO has not made a threat assessment. BMDO is designing NMD to meet the DIA-validated threat.

Question. I would like to establish more clearly what threats the planned NMD system would effectively defeat. I am referring now to the final deployed system, what I think you call the C–3 system, with 250 interceptors. Would the NMD system be effective against an attack with a few warheads and hundreds of decoys, if the warheads and decoys were disguised to present a range of temperatures, wobbles, and other characteristics such that the warheads could not be clearly distinguished?

Answer. The NMD System has looked at a number of large countermeasure suites which are in the current Capability 3 Threat Scenarios and consistent with that described above. This C–3 capability does address a range of temperatures, wobbles and other threat characteristics consistent with what the Intelligence Community considers being plausible limits. These characterizations are provided in the NMD Threat Description Document.

Question. Would the kill vehicle, guided by infrared sensors, be effective against a warhead that was cooled to liquid nitrogen temperatures?

Answer. [Deleted.]

Question. I understand that biological or chemical agents would be most effectively distributed not by a single warhead, but by dozens or hundreds of submunitions or bomblets. Would the NMD system be effective against a missile that subdivided into hundreds of bomblets?

Answer. We don't believe that our initial system will face the threat of submunitions and thus the NMD C1 to C3 systems haven't been designed to counter them. Technology to support boost phase negation capability such as space-based lasers is currently being developed to support systems beyond C3 which would be capable of destroying boosters containing submunition payloads prior to submunition deployment.

Question. Would the NMD system be effective against land or sea-launched cruise missiles?

Answer. No, the National Missile Defense System is designed to intercept intercontinental ballistic missile (ICBM) warheads in space. Land and sea-launched cruise missiles fly slowly (relative to an ICBM warhead) at very low altitudes.

Question. Would the NMD system be effective against a nuclear weapon hidden as cargo on a ship that sailed into a U.S. harbor?

Answer. No, the National Missile Defense System is designed to track and intercept intercontinental ballistic missile (ICBM) warheads in space. As you already know, the United States maintains significant defenses against this scenario, such as you describe. The Central Intelligence Agency, the Federal Bureau of Investigation, the Coast Guard, and the Customs Service along with a number of other federal agencies constitute the United States' first line of defense from a nuclear weapon hidden aboard a cargo ship.

Question. The Pentagon has recently estimated that the total life-cycle cost of a 100 interceptor system would be $30.2 billion in fiscal year 1999 dollars, an increase of $6.4 billion from the previous internal estimate of system cost, and more than twice the widely reported estimate of $12.7 billion. In your written testimony you point out that the program is on a "high-risk schedule" that may well slip. If deployment is delayed, would that raise the program cost?

Answer. The NMD Program is a high-risk effort with a highly compressed schedule. Despite some minor delays in test flights, the overall developmental effort remains on track with capability to have 20 interceptors fielded by the end of fiscal year 2005, and a 100 interceptors fielded by the end of fiscal year 1907. The Deployment Readiness Review (DRR) scheduled for summer 2000 will take place at the Defense Acquisition Executive Level and with the full participation of all stakeholders. With the information presented at the DRR senior leadership will be able to assess

technological progress to support a possible deployment decision later in 2000. No plans are in place to delay or slip the program. If the NMD Program was directed, in the near term, to delay events that hinge on a deployment decision for some period of time, e.g. for a year, the main impact on total life cycle costs would be extending the developmental (RDT&E) effort for that year, at approximately the fiscal year 2001 requested level of $1.7 billion to $1.8 billion. Key procurement, deployment and construction events would slip to the right, and, as production and construction have not begun, these would, therefore, not substantially increase.

Question. You also state that you very reasonably try to phase your decisions—I believe that means to delay final design decisions as long as possible. If some design elements change, would that be likely to increase the program cost?

Answer. Design element changes could increase program cost. Reconfiguring hardware or software will very likely require testing, verification and validation. Any reconfiguring that increases complexity, requires higher performance parameters, adds redundancy, hardens the system or improves performance is likely to increase program cost. NMD remains a high-risk and highly concurrent program. Tremendous effort has been devoted to estimating the cost of the Expanded C1 and an effort is underway to develop an estimate for possible follow-on increments in preparation for the Deployment Readiness Review (DRR) in the summer of 2000. Program confidence in cost estimates has grown as the developmental effort has progressed, hardware has been fabricated, integrated test flights have been executed, and more aspects of the program have migrated and been definitized under the Lead System Integrator contract. If following a favorable technology assessment at DRR the program receives direction to proceed toward deployment, program testing, including lethality testing, will continue concurrently with production of a significant number of interceptors for initial fielding. Some changes in production and deployment are possible, and would in all probability impact system cost.

Question. Do you have an estimate of the total life-cycle cost of the desired final 250 interceptor system?

Answer. An estimate of the cost of the objective 250 interceptor system has not been made. To support a Deployment Readiness Review (DRR) in summer 2000, BMDO anticipates doing cost excursions on alternative architectures. The objective 250-interceptor system architecture will be one of the cost excursions.

Question. The fiscal year 2001 budget includes some initial money for procurement. Given the phasing of decisions, do you think that, when procurement begins, we will have firm knowledge of the final cost of the system?

Answer. NMD remains a high-risk and highly concurrent program. Tremendous effort has been devoted to estimating the cost of the Expanded C1 and an effort is underway to develop an estimate for possible follow-on increments in preparation for the Deployment Readiness Review (DRR) in the summer of 2000. Program confidence in cost estimates has grown as the developmental effort has progressed, hardware has been fabricated, integrated test flights have been executed, and more aspects of the program have migrated and been definitized under the Lead System Integrator contract. If following a favorable technology assessment at DRR the program receives direction to proceed toward deployment, program testing, including lethality testing, will continue concurrently with production of a significant number of interceptors for initial fielding. Some changes in production and deployment are possible, and would in all probability impact system cost.

SUBCOMMITTEE RECESS

Senator STEVENS. If there is nothing further, the subcommittee will stand in recess.

[Whereupon, at 11:35 a.m., Wednesday, April 12, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2001

TUESDAY, APRIL 25, 2000

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:45 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Cochran, Domenici, Hutchison, Inouye, Dorgan, and Durbin.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE ARMY

OFFICE OF THE SECRETARY

STATEMENTS OF:

LOUIS CALDERA, SECRETARY

GEN. ERIC K. SHINSEKI, CHIEF OF STAFF

OPENING STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. Good morning. This morning our subcommittee will receive testimony from the Secretary of the Army and the Chief of Staff of the Army on the fiscal year 2001 budget request.

General Shinseki, we welcome you to your first time to testify before us as the Chief of Staff. I thank you very much for your visit to Alaska. I enjoyed traveling with you.

General SHINSEKI. Thank you, Mr. Chairman.

Senator STEVENS. As you know, you were very well received in our State, and the comments you made were very appropriate for the night.

There are many issues facing the Army. I think the most critical decision Congress will make this year will be on the direction we go on Army Transformation. The Transformation concept is not simply a new weapon system but a new doctrine and an organizational concept for the Army. I am going to put my full statement in the record at this point and ask Senator Inouye if he has a statement to make.

[The statement follows:]

PREPARED STATEMENT OF SENATOR TED STEVENS

This morning the subcommittee will receive testimony from the Secretary of the Army and the Chief of Staff of the Army on their fiscal year 2001 budget request.

General Shinseki, welcome to you. This is your first time testifying before the subcommittee.

I want to thank you again for your visit to Alaska in February. It sent a very powerful signal to the Army in Alaska, and the residents of my state, of the direction you intend to lead the Army in the years ahead.

While there are many important issues facing the Army, I believe the most critical decision Congress will make this year will be the direction we go on Army Transformation.

The Transformation concept is not simply a new weapons system, but a new doctrine and organizational concept for the Army.

Like any dramatic change, Transformation challenges entrenched interests, and those who prefer "business as usual".

Unless significant steps are made this year, and during fiscal year 2001, it will be difficult to realize the full impact you have articulated for the Army.

General Shinseki, in November of last year, in the final fiscal year 2000 appropriations bill, Sen. Inouye and I added $100 million in special funding to augment the fielding and equipping of the initial Transformation brigade combat team.

You provided this subcommittee with a report detailing the manner which you will spend that money, and we appreciate your specific plan.

We look forward to working with you to implement Transformation, and the opportunity to work with you during your tenure as Chief of Staff of the Army.

In addition, I would welcome any comments you might have on current funding requirements for the Army for fiscal year 2000, and your views on the scope and timing of any needed supplemental appropriations for this fiscal year.

Let me now turn to our mutual friend, and partner, the distinguished ranking member of the subcommittee, Sen. Inouye.

STATEMENT OF SENATOR DANIEL K. INOUYE

Senator INOUYE. Thank you very much. I would like to join you in welcoming Secretary Caldera and General Shinseki, and to publicly say that I am inspired by the ideas that are coming out of the Army on Transformation. And I, for one, support that. It is about time we began looking at changes in the military during peacetime. We are always somehow reacting to some adversary. And whenever we do that, we are never prepared.

I am old enough to remember World War II and the Korean conflict. And I remember, in the Korean conflict, we had occupation forces to face the combat-seasoned troops of North Korea and the Chinese. And in World War I, I still remember the story of General Patton, when he was assigned to Fort Benning to begin the tank corps. He had 250 tanks, half of them then moved. And he went to Sears Roebuck to buy parts, because we could not afford it. I do not want to see this happen again. So I not only wish you the best, but you have my support, sir.

Thank you very much. May I have my full statement made a part of the record.

Senator STEVENS. Yes, it will be.

[The statement follows:]

PREPARED STATEMENT OF SENATOR DANIEL K. INOUYE

Mr. Chairman, it is indeed a pleasure for me to have the opportunity to join you today in hearing from our Army representatives.

Secretary Caldera, General Shinseki we want to thank you for coming today.

Mr. Chairman, as the Army enters the new millennium, it is a time of great challenges.

I for one have been inspired by the ideas coming from the Army about transforming our land forces from a cold war force to a force for the 21st century.

I can only say to our leaders here that you have my support.

To those that believe we should slow down, I would say that we have never prepared for change in our Army during peacetime, but only when we were forced to do so by an adversary. We have the opportunity to do so now. Mr. Secretary, Gen-

eral Shinseki, I say to you don't slow down. The time to act is now, and you are the ones to achieve this goal.

To retain our status as the world's only superpower, we must maintain our Army as a force second to none. Transformation will help us to accomplish that objective.

Mr. Chairman, I look forward to hearing from our witnesses today how the Army's request for fiscal year 2001 will lead our Army into the future.

Senator STEVENS. Senator Hutchison.

STATEMENT OF SENATOR KAY BAILEY HUTCHISON

Senator HUTCHISON. Thank you, Mr. Chairman.

Mr. Chairman, in my opening statement, I just want to say that I spent Easter weekend in Kosovo and Bosnia. And I was so very proud of the troops that you have trained, General Shinseki. They are upbeat and they are very tough. But, definitely, in Kosovo, they have a tough job. And there is no question that they are on very high alert there. And I am really proud of the job they are doing and I am proud of the military construction that is supporting them.

And from the first time I met you, which was on the runway in Tuzla, things have changed very much at that base—and for the better, I might say. As you know, the 49th Armored Division is now in charge of the Eagle Base in Tuzla. And they are doing a great job. And having the Easter sunrise service with them was probably the best Easter I will ever have in my life. And I wanted you to know that they are all very, very excited to be there and doing the job they are doing, and you should be proud to say that they are our U.S. Army.

Thank you, Mr. Chairman. I will have questions later.

Senator STEVENS. Senator Dorgan.

STATEMENT OF SENATOR BYRON L. DORGAN

Senator DORGAN. Mr. Chairman, thank you very much.

Let me thank Secretary Caldera for his service. I have had the opportunity to work with him on a couple of issues, and I have appreciated very much his response. And, General Shinseki, thank you for your service to our country.

I will not give an opening statement except to say that we are proud of the men and women who serve in the Army. And Senator Hutchison mentioned the construction that is going on in Kosovo. Some of that is by the 142nd Engineers of the North Dakota National Guard, who are over there doing a lot of construction work. Also, I join Senator Inouye in being intrigued by the Transformation that is going on and some of the plans that you are presenting today. I have to speak on the floor of the Senate at 11 o'clock, so I will not be able to be here for your entire testimony, but thank you very much for appearing.

Senator STEVENS. Thank you very much.

Mr. Secretary, should we hear from you first?

FISCAL YEAR 2001 FUNDING

Mr. CALDERA. Thank you, Mr. Chairman. Mr. Chairman, I have a prepared statement that I would like to submit for the record. If I may, just to begin, I wanted to start by thanking you and this committee for your support of our soldiers in this past year, and

in particular to thank you for what you did last year in providing us some critical support to enhance our readiness of our Army, including the package of pay increase, restoring retirement benefits, pay table reform, that you supported last year, that sent exactly the right message to our soldiers, that our Nation honors their service and their sacrifice.

We had record reenlistment in the Army last year, I think in large part because soldiers were looking for that signal and got that signal. And we are continuing to work to enhance their quality of life and their training in order to be able to continue to recruit and retain the soldiers that we need.

We also appreciate very much the $100 million that this committee provided to the Army to begin the Transformation process last year. General Shinseki will talk more specifically about the Transformation process, and I would like to say just a couple more things about that. But I do want to note that I know that this committee supports the Army's need to obtain the supplemental funding for the mission in Kosovo. That is reaching a critical point for us.

We have already spent about $750 million of operation and maintenance (O&M) money that would have otherwise gone for Army training throughout the course of the rest of the year in supporting the mission in Kosovo. And we are at the point where we are beginning to, first of all, with support from the Office of the Secretary of Defense (OSD), we can continue to operate without changing our program for a couple of more weeks. But at some point we will begin to do some of the kinds of things that we need to do to husband resources, both to pay for the Kosovo mission and to ensure that we operate this year within our appropriations.

The supplemental is important, not just in terms of full funding, but also in terms of its timeliness, so that we do not have to take action such as curtailing training, deferring personnel actions, like promotions, hiring, permanent change of station (PCS) moves. Those are some of the kinds of things that we will begin to do—cut back on procurement of spare parts, slow down depot missions. Those are some of the actions that we will begin to take. We understand that this committee appreciates the importance of that supplemental, and we urge that, at the earliest moment, that that could be provided. It would be of great benefit in order not to impact our training and our readiness.

Mr. Chairman, in terms of Transformation, as General Shinseki was coming aboard last year, one of the challenges that Secretary Cohen laid before us was to better articulate the direction that the Army was going in the 21st century, the kind of Armed Forces that we would have that would be able to meet the threats and the challenges that our Nation will face in the 21st century. The need to have an Army that is more deployable, more responsive, capable of being dominant at every point on the spectrum, from high-intensity conflict through peacekeeping, peace enforcement, stability and support operations, right down to humanitarian assistance and engagement missions that we perform every single day all over the world.

As a consequence of that challenge, General Shinseki and I articulated this vision for the Army, the Army Vision, Soldiers On

Point for the Nation . . . Persuasive in Peace, Invincible in War, that lays out the tenets of Transformation. It is about more than changing our formations and our equipment.

It is about investing in the preparation, training and leader development of our soldiers, maintaining high readiness, manning our units at 100 percent by grade and military occupation speciality, and about transforming the Army so that it would be a more deployable, responsive force, looking out and seeing that our heavy forces are too heavy and take too long to deploy and are difficult to operate in certain parts of the world, where the 70-ton tanks are too heavy for the bridges, too wide for narrow urban areas, too difficult to employ, that our light forces lack staying power, in terms of their ability, if they faced an armored threat at the time of arrival, of being able to survive and win in that kind of environment without quick reinforcement, and of the need to be able to get the right force to the hot spots faster in the world in order to be effective, and to give the Nation more capabilities.

Transformation provides the Nation with increased capabilities immediately. Because the interim forces that we have begun to stand up, starting with the initial brigades at Fort Lewis, are forces that the Nation can begin to use today that are more deployable and have more lethality, more versatility in the kinds of missions that they will be sent to. It also, as we begin to procure the off-the-shelf interim armored vehicle that will be the weapon system that they will use, begins to take us down the road of driving our heavy forces and our lighter forces closer together, moving toward the concept of an Objective Force that has the deployability of our light forces, but the lethality of our heavy forces. And we begin to make today the science and technology investments that will give us the answer to the questions of whether we can technologically deliver that kind of force for the Nation.

FUNDING REQUIREMENTS

In order to jump start Transformation, to make it more than just a program, but to make it a reality, we used the assistance that this committee provided to begin standing up those initial brigades, and to begin those investments. And we reprioritized about $1 billion within the Army budget in order to make the kinds of investments that are necessary to deliver on Transformation for the Nation and to be able to deliver, within the Army's own budget authority, one brigade per year for the next 6 years, and to give us a force that will also provide sufficient forces that it can be employed by the Nation, that it can be put into a rotation, that both allows you to learn as you are developing the operational concepts, the doctrine, but also gives the Nation that capability that our country can already begin to draw on.

This Transformation is an exciting process for the Nation. We are very committed to what it can yield the country in terms of increased capabilities and where it will take us. The decisions we had to make in terms of reprioritizing within the Army budget were difficult decisions because there were valid requirements for some of the programs that we had to terminate in order to reprioritize, including the Grizzly and the Wolverine programs and the reduced buy for Crusader. But we thought those were the right tradeoffs to

make in order to move Transformation forward within the Army's budget, and recapitalizing our equipment for the future, replacing our aging equipment. Being able to make those investments will continue to be a challenge for the Army if we are to deliver the benefits of technology for our soldiers so that they can have the best equipment that will be available to them not only today but going into the future.

We thank you for your support. We stand ready to answer and work with this committee to make sure that we have a common picture of the kinds of increased capabilities that Transformation will provide for the Nation and that we are working together to deliver those benefits for the Nation.

[The statement follows:]

PREPARED STATEMENT OF HON. LOUIS CALDERA

Mr. Chairman and Members of the Subcommittee: It is an honor and a pleasure to testify once again before you. I am very pleased to report to you on the state of the U.S. Army and to explain where we are trying to lead it for the future.

Let me first express my great appreciation, however, to this Subcommittee for its role in developing and passing the fiscal year 2000 budget for the Army. This funding, together with the fiscal year 1999 Supplemental for Kosovo, is helping address many of the Army's most immediate needs, from training, to maintenance, to modernization.

The military compensation and retirement improvements Congress enacted this past year are particularly noteworthy. Your adoption of the benefits package sent a strong message of support to our troops; it has had a positive impact in attracting new soldiers and retaining experienced ones. No doubt in large measure because of these initiatives, last year was one of the most successful years ever for Army retention.

This year, I respectfully request your continued support for the Army's programs. Our budget carefully balances near-term readiness and quality of life with long-term modernization. It provides needed funding for contingency operations, training, base operations, housing and barracks initiatives, depot maintenance, research and development, and many other priorities.

Most importantly, the budget includes jump-start funding for our Transformation initiative, the most important organizational development for the Army in a generation. This initiative will help the Army remain a strategically relevant force well into this new century.

In Part I of my testimony, I will describe some of what the Army accomplished in the last year to meet the needs of our Nation's current security requirements and how, through the Transformation process, we will be better prepared to meet future requirements. In Part II, I will briefly describe how the budget request supports Army programs, including Transformation.

As always, I welcome your comments on every aspect of how the Army is doing. I also respectfully urge this Committee to move expeditiously on our budget request for fiscal year 2001 as well as the fiscal year 2000 supplemental for Kosovo. Expeditious adoption of the Kosovo measure will help us sustain the readiness investments that Congress approved in the fiscal year 2000 budget by reimbursing the Army for funds needed to execute our fourth quarter training and maintenance plans.

PART I

The Army and the Current Environment

Mr. Chairman, today's Army is a complex enterprise comprising some 1.3 million people, including, in round numbers, 480,000 active duty soldiers, 565,000 Guard and Reserve personnel, and 225,000 civilians. The Army is the largest service component of the Nation's armed forces, with 40 percent of all Department of Defense personnel. In terms of force structure, we field no fewer than 10 active component divisions, with another 8 divisions and 18 separate brigades available in reserve.

The Army is the most powerful conventional force on Earth. Trained to the most exacting standards and armed with lethal and efficient weapons, our soldiers are feared by our enemies and trusted by our allies—and respected by all. The Army is the decisive landpower element of our Nation's military, the only service able to conduct coordinated, sustained, offensive and defensive operations on land to seize

and maintain control of territory, people, and resources for as long as our country's interests warrant.

Men and women of the U.S. Army serve our Nation throughout the world, from Kosovo to Korea, Bangkok to Bahrain. More than 110,000 soldiers are permanently forward stationed to deter aggression and to be on hand in the event of a crisis; approximately 30,000 are deployed in scores of contingency operations and training in 70 to 80 different countries on any given day. Hundreds of thousands more are stationed at posts around the Nation, training hard, developing and testing new weapons systems, and providing the administrative, planning, and logistical support necessary to prepare our soldiers for battle and maintain them in the field. And everywhere our soldiers serve, they do so with spirit, dedication and resolve, and in the best traditions of the Nation's most venerable military service.

The Army supports our national interests by maintaining a force capable of responding to the full spectrum of operations, ranging from humanitarian missions on the low end to the capability to fight two nearly simultaneous major theater wars on the high end. Meeting this requirement entails a force of high quality people, with modern equipment, trained in the broad range of skills (more than 500 specialties) demanded of modern military operations. The nature of this force, in turn, enables the Army to provide support for the three major pillars of our National Military Strategy—shaping the international environment, responding to the full spectrum of crises, and preparing for an uncertain future.

Shaping the International Environment

Throughout 1999, the Army conducted a wide range of shaping operations that enhanced regional stability and reassured our allies.

In Bosnia, nearly 4,000 Army soldiers comprise a substantial part of the NATO force that supports implementation of the Dayton Peace Accords, monitors crossing points on the Bosnia-Herzogovina and Yugoslavia borders, and provides security for displaced persons and refugees. In Kosovo, the Army also assumed the principal responsibility for U.S. participation in the NATO peace implementation mission at the completion of Operation Allied Force in June 1999. Today, more than ten thousand soldiers overall are currently serving in the Balkans, doing the hard and dangerous work necessary to achieve our Nation's goals of bringing stability and progress to this troubled region.

In Southwest Asia, the continuous presence of an Army task force that includes attack helicopters, Patriot missile units, and other forces helped deter aggression, reassured regional allies, and supported implementation of U.N. resolutions against Saddam Hussein. Forward positioning of Patriot missile units by Operations Desert Falcon and Desert Focus forces maintained our ability to respond to crises in the region. Army forces deployed in support of Operation Southern Watch worked with the other Services and allied forces to enforce U.N. sanctions against Iraq. In the Middle East, the Army also maintained an infantry battalion and headquarters group in the Sinai as part of the Multinational Force and Observers.

In Korea, 25,000 soldiers served as a major bulwark of stability in this critical region, which includes some of our largest trading partners. Their presence underscored our commitment to the defense of South Korea, strengthened the United States/Republic of Korea position in talks with North Korea, and deterred adventurism by the North Korean regime. U.S. Army forces in Japan also contributed to regional stability and participated closely in combined exercises with Japan Self Defense Forces.

In Colombia, the critical single-source nation for illicit narcotics entering the United States, the Army helped establish a counter narcotics battalion to fight drug criminals in the narcotics producing areas of the country. In my recent visit there, I observed first-hand how critical our aid has been in this effort. The military assistance proposed as part of the President's recently-announced $1.6 billion Colombian aid package will significantly enhance Colombian security forces' ability to eradicate drugs over a wider area of cultivation by improving their intelligence capability, airlift mobility, and ability to plan and execute larger scale counterdrug operations, among other things. The aid will allow the U.S. Army to provide training for two new Colombian Army counter narcotics battalions. The improved operational capabilities of the Colombian military and police forces are key to reducing the massive increase in the acreage under coca and poppy cultivation that has occurred over the last three years. The Army is prepared to do its part in this stepped-up campaign to address the drug scourge at its source, once Congress passes this vital package.

Training of foreign military personnel constituted a significant portion of U.S. military engagement activities. Special Operations Forces deployed to 22 nations to conduct humanitarian demining training. They also trained several African armies for peacekeeping operations and humanitarian response under the African Crisis

Response Initiative. The Army Guard and Reserve, the Corps of Engineers, and the Army Surgeon General also participated in various endeavors in Africa designed to support democratic transition and to improve infrastructure and health.

The International Military Education and Training (IMET) program served as an outstanding vehicle for promoting cooperation and democratic values by training over 7,600 students from 134 countries. Most of this training took place in the United States, fostering personal and professional ties between American sponsors and foreign students.

An especially valuable IMET program is the U.S. Army School of the Americas, an institution that has trained tens of thousands of Latin American military personnel over the last 54 years. In addition to traditional military professional development courses, the School offers instruction in natural disaster response, peacekeeping, human rights, and the role of the military in a democracy. Several investigations by outside agencies have confirmed that the School's curriculum is consistent with U.S. human rights policy. Nevertheless, our goal is to have a training environment that permits us to accomplish our engagement mission while garnering the full support of Congress and the American people. I will recommend changes this year that will ensure all such professional development training for foreign officers and soldiers supports our national security goals in Latin America, promotes respect for human rights and the rule of law, and strengthens the development of democratic institutions and civil society.

In addition to these activities, the Army helped shape the international environment in ways favorable to U.S. interests by combining training with civic assistance projects. For example, last year Army engineers fixed a hospital roof in Mongolia and repaired roads and schools in the Marshall Islands. In Ukraine, a medical brigade provided surplus Army medical equipment to civilian hospitals. These types of initiatives enhance American credibility and goodwill abroad and provide important training opportunities for selected Army units.

Responding to the Full Spectrum of Crises

While engagement and training activities prevent and deter wars, the Army's core function is to remain ready to fight and win our Nation's wars. The Army's ability to respond to the full spectrum of crises is evident in several recent operations the Army led or in which it played a significant role.

The Army employed forces in support of the NATO bombing campaign against Serbia last spring. In addition to augmenting Joint Task Force Noble Anvil, the U.S. component of the NATO force that conducted the bombing campaign, the Army deployed the 5,000 strong Task Force Hawk to Albania to provide attack helicopter capabilities within striking range of Yugoslavia. This deployment reflected the Army's ability to send warfighting units anywhere in the world, in the most difficult weather and terrain conditions. Although never employed in the fighting, Task Force Hawk gave the national command authorities unique additional capabilities for prosecuting the war in Kosovo.

Two other Army deployments provided critical support to U.S. policy in the Balkans. In Europe, Army personnel expanded the base camp that would later prove indispensable as a staging base for the U.S. contingent of the Kosovo Force or KFOR, the NATO force underwriting peace in Kosovo. Closer to home, a unit from Fort Bragg, North Carolina, formed the nucleus of a joint task force assisting in caring for more than 4,000 displaced Kosovars at Fort Dix, New Jersey.

When U.S. forces crossed into Kosovo to begin the difficult task of bringing stability to that troubled region, elements of the Army's 1st Infantry Division led the way. This division has provided the bulk of the U.S. contingent (Task Force Falcon) since implementation of the treaty last June. On a daily basis, soldiers are working face to face with the people of Kosovo, conducting the dangerous work of disarming former combatants, resettling refugees, protecting minority populations from retribution, and establishing fertile conditions in which civil society can take root and thrive.

In Central America, the Army led efforts to assist victims of Hurricanes Georges and Mitch throughout most of fiscal year 1999 via initiatives that entailed massive logistical assistance. In Asia, American soldiers performed critical medical, intelligence, communications, and civil affairs tasks as part of the U.S. contingent supporting Operation Stabilize in East Timor, in response to the violence that occurred after the people of East Timor voted overwhelmingly for independence from Indonesia. These and similar operations underscored the Army's continued responsiveness and utility to national policy.

Preparing for an Uncertain Future

The 21st century holds great promise, but also potential menace, for our Nation. The dream of information age prosperity will also see an array of potential dangers to our national security interests. These include regional challenges of the kind we see in the Balkans, in Southwest Asia, and on the Korean Peninsula; threats that cut across geographical and ideological boundaries, including the drug trade, ethnic, tribal, and religious strife, and organized crime; and "asymmetric" dangers, such as terrorism, the threatened use of weapons of mass destruction, and information warfare.

The Army has prepared for this uncertain future by developing a bold new Vision for the 21st century. The Vision calls for our Transformation to a force that is more responsive, deployable, agile, versatile, lethal, survivable, and sustainable. The force will be more strategically dominant across the entire spectrum of operations, and will be capable of reversing the conditions of human suffering rapidly and resolving conflicts decisively. The Army's deployment is the surest sign of America's commitment to accomplishing any mission that occurs on land.

The new force must be responsive to allow the Army to meet frequent contingency requirements with any element of the force. To be responsive requires the ability to put forces where needed on the ground, to affect directly the outcome of the situation or crisis at hand within hours of a decision. The forces must be prepared to accomplish their mission regardless of the environment, the nature or scope of the proposed operation, or other commitments. They should also have the ability to employ force from low to high intensity.

To achieve this responsiveness, the force must be more deployable—capable of rapid strategic movement to create the opportunity to avert conflict through deterrence and confront potential adversaries before they can achieve their goals. The Vision calls for a capability to put a brigade on the ground within 96 hours after lift-off, a division within 120 hours, and five divisions in 30 days.

The new force will be more mentally and physically agile, to move forces from stability and support operations to warfighting and back again. Our organizational structures will be redesigned, so that our force is more versatile—able to generate formations which can dominate at any point on the spectrum of operations, with minimal adjustment and minimum time. It will be lethal—every element in the warfighting formation will be capable of generating combat power and contributing decisively to the fight. We will retain today's light force deployability while providing it the lethality and mobility for decisive outcomes that our heavy forces currently enjoy. The force will be survivable, by employing technology that provides maximum protection to our forces at the individual soldier level, whether that soldier is dismounted or mounted.

Finally, the force must be more sustainable. We will aggressively reduce our logistics footprint and replenishment demand. This will require us to control the numbers of vehicles we deploy, leverage reach back capabilities, invest in a systems approach to the weapons and equipment we design, and revolutionize the manner in which we transport and sustain our people and materiel.

The Army's Transformation strategy envisions the development of initial and Interim Forces on the way to achieving the Objective Force capabilities that are called for in the Vision. The initial forces will include a brigade combat team whose purpose is to validate the operational and organizational model of future tactical units and to generate insights for further Transformation of the force. As I speak, this brigade is being formed at Fort Lewis, Washington. This initial brigade combat team will equip itself with surrogate and loaned hardware, even as we begin to identify the best "off the shelf" platforms for the Interim Force. At the same time we are beginning to make, along with DARPA, the Science and Technology investments that will lead to development of the main Objective Force platform, known as the Future Combat System. This system will be delivered around 2012.

The initial brigade combat team will serve as the lead-in to, and eventually comprise the first element of, an Interim Force that will seek the characteristics of the Objective Force within the constraints of available and emerging technology. The Interim Force will be organized as a rapidly-deployable, full-spectrum force that is highly mobile at the strategic and tactical levels. Current plans call for the Interim Force to be C–130-transportable and equipped with a family of Interim Armored Vehicles, lightweight artillery, and other available technology.

Throughout the Initial and Interim Capability phases, the Army will revise key concepts, doctrine, and strategic plans as well as begin the Transformation of the Institutional Army. This Transformation will address the systems, organizations, and processes by which the Army supports training, leader development, infrastructure, management, combat and materiel development, and well-being.

Even as we push the Transformation process to develop Objective Force capabilities, we must continue to recapitalize some of our legacy systems, such as the Abrams tank and Apache helicopter, and bring on-line new systems like the Comanche helicopter and Crusader howitzer that we are counting on to have as part of our warfighting capability through at least the year 2025. At each stage of the Transformation process, we have the right mix of weapons systems and force structure to be able to respond to the full spectrum of operations, including high-intensity conflict. Until the Objective Force is fielded throughout the Army, it is likely that we will need to maintain heavy, digitized divisions with the capacity to win against Soviet-era armor that may be employed against us in places like Korea or Southwest Asia.

To improve responsiveness for the full spectrum of operations, the Army will also attempt to fill all operational and institutional organizations to 100 percent of authorizations, by grade and skill, by the end of fiscal year 2003. Matching skills with responsibilities will improve our readiness to respond during the Transformation period.

Transformation is and will be the central activity of the Army for the foreseeable future. All our energies are directed to the task of fielding an Objective Force whose capabilities will give the Nation the land force options and responsiveness needed to meet the challenges of an uncertain era. But getting there, to the Objective Force, requires that we begin here, now, with our current Army. Transformation cannot occur, and the Nation cannot reap its benefits, if we do not continue to sustain and build on the Army of today.

PART II

Supporting Today's Army

The fiscal year 2001 budget achieves three ends: it includes funding for programs that safeguard America and its allies, including selected smaller scale contingency operations; it advances Transformation of the Army into a more strategically responsive force; and it balances near-term readiness and quality of life with long-term modernization. A quick glance at some major areas of interest offers a broad sense of the Army's priorities.

Smaller Scale Contingency Operations

Our engagement abroad is a source of pride and valuable experience for our soldiers. The Army is proud of its work in shaping the international environment in the interests of peace and democracy. As previously described, approximately 30,000 soldiers are deployed every day around the world in support of America's interests. Our ability to respond quickly and effectively when these unforeseen crises develop depends on the continued timely support of Congress in funding such deployments.

The fiscal year 2001 budget includes $1.0 billion to support operations in Bosnia. Operation Joint Forge not only continues to provide the security necessary to allow time for that country to become self sufficient, but it is also providing The Army with the opportunity to hone the skills of our active and reserve units. We have just deployed elements of a National Guard division, the 49th Infantry Division (Texas ARNG), for a six-month tour of duty. For the first time, this ARNG unit is providing the command and control for the U.S.-led Multinational Division North in Bosnia.

We fully expect to achieve the same results in Operation Joint Guardian in Kosovo. At this point in the operation, we are still establishing the infrastructure and training base to support our presence. The timely passage of the fiscal year 2000 Emergency Supplemental Appropriations request for Kosovo, which includes $1.5 billion for the Army, is critical not only to the success of that operation, but to ensuring the execution of planned training events throughout the rest of the Army. Early passage of the Supplemental will enable our commanders to confidently keep on track planned fourth quarter training.

Our commanders and soldiers have demonstrated unprecedented flexibility and resourcefulness in preparing for unplanned operations while maintaining the fighting edge required for combat. During the past three years, the Overseas Contingency Transfer Account has been instrumental to our ability to conduct unplanned operations without interrupting funded training.

Transformation

This budget provides nearly $1 billion for the Army to pursue its Transformation initiative. The $100 million Congress provided for Transformation at the end of last year, together with the savings generated through the hard choices we made to cancel or cutback important programs in order to fund Transformation, will enable us to stand up the initial Brigade Combat Team. We will use loaned and leased equipment for this initial brigade while we begin acquisition of the off-the-shelf vehicles

for the Interim Force brigades. A few weeks ago, we conducted a vehicle demonstration at Fort Knox, Kentucky, to evaluate these potential Interim Force vehicles.

Additionally, the fiscal year 2001 appropriations will make it possible for us to make the initial science and technology investments in the Future Combat System as the weapons platform for the Objective Force around 2012. We intend to bring the new system on-line as soon as technology allows.

Even as we fund the new bills created by the Transformation process, we must continue to recapitalize our aging equipment and modernize our forces through our investments in digitization and procurement of new platforms for warfighting. The Army will continue to find ways to help itself, as we have already demonstrated in the short months since we announced our Vision. However, a critical component of funding shortages in the out years is the savings that can be accrued by eliminating excess infrastructure. I strongly encourage another round of base closures as a means of supporting our Transformation efforts.

Modernization

As the Army implements its Transformation strategy, development and funding of an affordable, fully integrated modernization program is an essential element of that plan. Two key components of our modernization strategy are worthy of note here because of their impact on the budget: recapitalization and digitization.

Recapitalization.—Recapitalizing our legacy systems is of equal importance with the development of the Future Combat System. We must increase the service life of key existing systems while we move to the Objective Force. Recapitalization also reduces maintenance requirements and streamlines logistics support.

Recapitalization is one area in which we will need the continued assistance of Congress as we anticipate sustaining many of these legacy systems through 2025. This budget will help us make the critical investments in weapons systems necessary to sustain our ability to meet current security obligations, including fighting and winning major theater wars, even as we transform our force. A few examples will suffice to illustrate our programs.

Critical to modernization of legacy forces are the upgrades for the Abrams Tank and Bradley Fighting Vehicle. We need to replace the Abrams' engine to reduce fuel consumption by about 30 percent, to make it easier to maintain and less costly to operate, as well as equip it with new electronics. We will modify our Bradley's to make them more lethal and survivable through digitization, night vision capabilities, and other improvements.

Support for the continued development of the Comanche helicopter and Crusader howitzer are also critical to our modernization program. The Crusader program was restructured to gain vital improvements in indirect fire support capability and to reduce the weight of the system while maintaining key performance parameters. The Army generated $11.2 billion for Transformation between fiscal year 2000 and fiscal year 2014 by reducing the number of Crusaders from 1,138 to 480. The restructure strategy partially satisfied the Army howitzer requirement for warfighting by continuing the use of Paladin and incorporating the Lightweight 155 mm howitzer.

The Comanche (RAH–66) helicopter will provide the Army with a new capability to conduct armed reconnaissance during both day and night and in adverse weather conditions. It will significantly expand the Army's capability to conduct operations in a wider range of scenarios. The fiscal year 2001 budget supports testing of two prototypes and the development of the advanced T801 engine, composite air vehicle, and mission equipment package.

Digitization.—We have not slowed our efforts to digitize our forces; we remain committed to incorporating digital capabilities to support our soldiers, our units, and our ability to communicate securely. The process of applying information technologies to allow warfighters to share a constantly updated common view of the battlefield is an ongoing modernization priority that is separate from but related to Transformation. Digitization involves across-the-board software and hardware improvements to weapons and communications systems that will vastly improve the capabilities of our forces. We will incorporate digital features in the more responsive, lethal, and agile forces of the future; digital advances are already being used to modify the structure of selected divisions. This budget continues our commitment to digitize the first corps by the end of 2004.

These modernization initiatives will require the long-term commitment of the Administration and Congress. Army modernization accounts for only $9.4 billion of the Department of Defense's $60 billion modernization budget. Indeed, modernization funding has decreased more than 40 percent in the period fiscal year 1989 to fiscal year 1999. But even adjusting for decreases in the size of the Army, we will spend about $5,000 less per soldier for modernization this year than we did only a decade ago (in constant fiscal year 2000 dollars).

We need to reverse this alarming trend, if the Army is to remain the premier force the Nation requires for influencing events and maintaining peace. The President's fiscal year 2001 budget makes the necessary investments in critical modernization initiatives that are central to the Army's modernization and Transformation initiatives.

Readiness

The fiscal year 2001 budget supports our most pressing readiness requirements. The budget protects critical areas including training, operations tempo (OPTEMPO), and infrastructure requirements. Resources have been maximized to ensure our forces are trained, equipped, and ready to fight.

Training.—Training is the heartbeat of the Army and a major component of readiness. The Army's training management system allows units to conduct training on key tasks with enough frequency to sustain their ability to perform, in spite of personnel turnover. A function of this system is to identify the resources necessary to conduct live and simulated training on mission-essential tasks. Operations tempo (OPTEMPO) is one measure of these needed training resources.

OPTEMPO.—The President's fiscal year 2001 budget request assumes funding to permit all active units and most reserve units to achieve 100 percent of our OPTEMPO training standards. Force Package 1 through 3 units are funded at 100 percent OPTEMPO and Force Package 4 units at 100 percent for individual and crew training. We have also funded adequate Combat Training Center rotations, Battle Command Training Program rotations, and flying hours for both active and reserve component units. Passage of the Kosovo Supplemental is important to preserving the benefits of this funding.

Infrastructure.—The Army is maintaining its base operations support at minimum essential levels this year. However, Real Property Maintenance (RPM) funding for the active Army is only 69 percent of known requirements and our aging infrastructure continues to deteriorate. The fiscal year 2001 budget assumes some risk to, yet sustains the real property inventory. We continue to reduce excess infrastructure by using RPM funds to resource the Facilities Reduction Program, while focusing Military Construction investments on specific priorities such as barracks and strategic mobility projects.

The President's Military Construction request of $1 billion focuses on upgrading all permanent party barracks to the 1 plus 1 standard by fiscal year 2008. Using fiscal year 2001 funds, we will build barracks that will house 5,000 active duty soldiers at facilities in the U.S. as well as in Korea and Germany. The requested funds would also be used to improve rail yards and other facilities to enhance our strategic mobility program, another important building block in our Transformation architecture. If the Army is not able to mobilize our troops and supplies, we cannot respond to our designated missions as quickly or effectively as we would like.

Finally, the budget will allow us to continue our efforts to provide high quality family housing, an element of military life that will certainly affect the morale and readiness of the future force. We do not have enough housing to meet current needs, and much of what we do have is in need of revitalization. The President's request of $1.1 billion for family housing will give us some of the resources necessary to meet our shortfalls in this area.

The Army is also continuing apace with efforts to privatize family housing, but at the direction of Congress, we are moving with prudence and deliberation. Reauthorization of the privatization program, which expires next February, is critical to meeting our housing needs.

Quality of Life

The fiscal year 2001 budget maintains historic funding levels for base operations support services. Our soldiers and their families continue to affirm the importance of this course of action. Frequent deployments and training exercises mandate that we provide the best services to sustain morale. Army installations continue to seek new efficiencies through A–76 studies, outsourcing, and adopting most efficient organization practices. Critical to maintaining high quality of life in the Army are fully manning the force through recruiting and retention and adequate health care. We especially appreciate the Office of the Secretary of Defense's and Congress' efforts to eliminate the basic allowance for housing differential, improve health care, and improve benefits.

Recruiting and Retention.—The bedrock of the Army remains its people. Without quality people, it does not matter how lethal our weapons are or how strategically responsive our formations are. But today's growth economy and high employment market have challenged us to attract and keep individuals who possess the knowl-

edge and skills to run the machinery of the modern Army, especially as we move toward Transformation.

In fiscal year 1999, the Army essentially met (within a 1 percent tolerance factor) its required endstrength of 480,000, thanks to a vigorous retention effort that exceeded our goals by more than 6,100 soldiers. This success can be attributed to an enhanced bonus program we recently implemented, as well as to the compensation and benefits improvements that Congress adopted last year.

On the recruiting front, we are aggressively restructuring our operations, including reviewing our advertising strategy and improving recruiter training. We are also implementing two new innovative programs that hold great promise. The College First program offers college-bound candidates up-front education benefits in exchange for a promise to serve. The Army High School Completion program, which we launched last month, helps highly qualified young people who are interested in serving to obtain their GED, so that they can meet the Army's quality standards for entry.

The Army will continue to develop and employ creative solutions like these to ensure that as Transformation takes place, our ranks are regularly replenished with qualified, motivated individuals. We hope that Congress will continue to support these efforts as well as the additional initiatives to improve compensation, benefits, and quality of life for our soldiers that are addressed in our budget and that are key to the Army's enlistment and reenlistment strategies.

Health Care.—A key quality of life issue with our soldiers and family members is health care. TRICARE, the Department of Defense healthcare program, has been implemented worldwide. TRICARE was designed to make quality healthcare more accessible and easier to use, and to lower costs for those who use it. We have many dedicated people in our military treatment facilities across the globe who are working to make these objectives a daily reality. Most of our beneficiaries report satisfaction with the quality of care they receive.

We are measuring the performance of various aspects of the TRICARE program to ensure it remains the health plan of choice. We are working collaboratively with the Department of Defense and the Joint Staff to address improvements in areas such as access, claims processing, portability, and the management of complex medical cases. Additionally, we are fully supportive of some key enhancements for our soldiers and family members, like the TRICARE Prime Remote Program for family members, throughout the continental United States. Accordingly, we encourage the necessary legislative changes needed to facilitate making these enhancements a reality.

Chemical Demilitarization

I would urge the Committee to provide the full funding for the Chemical Weapons Demilitarization program requested in the President's budget ($1.003 billion for the Chemical Agents and Munitions Destruction account in the Defense Appropriations bill and $175.4 million in Army military construction funds). This program is a priority to the Army, the Department of Defense, and the Administration. We owe it to public safety of the military and civilian families living near the chemical weapons storage sites to ensure that these aging weapons are safely destroyed as quickly as possible. The United States has committed to meeting the 2007 deadline in the Chemical Weapons Convention for the destruction of these weapons. Failure to meet our international treaty obligations would damage U.S. credibility in fighting the proliferation of chemical weapons. The Army will do what it takes to meet the 2007 deadline if the Congress provides us the funds to do the job. Finally, these chemical weapons no longer have any military utility, but their continued storage consumes valuable Army resources that could be better utilized to improve readiness and modernize the Army. Therefore, I urge the Appropriations Committee to provide the funds requested in the President's budget so that we can complete this important national program.

Conclusion

The Army's Transformation will provide the National Command Authority increased capabilities to meet 21st century threats to our national interests. As we stated in our Vision, The Army will be responsive and dominant at every point on the spectrum of operations, from humanitarian assistance to major theater wars. We solicit your support of our Transformation efforts and look forward to working with you to ensure that we remain the world's finest land force for the next crisis, the next war, and an uncertain future.

Thank you, Mr. Chairman and Members of the Subcommittee. I look forward to your questions.

Senator STEVENS. Thank you very much, Mr. Secretary.

General Shinseki.

ARMY POSTURE

General SHINSEKI. Mr. Chairman, Senator Inouye and distinguished members of the committee, good morning. Thank you for this opportunity to discuss the Army's current posture and its Transformation initiative.

Mr. Chairman, I would ask your consent to make a brief opening statement and then submit a written version for the record.

Senator STEVENS. All of our statements that have been mentioned will be printed in the record in full.

General SHINSEKI. Thank you, Mr. Chairman.

Senator STEVENS. General, before you start, Senator Cochran, did you have a statement to make?

Senator COCHRAN. No, Mr. Chairman. I will be glad to defer my comments until later.

Senator STEVENS. Thank you.

Senator Domenici.

Senator DOMENICI. I have nothing.

Senator STEVENS. General.

General SHINSEKI. Thank you, Mr. Chairman.

Let me assure you and all the members of the committee here, in follow-up to Senator Hutchison's recent visit, there is a magnificent Army out there, soldiers on point, doing heavy lifting for this Nation. Today there are 140,000 American soldiers overseas, 30,000 of them on deployment, away from their home stations. Since the end of the Cold War, the United States Army has deployed 35 times, in the last 10 years, to places like Panama and Saudi Arabia, Kuwait, Iraq, Haiti, Somalia, Bosnia, Kosovo, and even East Timor. And compared to the 40 years of the Cold War, when we deployed those forces only 10 times, you can appreciate the increase in operating tempo (OPTEMPO).

All of these deployments do not change the Army's fundamental purpose. And that is to fight and win our Nation's wars. The Cold War Army performed magnificently this past decade, but it is challenged, much as the Secretary has outlined, challenging today to maintain that pace, especially as contingency missions stretch into long-term commitments: Kosovo, 10 months; Bosnia, going on 5 years; the Sinai, 18 years; Korea, 40 years.

The Army has begun transforming itself to better meet all of these requirements. To do this in the midst of such a demanding OPTEMPO does require a longer-term vision. And last October, as the Secretary has outlined, the Army laid out a vision that talked about three things. It talked first about people. The vision statement opened talking about soldiers and it closed talking about soldiers.

Second, it talked about readiness. Third, it talked about the Army's need to transform itself. And while Transformation has received much of the attention, the vision did talk about people, about readiness and then Transformation. People, because the Army is people, and taking care of their concerns is fundamental. Readiness, because the Army has that nonnegotiable contract with the American people to fight and to win our Nation's war. We cannot neglect our people or our responsibilities for readiness.

Let me now address the Army's Transformation. We are preparing to meet our future warfighting responsibilities technologically, materially, and professionally. We must possess force characteristics that will enable us to initiate combat on our terms—on our terms, not someone else's. On our terms means at a time, at a place, with the method of our choosing, not someone else's. And once we have done that, to seize and retain the initiative in that warfight, to build momentum quickly, and then to go for a decisive win as soon as possible. And that is the way we intend to continue the business that our profession is about. And that is decisiveness and warfighting.

Unfortunately, our force does not have all of those characteristics today. Yet, we intend to take advantage of a window of opportunity—some say it is narrower than we think—to embark on the most significant and comprehensive effort to change this Army in a century. Our aim is to achieve strategic responsiveness and dominance at every point on the military spectrum of operations, from winning wars to deterring them, and winning them if deterrence fails, to stability operations.

Our capabilities must complement those of our sister services, so that there is no loss in momentum as we transition from one point on that spectrum of operations to another. We must develop not only equipment but capabilities the Nation will need and our future Objective Force. We must give the National Command Authorities strategic options to deter crisis before it becomes armed conflict, and then to fight and win should that effort to deter fail.

A force with these capabilities, which we call the Objective Force—if you will look at the chart that I have provided to you, the Objective Force is that force at the right side of the chart—a force with these capabilities will be able to place a combat-capable brigade anyplace in the world in 96 hours, a division on the ground in 120 hours, five divisions in theater in 30 days.

Now let me try to explain how we intend to get to that Objective Force. First, we must sustain our Legacy Force. And that is that top arrow. Sustain and recapitalize selected Legacy Forces, both active and reserve components, both ground and air formations. These Legacy Forces will be with us longest, and perhaps as long as two decades. And we cannot neglect warfighting readiness during this Transformation period.

Now, let us look at the technological effort to get to the Objective Force. And that is the center axis. The President's budget requests $1.3 billion in science and technology for fiscal year 2001. These resources will build on your initiative last year to gain congressional support for $100 million in seed money for the Army's Transformation. The fiscal year 2001 science and technology (S&T) budget will focus $500 million on developing future combat systems technologies. We expect the S&T community to come back to us in about the year 2003–2004, with options that will allow us to make decisions and begin research and development, as you can see along that center axis.

Every dollar that we put into S&T, science and technology, today, will speed the scientific process and enhance the quality and the quantity of the solutions we eventually achieve. We must address today's operational demands. To do so, we will invest in an

interim capability, the bottom axis, to do what we cannot do well today. This interim capability, a select number of brigades, employing off-the-shelf equipment, will allow us to respond to immediate operational challenges. We will begin at Fort Lewis this year with one brigade combat team, and we have set aside sufficient funding for an additional Interim Brigade Combat Team for the next 5 years.

Many of you have urged us to change over the last 10 years. And the Army is changing. The Army has had to make some tough decisions, some not of our own choosing, to get to a delicately balanced funding structure, submitted to you in the President's budget. We know that there is more work to be done in the 2002–2007 program objective memorandum (POM) cycle, but for now, we need your help in the fiscal year 2001 budget to establish the science and technology effort, to sustain our legacy formations, to build an interim capability, and to begin movement toward realizing that Objective Force.

When we accepted the responsibility for transforming the Army, we were cautioned that nay sayers would essentially try to slow us down. Well, there has been some of that. But I will report to you that we are resolute. We have developed the momentum needed to transform the Army. Your help and support in retaining maximum flexibility is crucial to maintaining that momentum over the long term. And with your advice and assistance, we will transform this Army into a land component with capabilities necessary to achieve strategic dominance in the decades to come.

We are grateful for the 1999 budget that reversed a 13-year decline in real Army buying power. Last year's pay triad and your attention this year to the defense health bill has sent clear signals to our soldiers and their families that you value their service and their well-being. However, in reinforcement of what the Secretary has pointed out, we are rapidly spending this year our fourth quarter training dollars to fund our contingency missions.

Your efforts, Mr. Chairman and Senator Inouye, your efforts in April to secure supplemental funding, and OSD's recent commitment of another $220 million to the Army to extend our buying power, give me assurance that we will have dollars on hand by late July to fund our operations in Kosovo. We look forward to quick approval of that funding to keep readiness from unravelling and undoing all the good work that Congress has helped us to accomplish last year. We appreciate your concerted efforts and ask for your continued support and vigilance in seeing these measures through as soon as possible.

Today, proud soldiers around the world are on point for this Nation. Their dedication, teamwork and commitment guarantee the freedoms we enjoy. I thank them for their selfless service and unparalleled professionalism. And I thank this committee for your leadership initiatives which have demonstrated your support and commitment to our soldiers and their families.

Mr. Chairman, this vision, this Army vision, is about an investment in future American leadership and security at home and abroad. Thank you for your invitation to appear before this distinguished committee, and I look forward to your questions.

[The statement follows:]

PREPARED STATEMENT OF GEN. ERIC K. SHINSEKI

Mr. Chairman and distinguished members of the Subcommittee, thank you for this opportunity to report to you today on the United States Army's Vision and its plan to transform itself into a force that is strategically responsive and dominant across the spectrum of operations.

The support of the Administration and Congress has helped immensely over the past months, charting a new direction for the Armed Forces and for The Army, in particular. The fiscal year 1999 budget reversed a thirteen-year trend of declining Army buying power. And the support for increasing compensation and fixing military retirement in the fiscal year 2000 defense legislation sent a strong message to our soldiers and their families that their service is appreciated. In combination with the hard work of noncommissioned officers (NCOs) and officers across The Army, your support contributed to making fiscal year 1999 one of the most successful years ever for Army retention.

But there is much work yet to be done. The number and scope of missions that The Army must perform has grown significantly since the end of the Cold War. The Army must minimize the vulnerabilities associated with frequent contingencies, long-term commitments, and global power projection. It must train soldiers and grow leaders to adapt readily to conditions across the spectrum of military operations and build organizations capable of attaining dominance at every point on that spectrum. The new Army Vision charts a course to better align the capabilities of the Army with the challenges it is likely to face in the years ahead. The Army has already begun to help itself, but we will need your sustained assistance to achieve our goals.

I want to talk to you today about The Army's Vision for the future. In my testimony today, I will describe the magnificent work The Army has done in recent months and identify the challenges we still face. I will then discuss The Army Vision under three broad themes—People, Readiness, and Transformation—and request your continued support as we work together to keep The Army, Soldiers on Point for the Nation, persuasive in peace and invincible in war.

Secretary Caldera and I unveiled The Army Vision here in Washington last October at the annual convention of the Association of the United States Army. This Vision is not just an investment in future readiness, but an investment in American security in broadest sense.

Our Vision addresses three things: people, readiness, and Transformation. Let me touch on the first two briefly before turning to my main topic today, which is Transformation.

People

The Army is people, and the soldier remains the centerpiece of our formation. It is the soldier who enables America to meet its leadership responsibilities worldwide. Soldiers are our investment in America. Soldiers in our formations, from all components, are deploying overseas and showing America how real that investment is.

We are also about leadership—it is our stock in trade. Every day in The Army is an immersion experience in leadership. Some of the finest leaders in our country, military and civilian, public sector and private, learned what they know about leadership in our ranks.

The Army remains a values-based institution, where loyalty, duty, respect, selfless service, honor, integrity, and personal courage are the cornerstones of all that we do.

American soldiers are busy and engaged around the world. As many of you who have visited them have seen, almost 5,500 American soldiers of Task Force Falcon remain in Kosovo, with another 670 in Macedonia, ten months after the air campaign ended and refugees began returning home. Soldiers of the 49th Armored Division, Texas Army National Guard, and the 3rd Armored Cavalry Regiment from Fort Carson, Colorado have assumed the Task Force Eagle mission in Bosnia, four years after the Dayton Peace Accords were signed. Nine years after the Gulf War ended, we routinely deploy battalion task forces on extended exercises in Kuwait and Saudi Arabia, with hundreds more soldiers permanently stationed there. Eighteen years into the Sinai mission, the 1st Battalion, 5th Infantry from Fort Lewis, Washington recently became the 38th Multinational Force and Observers unit in that rotation. And we will soon mark the 50th anniversary of the beginning of the war in Korea, where the Eighth U.S. Army and 2d Infantry Division still remain on point for the Nation in that most dangerous theater. The Army's job is to fight and win the Nation's wars. But, our soldiers also maintain the peace—robust, ready, disciplined forces deployed around the world, and often long after the shooting has stopped.

At the end of the day, I'll still be talking to you about American soldiers and how well we have done at equipping them and caring for their families. In taking care of our people last year we focused on pay and retirement. This year we must build on that successful effort by focusing on health care and the well-being of soldiers and their families.

Readiness

The Army has a non-negotiable contract with the American people to fight and win our Nation's wars. Warfighting is job #1. But in addition to the requirement to be trained and ready for the warfight, The Army is globally engaged, heavily committed to meeting the daily requirements of the National Security Strategy (NSS) and National Military Strategy (NMS). On any given day, more than 140,000 Army personnel are forward stationed or deployed around the world. Soldiers and civilians stationed in the United States perform other critical roles, from keeping warfighting organizations ready for worldwide employment today to building the tools necessary to maintain readiness tomorrow.

The Army is the force the Nation relies on most heavily to perform the full spectrum of military operations. Since 1989, the average frequency of Army contingency deployments has increased from one every four years to one every fourteen weeks. Some of these operations have been brief; others have evolved into ongoing commitments for our forces. While executing these missions, The Army has remained ready at all times to meet the warfighting requirements of the NMS: to fight and win two nearly simultaneous major theater wars (MTWs). We are able today to meet the requirements of the NMS, but there is moderate risk associated with fighting the first MTW and higher levels of risk associated with the second MTW. In this context, risk does not mean that U.S. Forces would not prevail; however, achieving our objectives could require a larger expenditure of our national treasure.

As Chief of Staff, Army, I provide forces to the unified combatant commands. Indeed, it could be said that I work for the geographical commanders-in-chief, the CINCs. When North Korean fishing boats are bumping into South Korean naval vessels, Tom Schwartz gives me a call. When Saddam rattles his saber, Tony Zinni expects The Army, on short notice, to provide robust, ready, disciplined formations with which he can fight and win a major theater war in his region. On days when concerns about a warfight are not quite so nagging, Charlie Wilhelm, Denny Blair, and Wes Clark expect Army forces to engage in partnership exercises and military-to-military contacts within their assigned areas of responsibility. Those two demands—on-call warfighting readiness and day-to-day engagement and leadership abroad—are in tension with each other; doing one well detracts from the other. To do both well requires a fully ready, C–1 kind of Army—in our readiness parlance. And we have traditionally been a C–1 Army, but we are not fully C–1 today. Our soldiers are working hard to be that C–1 Army, and measures we have implemented, such as increasing the manning of our warfighting organizations, will help those efforts. With the help of the Administration and Congress, the momentum we started last year to improve our readiness condition was important. That momentum needs to continue, and with your continued support and vigilance, it will.

I have testified before various committees and subcommittees in recent months, stating that, as smaller-scale contingencies become long-term national commitments, The Army, like our sister services, becomes more and more of a rotational force. Our "carrier groups," the U.S.S. *Korea*, the U.S.S. *Bosnia*, and the U.S.S. *Kosovo*, are likewise teaching us the "rule of threes": for every formation on the ground, another is returning and recovering from the mission and a third is preparing to go.

The fiscal year 2000 appropriation helps us to mitigate the risk associated with these missions and to meet our readiness obligations. But, we are spending 4th quarter training dollars to fund contingency missions. We look for quick approval of a non-offset Kosovo supplemental to keep us from unravelling readiness in the 4th quarter.

Four Rules of Thumb

Now, allow me to address the third part of The Army Vision, probably the most talked about aspect of vision, the Transformation.

To begin, it is necessary to talk about the complex business of warfighting. The history of the military art, the principles of war, the tenets of AirLand Battle, and tactics, techniques, and procedures all boil down to four rules of thumb that are applicable at every level of war:

—We want to initiate combat on our own terms—at a time and place and with a method of our choosing.

—We want to gain the initiative and never surrender it.

—We want to build momentum quickly.

—And we want to win decisively.

But military forces that would achieve those conditions must beware of the transitions in war that can sap operational momentum—transitions from peacekeeping to warfighting, from the defensive to the offensive, from the sea to the beachhead. Negotiating those transitions is key to fighting within those four rules of thumb.

Military forces that can do so provide strategic flexibility to the national command authority, which must have flexibility in a crisis. The Army has historically provided those capabilities to its formations. For forty-five years of the Cold War, we followed those principles in preparing for war in central Europe against a formidable enemy—with well-trained and properly equipped forces, prepositioned equipment for follow-on troops, and infrastructure to support those formations. In Southwest Asia, we were fortunate during Desert Storm that our enemy afforded us a six-month delay that allowed repositioning that Cold War force and re-equipping it for a decisive win. A scenario absent that pause might have had other outcomes. And our adversaries have learned those lessons as well. In today's strategic environment, we must possess force characteristics that enable us to initiate combat on our terms, to retain the initiative, to build momentum quickly, and to win decisively. The Army must transform in order to develop and field a force that possesses these characteristics more fully today and into the future.

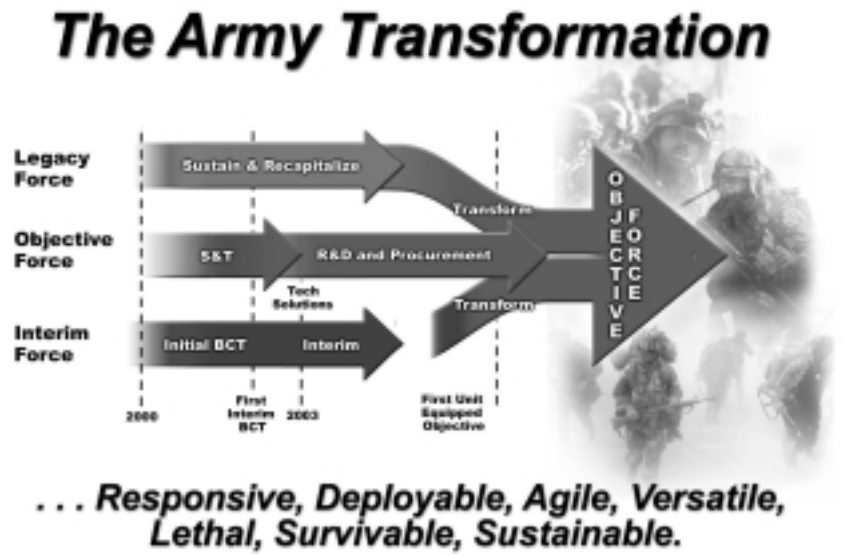
Transformation

That is why the third piece of The Army Vision addressed Transformation.

The Army Vision is "Soldiers on point for the Nation . . . Persuasive in Peace, Invincible in War." The Vision's goal is to ensure that The Army fulfills its Title 10 responsibilities, continuously meeting the requirements of the NMS. To do this will require The Army to transform itself into a full spectrum force capable of dominating at every point on the spectrum of operations. At present, in some instances, we face strategic deployment challenges that inhibit our ability to negotiate rapidly the transitions from peacetime operations in one part of the world to small-scale contingencies or warfights in another. We must provide more flexibility. We have heavy forces that have no peer in the world, but they are challenged to deploy rapidly. The Army has the world's finest light infantry, but it lacks adequate lethality, survivability, and mobility once in theater in some scenarios. We must change. The Army's Transformation Strategy will result in an Objective Force that is more responsive, deployable, agile, versatile, lethal, survivable, and sustainable than the present force. Thus, The Army has determined to transform itself to gain strategic flexibility and to become strategically dominant at every point on the spectrum of operations.

A force with these characteristics will have the ability to place a combat capable brigade anywhere in the world, regardless of ports or airfields, in 96 hours. It will put a division on the ground in 120 hours. And it will put 5 divisions in theater in 30 days.

These are operational imperatives, and to accomplish them, we have embarked on a search for technologies that will give us answers in about 3 years that we will use to design a future objective force 8–10 years down the road. Candidly, we don't have all the answers today; but we are asking the right technological questions, and we will go where the answers are. The Army has moved out.



The Transformation Strategy

Throughout this Transformation The Army must maintain its non-negotiable contract with the American people to fight and win the Nation's wars. Thus, implementing these profound changes will require careful planning, sustained support, and periodic reassessments and adjustments. A Transformation Campaign Plan will enable The Army to complete its evolution into the Objective Force while remaining trained and ready to meet NMS requirements at all times. The strategy synchronizes the Transformation by establishing intermediate objectives and conditions that must be met before implementing subsequent changes. Changes to the operational forces will be the most visible aspects of the strategy. Less obvious will be the simultaneous Transformation of the Institutional Army, along with The Army's concepts and doctrine, which will be essential to developing and sustaining the requisite capabilities of the Objective Force. In general, The Army's Transformation strategy will go forward along three major paths, as depicted on the attached chart: the Legacy Force, the Interim Force, and the Objective Force.

Interim Force

The Army will begin fielding a Brigade Combat Team (BCT) at Fort Lewis, Washington this fiscal year. This initial BCT, the first step toward the Interim Force, will accomplish two goals. First, it will give The Army an enhanced capability for operational deployment to meet worldwide requirements. Second, the initial BCT will validate an organizational and operational model for the Interim Force. Based on this validation, The Army will field the Interim Force. As a follow-on to the initial BCT, we have set aside funding for an additional Interim BCT each fiscal year through the Five Year Defense Plan (FYDP). These Interim BCTs—including the Reserve Components—will employ an Interim Armored Vehicle (IAV)—a yet-to-be-selected, off-the-shelf system that The Army will begin procuring in fiscal year 2000. With the IAV and a new operational and organizational structure, the Interim Force will possess some Objective Force characteristics, those that are available within the constraints of current and emerging technology. The Interim Force will allow us to respond to the immediate operational requirements that currently challenge us. It will allow us to train soldiers and grow leaders in the doctrine and organization of these new formations. These Interim Brigades will be the vanguard of the future Objective Force.

Legacy Force

As we do this, we must sustain portions of The Army as we know it today—a Legacy Force—to guarantee our warfighting readiness in the event that an adversary miscalculates. We will recapitalize selected formations—from the active and reserve components—of key armored and aviation systems, as well as enhance light force

lethality and survivability. We will continue to insert digital technologies with advanced systems such as Crusader and Comanche. Thus, the Legacy Force will maintain the capabilities we currently have and add others that are soon becoming available. We cannot neglect our ability to meet our non-negotiable contract as The Army begins its Transformation, and continues to transform over the decades to come.

Institutional Army

Not shown on the chart is the Transformation of the Institutional Army, which will begin immediately. This Transformation will address the systems, organizations, and processes by which the Institutional Army supports training, leader development, infrastructure management, sustainment, combat and materiel development, and well-being. The Transformation of the Institutional Army is essential to sustain readiness while developing and fielding the Objective Force.

Interim Capability

Taken together, the Interim Force, the Legacy Force, and the transforming Institutional Army will give us interim capabilities, more advanced than today's Army, especially in terms of greater responsiveness, agility, versatility, and deployability. These interim capabilities will enhance readiness as well as allowing us to develop doctrine, training, and organizational structures for the Objective Force.

Objective Force

The critical path of the Transformation leads to the Objective Force. Today, the science and technology community is working hard to develop answers to questions we have asked. How do we reduce armored volume in combat vehicles while increasing survivability? How do we increase deployability without sacrificing survivability and lethality? How do we reduce in-theater support needs, and thereby reduce strategic lift requirements? These and other questions guide a major science and technology (S&T) effort to develop technologies that will give the Objective Force its desired characteristics—responsiveness, agility, versatility, deployability, lethality, survivability, and sustainability. The President's Budget calls for $1.3 billion in fiscal year 2001 for this endeavor. $500 million of that will focus on developing future combat systems technologies. Our challenge to the science and technology community is to come back with a comprehensive set of technological recommendations and R&D plans by 2003. On that basis, The Army will make technology readiness decisions, and we anticipate eight to ten years of development before the new technologies are produced. When the technologies are mature and when the production lines are ready, we will begin to field the Objective Force in unit sets. Organizations will field complete suites of new equipment, thoroughly integrated systems; the whole designed to give us all of the capabilities outlined in The Army Vision. Transformation to the Objective Force will encompass the entire Army. The Legacy Force will transform directly to the Objective Force, and the Interim Force will follow. Over the course of ten to fifteen years The Army will transform itself into the Objective Force.

The budget request provides sufficient funds to support continuation of The Army's Transformation in fiscal year 2001. Since the announcement of the Vision in October 1999, The Army has worked closely with OSD to resource this requirement. We have restructured the fiscal year 2001 budget to fund the Transformation. The $100 million provided by Congress to assist with our initial efforts is greatly appreciated. It provides The Army with important flexibility as we move forward with this critical endeavor. Fielding the Objective Force while sustaining decisive capabilities will require significant resources throughout this Transformation. Given current funding trends, we estimate that The Army has identified funding for approximately half of the additional costs associated with Transformation. We will continue to work with the Administration and Congress to request the necessary support.

Historic Opportunity

This is the most significant effort to change The Army in 100 years. Our aim is not a single platform swapout, but a systemic change and full integration of multidimensional capabilities—space, air, sea, land.

Not since the beginning of the last century has such a comprehensive Transformation been attempted. Then, the new weaponry—aircraft, machine guns, rapid-fire artillery, motorized vehicles—were all being developed and tested in relative isolation. There was no shortage of ideas, but no one was sure what warfare would look like when all the pieces came together. The potential for that Transformation failed due to lack of funding and a lack of support outside the Army. When the First World War came, we were not ready. We integrated all those systems into the Army of necessity under the stresses of imminent combat.

Indeed, most opportunities for armies to change are forced by war. The major conflicts of this century—World War I, World War II, Korea, Vietnam, and even Desert Storm—provide myriad examples of military innovation under the pressure of combat. This effort is almost historically unprecedented—to change in time of peace because we know our condition, we are informed about our future environment, and we know what capabilities we will need.

Our Nation is at peace. Our economy is prosperous. We have strategic perspective and technological potential. This time is a window of historic opportunity that will grow narrower with each passing day.

We can transform today in a time of peace and prosperity. Or we can try to change tomorrow on the eve of the next war, when the window has closed, our perspective has narrowed, and our potential is limited by the press of time and the constraints of resources.

The Army is building support for this Transformation. We have been talking to the defense industry. We know that this Vision entails risk, but it promises great reward for our national security. We need to continue our long tradition of partnership between the Army and Industry.

The Army is transforming. The Army Reserve and Army National Guard are seamlessly integrated in this process, from the development of the Army Vision to the final fielding of the last Objective Force unit.

We're gaining support in Congress. For years, Members of Congress have counseled The Army to change—we're changing. Now, we need your help, but more than that we need your ideas, your criticism, your energy, and your enthusiasm. We need your approval and fiscal support.

Mr. Chairman and distinguished members of the Subcommittee, your Army is on the move. The Nation can't afford to miss this opportunity. Thank you once again for this opportunity to report to you today on the Transformation of your Army. I look forward to discussing these issues with you.

ARMY TRANSFORMATION

Senator STEVENS. Thank you very much, both of you. We appreciate your courtesy, and we are very pleased to see General Plewes behind you, representing the Reserves. We know that you have a great interest in this also, General.

Let me ask you this, General Shinseki. And we will use the 5-minute time clock if that is agreeable, so that everyone gets a chance to have some questions. What is the time line for this new armored brigade at Fort Lewis, Washington?

General SHINSEKI. We will begin to stand up the first brigade in fiscal year 2001. It is our intent that by December 2001-January 2002 we will see an operational capability in that first brigade. Again, that time line is driven by decisions yet to be made this summer on selecting the equipment platforms that will be acquired in order to stand up that brigade.

Senator STEVENS. That was my next question. What are those milestones, and what do you see for them in timing before you make that final decision about Transformation to Fort Lewis?

General SHINSEKI. This decision on platforms will occur during the fourth quarter of this year, sometime in the July-August timeframe. We hope, by no later than September, to have contracted acquisition of the interim armored vehicle systems that will then go into production and, beginning in 2001, late spring, summer of 2001, we look to be arriving at Fort Lewis to begin to fill out that formation. Such that by December 2001, we will have had the chance to organize, to have done some training, and have gotten the leadership ready to operate that brigade.

So December 2001 and January 2002, we look for that kind of operational capability, which we intend sometime thereafter to exercise and demonstrate its capabilities.

Senator STEVENS. Is there a hurdle out there with regard to tracked or wheeled vehicles? Has that decision been made?

General SHINSEKI. No, sir, it has not. And frankly, there has been a good bit of debate about tracked versus wheels. And I will admit that I am probably partially guilty for having raised the issue. Frankly, for this interim capability, whether it is tracked, whether it is wheeled, whether it is a mixture of track and wheels, I do not think the Army has any preconceived decision on that. We just want whatever is best available on the shelf that we can take very quickly, fill out our formations, bring them up to an operational capability, so we can meet a shortfall that we currently have today in the force.

Senator STEVENS. I may show my ignorance, but I do not know of any light tracked vehicles that are on the shelf, General. The only thing I know of that is on the shelf really is wheeled vehicles. Is it your intent to try and see if we can procure some wheeled vehicles and some tracked vehicles and try them out in the same brigade, or are we going to try one wheeled brigade and one tracked brigade and see what happens? It is sort of confusing. Because as I understand it, you are only going to go forward with one, and then you are going to go forward with a second one each year as I understand it.

General SHINSEKI. That is correct. The first brigade in 2001, and then what we have laid aside is a brigade each year thereafter, 2002 to 2006. We would like to accelerate that process, one brigade in 2001 and hopefully go to two brigades in 2002. But this is the matter of building the POM for the 2002–2007 timeframe.

Senator STEVENS. Does that depend upon money or upon the availability of the equipment that you are speaking about, or the decision as to tracked or wheeled vehicles?

General SHINSEKI. It is primarily availability of money. But I will also tell you that we will not frankly know what the production schedule is until we make that decision on which systems we will get sometime later this summer. But our intent here is, whatever we select, for that system to be able to go into production and to see systems begin arriving in the field here early in 2001.

Senator STEVENS. I am still nebulous about the wheels and tracks, so I will be back to you on that.

Senator Inouye.

OBJECTIVE FORCE

Senator INOUYE. Thank you very much.

In your statement, you said Transformation to the Objective Force will encompass the entire Army. Does that mean that you will eventually phase out your heavy divisions in favor of medium-weight units?

General SHINSEKI. Eventually, Senator, that is correct. The long-term intent is that Objective Force will have systems that are not as heavy as our heavy forces today, not as heavy as the M–1 and the Bradley, which are magnificent warfighting systems, but our challenge is to be able to deploy them and then sustain them in all the places we are asked to go. But the intent is, in the long term, to have Objective Forces that have weapon systems in them

that are deployable, but have the same lethality and the same survivability, if not better, than our heavy systems have today.

And it is based on the recognition that we designed the M–1 and the Bradley for the European environment, the Cold War European environment, which we understood what the environment demanded. It was a relatively shallow operational battle space. We expected to face a large Warsaw Pact initial attack. We understood that we had to survive that. We would take hits. And then we had to be capable of mounting a counterattack to reestablish the boundaries.

To do that, you have to design equipment that is going to survive in that environment. And so we designed equipment that would take hits and continue to fight. Under those principles, we ended up with systems such as 70-ton tanks. They are magnificent tanks. Still the best tank in the world. But less capable in lots of other areas where we are asked to go today.

If we were discussing a similar scenario like we had for the Cold War in Europe, I think we would end up with the same kind of solution. But, frankly, we need to move on and find systems that will fight as well, survive, and be as lethal, but are capable of being deployed to the places we are asked to go, and where the infrastructure does not necessarily support 70-ton systems—bridges, roads, the ability to distribute fuel and repair parts. And it is understanding our future environment that is causing the Army to embark on this Transformation.

LEGACY FORCE

But the answer to your question is, ultimately, in the Objective Force, which we see in the 2008–2010 timeframe, where we will begin transforming to that future system, we do intend to transform all of our formations, that Legacy Force, that is described on the top arrow, to a more rapid and more capable formation.

Senator INOUYE. I gather, at this moment, you are not getting all the resources that are necessary to bring about this Transformation. If that is the case, where would you put your priorities, modernizing your Legacy Forces or fielding an interim brigade or investing in science and technology?

General SHINSEKI. That is a good question, Senator, and it is a tough one. Our responsibilities to the Legacy Force is we have to sustain the force we have and do modest recapitalization to that force, because it is the force that we will go to war with in the next 10 years. If miscalculations occur and this Army is called upon again to fight a war for this Nation, that is the force that will go.

Keeping that Legacy Force ready to fight allows us the opportunity to go and invest in the S&T work that will define a future warfighting formation with new systems. Even as we do those two things, there is a shortfall today in our formation. And the shortfall I can best describe to you as, in Desert Storm 10 years ago, as Saddam began to move south and overran Kuwait City and moved toward the Kuwaiti border, and this Army deployed what it had, and it was a brigade out of the 82nd Airborne Division. We flew them in there and put them astride a high-speed avenue of approach that moved south into Saudi Arabia.

We got them in there and, frankly, all of us held our breath. Because if the movement south by Saddam's forces continued, we knew that the arrangement of warfighting was not one we would have chosen, heavy formations fighting light infantry. For reasons we do not know, Saddam stopped. He stopped at the border and he stayed there for 6 months. And that gave us time to reposition our heavy forces out of the continental United States and out of Europe, and the rest of it is history.

My operational requirement in describing the need for the interim brigades is to fix the problem that occurred 10 years ago. Today, if we were to go anywhere else other than Kuwait, where we have prepositioned significant resources, or Korea, where we have also prepositioned significant resources, if we were called upon to go to a crisis anyplace else, we would be in the same situation in a breakaway crisis. And that is, we would fly the 82nd light infantry assets in, and then we would wait for the first heavies to arrive.

These interim brigades are the bridge between the light infantry and the arrival of those heavy forces, to provide what the 82nd does not have today, mounted weapons platforms, the ability to move infantry tactically. One of our problems when we put the 82nd in, they were in. We could not move them in or out. And also to provide them a modest amount of assault weaponry, assault guns mounted on vehicles. And this interim brigade will provide to the 82nd Division, or any light division that goes in first, that added warfighting capability that fills the gap between the initial light infantry going in and the arrival about 30 days later of the first heavy elements. That is the pressure on getting an interim force stood up.

Senator INOUYE. Thank you, Mr. Chairman. I have a few other questions, but I will wait.

Senator STEVENS. Yes, sir.

Senator Hutchison.

OPTEMPO/RETENTION

Senator HUTCHISON. Thank you, Mr. Chairman.

General Shinseki and Secretary Caldera, one of the areas that is making the biggest impact on retention problems is deployment and overdeployment. I certainly talked to people this week in Bosnia and Kosovo, but it is not isolated. I have talked to troops on the ground in many other foreign countries, and the OPTEMPO is clearly a problem.

The Air Force and the Navy have been addressing this issue. The expeditionary Air Force is trying to give people the ability to plan ahead, know when they are subject to deployment. And this seems to give a good comfort level to the members of the Air Force with whom I have talked. And the Navy, secondarily, not as much so because there are other encroachments that have occurred in the Navy program.

My question is this. What is the Army doing to try to address the overdeployment issue and as it affects retention?

Mr. CALDERA. Senator, we are trying to do some of the same kinds of things in terms of building in more predictability for soldiers, identifying units far out ahead of time, when they are going

to rotate to one of these contingency missions. The initiative to man units at 100 percent means that you do not have to fill units as you are getting ready to deploy. Whenever you do that, it causes turbulence in other units and it is more likely that you are going to tap someone who may have already come back from an overseas tour or some kind of deployment when you end up moving them to the unit in order to be able to deploy them.

We have tried to add to that predictability by also, as you have noted, tapping more of our Guard and Reserve units who today are helping us perform all the missions that we perform all over the world, but also working some of the Guard and Reserve units into the rotation picture to spread out the burdens of the contingency missions and add to the predictability, as well. And of course we are in uncharted territory there in terms of maintaining employer support for the Guard and Reserve and the goodwill among the men and women who are committed to being citizen soldiers.

One of the benefits of Transformation is that if you move your heavy and light forces closer together, you can also build in more predictability. Today, all Army divisions are expected to be at the highest state of readiness, and so we do not have a built-in rotation where some are at the highest state of readiness and others in more of a stand-down phase with more family time and attention to other kinds of efforts to regenerate the force. So all of those efforts will help.

One challenge, of course, is when we set the glide path for the size of the military we would have, at the end of the Cold War, we did not anticipate that our Army would be as busy as it is today. And so we set the end strength goals for the Army based on predictions about how busy we would be. And if we are going to continue to be as busy as we are, performing the engagement missions that the Commander in Chiefs (CINC's) look to the Army to perform all over the world and the contingency missions that we are involved in, then I think it may be appropriate to look at what the end strength of the Army is.

Clearly, if we had additional soldiers it would be easier to do all of the things we need to do in terms of the schoolhouse and the sustainment piece of what the Army has to do in theater operations in wartime, as well as be able to support these contingency missions.

Senator HUTCHISON. Let me follow up with two questions. General Shinseki, did you want to speak to that?

General SHINSEKI. I was just going to add, Senator, I think you got to experience what our great youngsters on deployment think about their contributions. They think that they are making a difference. They think that they are appreciated. Frankly, they are charged up by these missions. So this is the great dilemma for us, that morale is pretty good on deployment, and yet we understand that this also places pressures on families and places pressure on us to take better care of them when they do come home from those operations.

The Secretary and I, in order to address some of these other issues, even as we were creating the study effort to undertake Transformation, looked at the Army War College, up at Carlisle, Pennsylvania, as a repository of talent for helping us understand

some of these other issues. And we asked that the War College create a student study group to do a couple of things. One was to look at turbulence. What were the causes? What could we do about it. Understanding we could not necessarily take it to zero, but then how do we get predictability into this? If you have turbulence, predictability becomes more important.

The second study group was designed to look at well-being in the Army, to look at all the kinds of support that we provide soldiers, families, civilians, veterans, retirees, and try to help us better understand how to quantify the importance of these programs so we can make a better case when we bring them here for articulation.

Senator HUTCHISON. Mr. Chairman, let me just throw out the other two questions. My red light is on, so if you want to move on, that is fine. But I just want to make the point that an 8-month time for a Reserve and Guard unit is a whale of a request. And I hope that you are talking to employers very realistically about how long these deployments are. And if it is in your mission, Mr. Secretary, that you are going to use Guard units routinely to fill in, I think you better look at the length of time very carefully. I know you have gone back to 6 months; I still think that is unrealistic, especially if you are talking about small business people. You just cannot overdo your Guard unit, or you really are going to be fraying at the edges.

Second, I just would ask, perhaps for the written record, what is your timetable for looking at your force strength? Because it seems to me that you are due an increase in force strength. And talking about it as if you are going to think about it in the future I think is probably not very realistic. I think it should be sooner rather than later.

Senator STEVENS. Gentlemen, we will take that as a comment and a question for the record.

[The information follows:]

FORCE STRENGTH

The 2001 Quadrennial Defense Review (QDR) and the Transformation are the vehicles that we will use to review our force strength and make force-sizing recommendations. Based on the geopolitical strategic environment, the 480,000 active Army force may not be adequate to meet the demands of the current National Military Strategy. The QDR will confirm or deny this.

The multiple, simultaneous, and long-term contingency operations in which we are involved stress our operational tempo (OPTEMPO) and deployment tempo (DEPTEMPO). The worldwide challenges to the Nation's security means ensuring geographic commander-in-chief (CINC) warfight requirements are satisfied and we maintain constant unit readiness. The Transformation will address this. Increasing Army end strength would help mitigate OPTEMPO and DEPTEMPO challenges, address high-demand, low-density military occupational specialty shortfalls, meet early deployment CINC warfight requirements, improve unit readiness, and better support the Transformation vision. We will review alternative force-sizing constructs and be fully prepared to respond to the questions posed in the QDR 2001 legislation.

We have been challenged in meeting our manpower goals over the past several years as the Army concluded its drawdown. Despite these challenges, we have met our end strength targets. The Army has made significant progress over the past several years in the three critical manning areas: retention, attrition, and recruiting. Continued success in the retention program, combined with improved attrition, has reduced future recruiting requirements. Recruiting in a tight labor market remains a challenge. However, we have significantly improved recruiting production over last fiscal year, and we will again meet our end strength target in fiscal year 2000. Anticipated success in these areas over the next two years will position the Army to

continue to meet end strength targets and fully meet near-term Transformation and manning goals.

HIGH ENERGY LASERS

Senator STEVENS. Senator Domenici.

Senator DOMENICI. Mr. Chairman, I do not want to take very much time. I am late myself for another appointment. I am going to submit a number of questions for the record. If you would just permit me to indicate to the two witnesses what they are, as well as my genuine interest.

Secretary Caldera, I have a brief statement with reference to the United States military, particularly the Army, working on tactical high energy lasers and airborne lasers. I ask for some of your observations regarding centralizing that and where that centralization might be, considering that General Costello is very, very interested in this area. I would like for you to comment in the record on that if you would.

To both of you, on this same issue, I have five questions regarding White Sands Missile Range and high-energy laser weapons for each of you. These questions are in reference to developing and fielding laser weapon systems and what each of you see as the short-term future as to where we go.

My next question has to do with information operations vulnerability. I understand that the vulnerability analysis at the Army research laboratories is underfunded. And I have two or three questions to ask you about that underfunding. It is not a lot of money, but if it is important to getting to where the United States ought to be in this vulnerability assessment, with recommendations on how America can minimize it, I think it would be important that we know.

And the same with reference to tests and evaluation. I am going to ask you to discuss the Army's current state of testing and evaluation programs, and that you elaborate on major needs. If you would do that at your convenience, I would appreciate it.

FOOD STAMPS

I want to close up by submitting a question with reference to food stamps. We have been on this issue so long and it continues to be in the limelight today. I have some specific questions about food stamps and the military. But first, I would just ask both of you, there is not an Army policy with reference to trying to limit the size of families in order to minimize the food stamp problem, is there?

Mr. CALDERA. None whatsoever.

General SHINSEKI. No, sir.

Senator DOMENICI. I note that both of them say there is not. I have heard rumors of this started by someone in the military. But there was never put a name alongside of it. I would not think the Congress would be very interested in saying to our military: You are going to have to be on food stamps because you have five kids; you would be better off if you only had two. We are trying to retain our military personnel for a long time. And it is not our job, nor in our best interest, to family plan for these military people. Are we in concurrence on that?

Mr. CALDERA. There is none of that whatsoever, Senator. At the time that you enlist a soldier, as they go through basic training, they are not supposed to have responsibility for other family members. But sometimes what they do is they just leave the kid with mom or dad or grandma or somewhere, and then, after they go to their unit, children rejoin them. And as long as they have a family plan for, if they get deployed, who is going to be responsible for that child, then they are soldiers in good standing.

LEADER DEVELOPMENT

Senator DOMENICI. My last observation, and it may be the only one I would ask you to answer today. It has to do with The Washington Post story which reported the results of a survey of junior officers. I think, General Shinseki, you are aware of the results and are trying to do something about the concerns raised. Are you going to consider the survey criticism seriously, and what do you plan to do about it?

General SHINSEKI. Without responding to that particular article, because there were several and I am not quite familiar with what that article measured as the bottom line, let me just explain that as we began this Transformation initiative in the Army, and much as described by Senator Hutchison, both the Secretary and I walk the terrain and talk to youngsters. And besides turbulence and employee concerns, we hear other things from our young officers. There were some issues regarding leadership and focus on training. And so the Army began planning to stand up two, what we would call for lack of a better description, blue ribbon panels to look at how we train in the Army and think about how we might want to change that in the future.

The second panel had to do with leadership and leader development. And we thought these were both appropriate panels, because it is the business of the Army every day to do those two things. We train soldiers every day and we grow them into leaders. Our leaders of tomorrow are today's soldiers. We do not hire out 20 years from now. Whatever inventory we have 10 to 15 to 20 years down the road from which to select our leaders comes out of our inventory today of youngsters. And so we thought that training and leadership was an appropriate focus for the Army at large.

In response to these panels that had been described out at Leavenworth, where we have some of our brightest young officers in attendance for a year of schooling, some preliminary work was anticipated, where youngsters were called in and asked, the Army is standing up these two panels, if you had something to contribute, what would you say is wrong, what should be fixed? And those questions are unfortunately focused on the negative.

If the question had been, what do you think is going right and what do you think is going wrong, I think you would have had a different outcome. But the focus of the question was, if you are going to help the panels out, where would you like to focus the Chief and the Secretary? So, as a result, with non-attribution, these questions were answered. And unfortunately, and somewhat to the disappointment of those students, it ended up being on the front page of The Washington Post.

These are great youngsters. Some of our future leaders are there. And we are going to stand up these panels and we are going to go take a look at what they have asked us to focus on.

Senator DOMENICI. Thank you, Mr. Chairman.

Senator STEVENS. Senator Cochran.

RESERVE COMPONENT DEPLOYMENT

Senator COCHRAN. Already there has been some discussion about the deployment experiences of the Army in recent years. That has obviously become more extensive and more expensive. The fact that we have National Guard and Reserve units now making up part of the rotation in Bosnia is a matter of some concern. Because, if what I am hearing is true—it may be anecdotal or there may be other evidence—there are some members of the Guard and Reserve units who are resigning or dropping out because of these deployment orders that are coming down and the fear that there will be more of the same.

What are the statistics on this? Do you have any information you can share with the committee, Mr. Secretary or General Shinseki, on this issue?

General SHINSEKI. I am not aware of any statistics that I could provide. I will try to see what we have in terms of how these deployments are specifically affecting retention. In the Reserve component units, retention in Reserve component units has a certain level of turbulence. To say that we have been able to measure what the deployments have done above and beyond that normal retention factor, I do not know that we have the analytics quite yet.

This deployment of a major unit to Bosnia, the 49th Armored Division, Texas National Guard, is the first large deployment like this. We have had other smaller deployments of individuals and detachments. Let me see what we have, and I will try to provide a better answer.

[The information follows:]

RESERVE COMPONENT DEPLOYMENT AND RETENTION

From December 1995 to February 2000, the ARNG has deployed more than 5,400 soldiers in support of operations in Bosnia. The post-deployment attrition rate for returning soldiers from September 1996 to March 1999 is averaging 20 percent. The average attrition rate for the ARNG during this period is 18.1 percent to 19.4 percent. ARNG soldiers are leaving primarily because of completion of their service obligation, followed next by completion 20 years of service. The attrition rate for ARNG soldiers who demobilized from the first two Bosnia rotations, from September 1996 to July 1997, was 15.9 percent. The corresponding ARNG attrition rate was 18.6 percent.

We have mobilized USAR soldiers to support Bosnia operations for a fifth year. Additionally, we have deployed USAR soldiers and units, not as part of that Presidential call-up, for support missions to 63 other countries. During this period of increased deployments, the USAR, using expanded entitlement programs and improved management processes, has achieved great success in reducing enlisted attrition to 26.6 percent in fiscal year 1999. For fiscal year 2000, we expect attrition rates to continue to improve and have projected a year-end attrition rate of 27.4 percent.

A more in-depth study of attrition losses is required to determine if the duration or frequency of deployments has influenced reserve component retention. We are concerned about the environment created as increasing numbers of reservists have to serve more than the traditional one weekend per month and two weeks per year training. We believe the frequent deployments and escalating competition from employers and educational institutions, intensified by a robust economy, will continue

to challenge our best retention and recruiting efforts and may require more resources to counter.

SCIENCE AND TECHNOLOGY

Senator COCHRAN. Thank you very much.

In your Transformation plans, I noticed that science and technology is highlighted as an important asset. I know that composite materials research provides lighter and more durability possibilities for equipment and weapons. Is research and development (R&D) funding included in this budget at a level that meets the needs of the Army for such composite materials research and specific development programs such as the Advanced Army Medium Brigade Bridge?

General SHINSEKI. I would have to go and consult what the level of funding is, but I would say, Senator, probably not. The fact is that the amount of money we have been able to invest for 2001, put in the budget, for S&T investments is $500 million a year each year for the next 5 years. And I would say that more investments need to be made there in order to get the momentum in technologies up, so that in about 2003–2004, we get back real answers, quality and quantity real answers, on future technologies that allow us to then design those future platforms 8 to 10 years out.

Specifically, things we are looking for are low-observable technology, better armor protection, long-range acquisition. We want the range overmatch. We want to shoot first every time. And we want to kill every time we pull the trigger. So precision counts here. And we want to do it at smaller calibers. Off the top of my head, those kinds of technologies, along with microtechnology, fuel efficiency to drive down the cost of operating our systems, are the kinds of technologies we are looking at.

Senator COCHRAN. One of the things I noticed in your plan for the future is to have a more digitized Army, that you have a network of data, information, integrated command and control to commanders at all echelon levels. You are planning to have the first digitized corps in fiscal year 2000, but the funds are not here in this budget to make that come true. At least that is my impression. Will the currently planned procurement of such systems as enhanced position location and reporting system provide the first digitized corps with its radios in time to meet operational requirements?

General SHINSEKI. That is a level of specificity on time line I would like to comment for the record, Senator.

Senator COCHRAN. I have some other specific questions about these systems, and I would be glad to submit them and give you an opportunity to review them and give us answers for the record.

General SHINSEKI. Thank you, Senator. I would like to be precise here and I would like to provide it to you for the record.

[The information follows:]

DIGITIZED CORPS FIELDING

The digitization strategy is on track to equip the 4th Infantry Division—the first digitized division—by the end of 2000 and the III Corps—the first digitized corps—by the end of 2004. Both are adequately funded for procurement of required systems to achieve operational requirements on time. Digitization remains a critical enabler in the new Army Vision by significantly enhancing our warfighting capabilities of

the Transformation forces. Digitization exploits advances in information technology to achieve full spectrum dominance and improve battlefield organizational effectiveness by allowing systems to operate synergistically. The Army will not slow efforts to digitize the force and remains committed to fielding digital capabilities to support our soldiers, our units, and our ability to communicate securely.

Senator COCHRAN. Thank you, Mr. Chairman.

Senator STEVENS. Thank you.

Senator Durbin.

SCHOOL OF THE AMERICAS

Senator DURBIN. Thank you, Mr. Chairman.

For Secretary Caldera and General Shinseki and all of the staff that have joined you, let me express my gratitude for your service to our country. And I think it goes without saying that every member of this subcommittee and every Member of Congress appreciates the sacrifices you have made for our country and continue to make. Though I may raise some questions here that may be critical in nature, they do not in any way reflect on my lack of respect for all that you have given to this country and continue to give.

First, I would like to ask the Secretary, on a very contentious and hot issue about the School of the Americas. This is an institution which has been in place for a long time now. It has been swirling in controversy certainly on Capitol Hill, with contentious votes on a regular basis in the House of Representatives and a lot of debate as to the history of this institution and its future.

I think it is well documented that in the past the School of the Americas has included among its graduates some army personnel who have gone back to Central and South America and been engaged in some of the most outrageous conduct; certainly conduct which none of us would want to be associated with—human rights abuses, torture, murder of innocents civilians, and the like.

Mr. Secretary, there are two questions I would like to ask of you. I believe that you have made a personal commitment to changing the climate around the School of the Americas and have really sought out ways to change the image of this institution. There are two things that still concern me. That is the unwillingness of the Army at any point to acknowledge what were clearly abuses in the past associated with the School of the Americas. I think an honest acknowledgement of those abuses would go a long way to at least beginning a dialogue to reassure us that the School of the Americas or some successor institution in the future would really have a much different philosophy and a much different approach.

My first question of you then is, why will not the Army just flat out acknowledge the fact that there have been men and women graduated from that institution who have done things that are a great embarrassment to the United States and that some of the practices and policies of the School of the Americas were just plain wrong?

Second, in a more topical context, we are being asked to appropriate massive sums of money for the efforts in Colombia to deal with the drug problem. It is a drug problem of great concern to every American. And it should be, when we find that the country has now become a major source of cocaine and heroin exported to the United States, causing untold damage in our society.

We know that the military in Colombia is dreadfully unprepared to deal with the situation. Press accounts suggest that they are only one-third operational at this moment. We also know that concessions have been made to paramilitaries and other groups in the country, which have surrendered almost 48 percent of the geography of that country to groups not under the control of the government.

I have now learned that the School of the Americas continues to train the Colombian military. I am concerned about what appears to be a cross-pollination of civilian paramilitary and military groups, human rights abuses in Colombia, and the fact that we are talking about a massive commitment of military resources into a country that is rife with civil war and discord. I am concerned about whether or not we have a clear and specific strategy and whether the curriculum at the School of the Americas is consistent with a strategy that we can defend to the American people.

Those are my two initial questions.

Mr. CALDERA. Thank you, Senator. First of all, Senator, I looked at the debate that occurred in the House last year on the School of the Americas, and we have put together a legislative proposal that I think furthers our ability to provide the kind of training and engagement that we want our Nation to do with the militaries in Latin America.

What I heard a lot of the members saying is they wanted a school that strengthens democracy, that teaches protection of human rights, that works on the fundamental challenges that the countries in Latin America are facing today in the 21st century, not the Cold War challenges that they faced when threatened by communists and Marxists and insurgencies in the eighties as the Cold War played itself out. And this legislative proposal I believe will do that, because it will put into place those goals—disaster assistance, counterdrug operations, strengthening democracy, the appropriate role of a military in a democratic society as subordinate to the civilian elected officials.

I hope you will take a close look at that proposal, because I think it is a way for us to continue to provide a training that I think we want Americans training the militaries of Latin America, helping them become more professional military bodies and more responsive to societies we serve. And we do not want anyone else doing that kind of training and having that kind of influence here in our own hemisphere.

Senator, the question of willingness to acknowledge, that very specifically you asked, wrongdoing, I think there is a fundamental difference about whether violations of human rights were because of training at the School of the Americas or in spite of training at the School of the Americas. We do not teach American soldiers to torture or rape or murder or be human rights violators. And we do not teach that to other countries. And those who have done that, there is a little bit of causation being attributed here that I think is not there. That because they went to the School of the Americas, they were human rights violators.

For some, their association was ages ago, in very tenuous capacities, in courses that lasted but a few days or weeks. For others, more recently. So that whole causation, about whether the School

of the Americas or the United States Army should be fingered as having responsibility, when we do not teach those things, and in fact when what we teach is exactly the opposite, I think that there is a fundamental fairness to that issue.

I think a lot of the concerns that people have raised about the School of the Americas they could substitute the United States Army or the United States military, the United States Armed Forces, or the United States as easily in many of the kinds of charges that have been levelled about whether our country was right in terms of its involvement in Latin America during those critical years in the eighties as the Cold War played itself out there.

As you know, President Clinton last year went down there and said he felt sometimes our involvement went too far. But even throughout the eighties, we took our support away from nations that had bad human rights records, of countries that we supported. And then, when they cleaned up their records, we would support them again. Today at the School of the Americas, we vet soldiers and we vet units that come to the school there so that they are not known human rights violators, including soldiers from Colombia.

I went down to Colombia. I spoke to their war college specifically about the importance of human rights, and not just with respect to the Revolutionary Armed Forces of Colombia (FARC), which they are human rights violators, but with respect to the paramilitaries as well. I believe the Colombian military is as focused on opposing paramilitaries as they are the guerrillas, both of whom are human rights violators, both of whom are involved in drug trafficking, both of whom enslave that population that they turn into either producers of drugs or guerrillas defending the drug cultivation.

This plan in Colombia has an ability to stem the acreage that is being dedicated to cultivation of the drug, because they do not control, as you said, many large segments of the country, and they cannot control it, just by presence. That is how they get overrun, and that is how the guerrillas appear to be defeating the government.

They will operate out of a base camp where they will use the airlift that the Blackhawks provide to go out into the area, to take down the areas where the drug is being produced, to eliminate the precursor chemicals that are really wreaking environmental damage, to arrest the individuals who are there, and then go back to their base camp. And from that base camp, they can operate and control larger areas and begin to reduce the amount of acreage that is being devoted to drug cultivation. I think that will work.

Senator DURBIN. Mr. Secretary, I am sorry to interrupt you, because my time has expired. I will wait until the second round for a follow-up question, but I will just close by saying that if we are ever going to have a constructive conversation about——

Senator STEVENS. Senator, we have gone 12 minutes into this right now.

ARMORED GUN SYSTEM

General Shinseki, I forgot to ask you about the armored gun system and how that fits into this Transformation. We have spent a

lot of money developing that system. Are you going to utilize it now as we go into this new concept in Transformation?

General SHINSEKI. Senator, the armored gun system is one of those platforms that showed up in December for the side-by-side demonstration. And I expect it will be one of the candidate models that will show up in the July timeframe for this final decision to downselect. And if it meets the requirements best, it has a very good chance of being contracted for production.

INFRASTRUCTURE

Senator STEVENS. I note that Transformation is a very important subject as far as you are both concerned, but some of us are concerned about the infrastructure needs at existing bases and whether or not this process we are going into now is going to postpone further some of the modernization and upkeep, the deferred maintenance on the bases. I am particularly concerned of course with those in my State, and I think Senator Inouye and others, those in their own States. But what are we going to do about the requirements of existing bases during this period of time and catching up on some of the funding that is necessary?

I am concerned about the quality of life issues that are being affected by the failure to maintain some of our bases. What is going to happen during this Transformation in regard to those concerns?

General SHINSEKI. For the interim brigades specifically, which is what you have asked about, let me just say that in the larger budget, base ops is, as I recall, being funded at about the 96 percent mark. In terms of real property maintenance (RPM), where we have been challenged, we are around the 80 percent mark.

Mr. CALDERA. Sixty-nine percent.

General SHINSEKI. Sixty-nine percent. And it is always an effort on our part to get more dollars into this.

When we talk about the cost of fielding an Interim Brigade Combat Team, part of that cost does look at the requirement to have a location into which that brigade can move and have the kinds of support requirements that go along with it—motor pools, ranges, training areas.

Senator STEVENS. Let me get just a little more specific if I can. The two of us, Senator Inouye and I, live offshore. And people in our State are semi-forward deployed. We have the forward deployed in Korea when we have the OCONUS operations. It just seems to us that those of us that are in between neither get the priority for forward deployment or the priority now for modernization for Transformation. What is going to happen to our facilities in Alaska and Hawaii as far as the Army is concerned?

General SHINSEKI. Senator, we are in the process of now identifying where these future brigade combat teams, beyond the first two that we have identified to go into Fort Lewis, where likely sites might also accommodate those remaining brigades that follow on. And I would just say that both Hawaii and Alaska are being looked at as potential sites. And I think this would also acknowledge that there is a requirement to do some preparation work in both those locations.

Senator STEVENS. I would hope so. We sort of feel left out right now. And I do not know what is going to happen to our facilities.

If we do not get selected and our people are not selected to be the next two, then that means that we are going to be 4 or 5 years behind before we are through.

I do believe that the semi-forward deployment that our two areas offer the military is very strategic. But we will talk to you about that later. I do not want to go over the time here.

Senator Hutchison, you had some questions. Do you want them answered now or do you want to ask more questions?

Senator HUTCHISON. I just want to ask one other question. I do think, Mr. Chairman, I cannot emphasize enough the impact of overdeployment on retention. And I do hope that you are going to address that by really talking to employers of Reserve units and listening to their answers. Because there is a disconnect that I am seeing between what I hear and what I hear many of the Army personnel saying. So that is very important.

MILITARY HOUSING

I wanted to ask you one other question on the budget. And that is that your budget has an overall increase of approximately $800 million. And I understand and agree with your priorities for the kind of Army that you are trying to produce. However, what you have had to cut back on is military construction and family housing. My question is, are those cuts of muscle and bone or are they areas where you feel that our housing is now up to what it ought to be? I am concerned about that, as we are talking about retention and quality of life, that this is an area that you are having to cut back on.

Mr. CALDERA. Senator, as we try to put together the Army budget, of course we are trying to balance a lot of priorities in terms of maintaining the readiness that our country is counting on: quality of life, the needs of soldiers, as well as modernization and investment for the future. And we are not able to do all of the things that we would like to do, neither for the active forces nor for our Reserve components.

Our housing is not where we would like it to be. We have been working with the Congress in terms of implementing the residential communities initiative, to leverage private capital to invest in family housing. We have three projects that we are working on at Fort Hood, Fort Meade, and Fort Lewis that I think have great potential in terms of getting out of a business that is not really a core business for the military, building and managing housing. We are privatizing it, giving it to the private sector who can do a much better job of providing the kind of housing with the amenities that we want our soldiers to have and can use their capital and their expertise as homebuilders. And we think that that has great potential.

There are many other things in the military construction that we should do. Much as Senator Stevens pointed out, technology gives you a chance to upgrade your ranges, with much better instrumentation that can give you much better feedback in terms of the exercises that you perform, of how the leaders are doing, how the units are fighting and how effective and accurate they are in their maneuver, their rates of fire. And we want to be able to make those kinds of investments to use technology in that kind of way.

So there is modernization that ought to occur at all Army installations that we will program through future POM's and get to it as quickly as we can and certainly at those early deploying, high priority installations, places where we are doing Transformation, perhaps earlier than other places.

UNFUNDED REQUIREMENTS

Senator HUTCHISON. If we were to restore some of the cuts that you have made in order to address your other priorities, would it go into family housing, or barracks housing for that matter, improvement or are there other priorities that you have cut that you think are even more urgent?

Mr. CALDERA. Our top unfunded requirements are restoring some of the readiness plus-up that we were not able to get to because we did not get all of the readiness plus-up for other Department of Defense priorities. And some of those did include our real property maintenance. And our top unfunded priorities programmatically are the Grizzly and Wolverine systems that we had to kill to fund Transformation, but which we continue to have valid requirements for.

General, did you want to add to that?

General SHINSEKI. I would say that the three areas that we are looking for help on is to improve or increase the S&T investments. As I indicated, if we are going to get quality and quantity answers in 3 to 4 years, we have put as much energy as the Army can afford right now—$500 million into S&T—additional resources would go there.

The second priority here is the Wolverine and Grizzly investments. And third is the readiness issues, the shortfalls that we have had for years now, and it is a compendium of requirements.

Senator HUTCHISON. Thank you, Mr. Chairman.

Senator STEVENS. Thank you.

Senator Inouye.

FISCAL YEAR 2000 SUPPLEMENTAL

Senator INOUYE. I believe that the greatest risk among all the Department of Defense (DOD) activities in regards to the fiscal year 2000 supplemental is the Army. In fact, you are spending about $1.5 billion out of your existing funds to support Kosovo. The Secretary of Defense just set aside $200 million. And as a result, you will be able to keep the National Training Center (NTC) going.

Now, many of us here are quite concerned as to what is going to happen to the supplemental in fiscal year 2000? The question I would like to ask is, what impact will the delay on the supplemental currently is having on you and when will you have to take drastic actions if the funding is not forthcoming? And it would appear at this stage, unless we move within the next few weeks, it may not be timely.

Mr. CALDERA. Senator, both the issue of full reimbursement and timely reimbursement are critical. Because once you lose the training opportunities, you never get that time back for training, and it disrupts the training cycle that goes from individual squad level training to platoon/company level, higher echelon level, up to those

National Training Center rotations. We of course do not want to do that.

One concern is, even when you issue the guidance that says to begin to think about how to cut back on expenditures, many people will throttle back on their training plans, and the impacts will be felt even if the supplemental is passed shortly thereafter. The kind of things that we do early on is stop some of our capital fund expenditures, some of our payments to other defense agencies, start planning for things like cutting back on some of the civilian hiring, promotions, PCS moves, all ways of trying to conserve resources.

We would begin to cut back at lower level echelon training at first rather than affecting the larger-scale NTC rotations, which are so critical to maintaining readiness. You start cutting back on the ordering of spare parts or on sending work to a depot, so as not to have to expend those resources. But if you start cutting back on ordering spare parts, it means, as you are pulling it off the shelf, that may be the last one. And so that is an impact that, even when the supplemental is passed later, will take months and months, if not 1 year or more, to catch up to the work that you should have been doing in terms of your maintenance at different levels.

So those are some of the kinds of actions that we would need to begin to take in order to begin to both shift the dollars that we need to continue to pay for the Kosovo mission and then to start to husband those resources, both so that we can live within our appropriation and for supporting that mission.

Senator INOUYE. General Shinseki, if these supplemental funds are not available by Memorial Day, by the end of May, what impact would it have on your readiness?

General SHINSEKI. Senator, what we would need to have is the assurance in May that the funds are coming. And if the assurance is provided, then we can make decisions about fourth quarter training. If that assurance is not provided, and it is possible that funds may not be coming or the question is left unanswered, then we would have to begin looking at fourth quarter training, because the long lead time that goes along with training in the fourth quarter requires us to order things in order for that training to happen. And once ordered, beyond a certain point we have to pay for it. And to ensure that we do not exceed our available funds in that fourth quarter, we may have to make decisions earlier—for example, in June.

There is an indication in May that the funds will be provided and the funds physically arrive in July will allow us to stay on track. But the decision or the indication in May would be helpful about whether or not a supplemental is going to be provided. And that is why, in my opening comments, I did point out that the chairman's efforts to move on the supplemental and your support was an indication to the Army that it could count that it was going to get the funds. It is just a question of when. May, it would be helpful for us to know, in May. And that will put off having to make these decisions about cancelling long lead time requirements for fourth quarter training.

Senator INOUYE. Mr. Secretary, when would you have to take drastic actions, such as furloughing civilians or invoking feed and forage?

Mr. CALDERA. I think by July, if we do not have the supplemental, the money in hand.

Senator INOUYE. In other words, by the end of June, if you do not have it in your pocket, this is going to happen?

Mr. CALDERA. By the end of June, if the measure has been passed and it is really just getting through DOD to actually get money in hand and through the process that that has to go through, we could survive for a couple of more weeks. But if by the end of June it had not been passed, then we would have to start taking those kinds of measures. And of course, invoking feed and forage is one option that is an option where we will be living outside, beyond what our appropriated support is. And of course that is a drastic step that we would prefer not to have to take obviously.

Senator INOUYE. I have a few more questions, but my time is up.

Senator STEVENS. At some point we are going to go into the question of what is your authority to use the money we appropriated for specific purposes in Kosovo without it being specifically appropriated for Kosovo. That is background to what the Senator is asking, too.

Senator Durbin.

"BLACK HAWK DOWN"

Senator DURBIN. Thank you very much. I have two questions. I do not know if I can get them in this turn or if I will need another turn, but I will try to be very brief.

General Shinseki, one of the most popular books in America today and one that I recently finished is a book entitled "Black Hawk Down," which tells the story of Mogadishu and what happened in that tragic situation. The lessons that I have learned from that as a Member of the United States Senate were first the obvious and extraordinary heroism of the men who were involved in that mission. Second, the questions that really relate directly to the whole question of Transformation. Because I believe that what we were attempting to do there was to use this more flexible and mobile and lethal and survivable force to deal with the situation.

I think you are on the right track, and the Army is on the right track in this Transformation. If you have read this book or if you were familiar with the circumstances there, the two things that struck me was, first, the vulnerability of the Blackhawk helicopter, which apparently was not appreciated until we actually saw the helicopter shot down. And, second, the breakdown in radio communications between the various resources available to the troops on the ground, the fact that they did not have direct communication. Those were the two things that jumped out at me as a civilian, making this analysis.

If you have read the book or if you are familiar with this, reflecting on what it had to say and this whole Transformation, can you make some observations for the committee?

General SHINSEKI. It has been a while since I went through the book, but I think, for me, what "Black Hawk Down" pointed out was the importance of understanding how we ought to think about

organizing and equipping and training our military forces. What "Black Hawk Down" pointed out first for me was you can easily go into a situation thinking that you are in one kind of an environment and, in a matter of minutes, because someone else chose to raise the ante, that you are in a hot fire fight.

And if you are going to be in that situation where the parameters can change very quickly beyond your control, then you better go in organized for the hot end of this, because that is where you will end up. And you need to have capabilities, you need to have the equipment, the communications gear, the training at that very high level of rigor and precision, because that is where all of those capabilities get called into focus.

But I think what we experienced there was a quick change in environment. I think we understood there was a risk. It changed faster than any of us could have appreciated. And what we relied upon was the great valor of those soldiers to operate in that environment. And I think what you will see is, even though there were some significant losses, the soldiers who continued the mission and extracted themselves did magnificently.

Senator DURBIN. No question about that. Would you address the specific question of communications? I was stunned to learn that the planes overhead and the information overhead could not be directly communicated on the ground so that they could extricate themselves from this dangerous situation. Has that changed?

General SHINSEKI. I would have to go back and see exactly what kind of communications gear they had available and what they were trying to link. I think there is a better answer than I could give you today. It did not capture my attention as it did yours, but I will give you a better answer.

Senator DURBIN. Perhaps if you would for the record, I would appreciate that very much.

General SHINSEKI. I will do that.

[The information follows:]

"BLACK HAWK DOWN"

Mark Bowden's book, *Black Hawk Down*, cited the inability of P–3 Orion Navy pilots to talk to Army ground commanders during the October 3, 1993, battle in Mogadishu. Mr. Bowden infers that had the pilots been able to talk directly to the commanders, they may have been able to provide information to facilitate the ground forces' extrication from a dangerous situation.

The equipment on hand was capable of communication between the Navy aircraft and Army ground forces. However, pre-configured communications nets did not allow individual Navy aircraft to talk directly to Army commanders on the ground. Communications nets are developed for each mission based on anticipated requirements to distribute information, share reporting, and provide tactical direction. Normally, component commanders talk to other component commanders on command nets, and individual aircraft talk to their unit commanders on their internal unit command nets. The Navy component commander always has the ability of communicating with the Army component commander in any joint task force. Individual elements, like aircraft, would report to their commanders who, in turn, would pass the information.

Current technology can provide real-time air-to-ground communications to commanders at most levels. However, the feasibility of doing this is carefully assessed before each mission. The necessity and usefulness of the information must be balanced with the adequacy of existing intelligence reporting and the ability of the commander to rapidly acquire and distribute the information. Having too many subscribers in one command net can seriously degrade the ability of commanders to command and control their units.

The primary problem during the Mogadishu mission was that the events rapidly evolved into an unanticipated situation. Previous missions did not require extensive communications between airborne and ground force assets. Commanders opted for pre-configured communications nets that were not encumbered with all assets trying to talk to each other while commanders attempted to control the mission.

ARSENAL UTILIZATION

Senator DURBIN. Mr. Secretary, one last question on the lightweight howitzer program. The General Accounting Office has come back with an interim report which suggests that Vickers has at least fallen 2 years behind in some of their contract requirements. This is a contract which is not moving as we had hoped. I do not believe the Army can be satisfied with the results. You know that my perspective is from the arsenal side, that believes it has been shortchanged in opportunities to provide, as they have traditionally, good equipment on a timely basis for the military to use.

Is there a resistance within the Army to using our arsenal resources even in the face of what appears to be a breakdown on the private side in the lightweight howitzer program?

Mr. CALDERA. Senator, there is not a resistance to using the arsenal. There is a belief, and of course this is a Marine Corps program that the Army is helping to manage, that we ought to use the best and lowest cost way of producing this weapon and getting it into the hands of our soldiers and our marines and that we ought to let the benefit of competition determine who the contractors and who the subcontractors ought to be in that proposal.

With respect to Rock Island Arsenal, our challenge with arsenals is frankly that we have not had enough work to go around to the arsenals in order to utilize the capabilities that exist there. And so we have been looking for the kind of work that we might be able to direct to the arsenals in order to use that capability. We have been looking at trying to right size the arsenals in terms of lowering the overhead in the unused capacity so that their labor rates are in line with something that would allow them to be competitive for work.

And we are currently doing a study of that kind of capacity and what our need is for that kind of capacity both for sustainment and replenishment after wartime. And answering the question which I have posed to our folks, which is if we need this capability and this capacity, how will we fund it so that the only way of funding it is not just by forcing program managers to make uneconomic decisions within the context of programs in which they are measured by trying to stay within budget as a way of paying for it? Is there a better way for us to pay for the capabilities that we do in fact need as a Nation?

Some of that may involve things like going to government owned or privately contracted or privately owned arsenals. That study will be completed some time this year. But I think it is an effort to try to look at how we look at this capability that the arsenals represent to make sure that we do have the capability that the Nation needs and that we are not always in this spiral of being unable to attract work because the labor rates are so high and then that just feeding into itself.

Senator DURBIN. If the Senator from Hawaii will allow me to make one closing comment.

Thank you, Mr. Secretary, for that. I agree with the concept of competition. I certainly believe that the arsenals should compete. And if they can provide the best equipment at the best price, they should be given a chance to compete. I think the lightweight howitzer program shows what happens when there appears to be a bent toward the private side. We had a breakdown, where the original contractor, Textron, had to have the contract taken away from it. Vickers stepped in, and now they have fallen behind.

It appears from the arsenal side that every excuse is being made when it comes to the private sector competition and no opportunity is being given to the arsenal to prove that it can do the job effectively at a low-cost option. I am heartened by your comments, and I hope that we can follow through on those.

And the last comment I will make is just very brief. I support the effort, the acquired immune deficiency syndrome (AIDS) in Africa effort, which I believe is going to be included in this appropriation. I think it is a very thoughtful approach by our military to make certain that if we are ever called on to deal with the military forces in Africa, that we have done our level best to make sure that they are disease free and can be part of an effective combined force, including the United States.

Thank you very much.

Mr. CALDERA. Thank you, Senator.

Senator INOUYE [presiding]. Thank you.

POWER PROJECTION

General Shinseki, your stated goal is to be able to deploy one brigade within 96 hours to anywhere on the planet.

General SHINSEKI. That is correct.

Senator INOUYE. One division in 120 hours and five divisions in 30 days.

General SHINSEKI. Those are stretched goals for the Objective Force, Senator.

Senator INOUYE. It would appear that if you are going to carry out this plan, you would need immediate air transport. Now we have two active bases at this time, one in South Carolina, the other in the State of Washington. There is a National Guard unit in Mississippi, a training unit in Oklahoma. Under your plan, it would appear that in order to carry out this threshold, as you say, units will have to gravitate to South Carolina and Washington.

General SHINSEKI. Frankly, Senator, you are a little bit further in your analysis than I am. I am looking at it primarily right now, along with the Secretary, from the Army's perspective, where is it strategically that we can place this capability and then be able to employ it. And it then talks about deployment airfields, clearly, installations that can accept these brigade combat teams, and then have the physical space in terms of training land to be able to exercise and train and maintain their proficiencies.

I had not looked at where aircraft are located, but certainly looking at airfields that could accommodate that kind of aircraft, was as far as our very cursory analysis had gone. We had started with looking at Army installations, and then ensuring—part of the reason that we are at Lewis is that Lewis, from an Army perspective, had training grounds, had the kinds of ranges that could support

mounted training. It is adjacent to a deployment airfield, McCord Air Force Base, that has the capability to deploy.

And then, from the Army's own perspective, there is a history of mounted units at Fort Lewis that would accommodate doing this at that location. And having one heavy and one light brigade at Lewis also gave us the opportunity to learn what it takes to do each kind of unit for our purposes.

As we continue to look at other locations, we will be essentially following the same format. We had not looked at where aircraft were located, but I take your point that we should. And we will include that. But, ultimately, that will not be the decider. It will be the strategic requirements that the Army sees for itself.

Mr. CALDERA. Senator, if I could just add to that answer. One of our top priorities in the military construction has been the power projection improvements at many of our installations, not just those that are collocated near Air Force bases, but to improve the railheads in order to more rapidly move the weapons platforms to a seaport where they might deploy from or to improve the airstrips in order to take larger lift capabilities. And part of the goal of Transformation is also to reduce the logistical footprint of the forces when they move into the theater so you do not have to take as many things with you and you do not have to rely on as much airlift for the sorties that will get you there.

So those improvements for power projection to rapidly deploy forces means that those forces could come from any one of our installations around the Nation.

Senator INOUYE. Well, if you want it to be rapid deployment or rapid response, then Alaska, for example, is closer to places like Bosnia than South Carolina is. And the same can be said about Hawaii as compared to other places. So I am very pleased, General Shinseki, that you are considering both Alaska and Hawaii as possible areas. Because they are the closest to the scene of the actions or the potential actions.

ADDITIONAL COMMITTEE QUESTIONS

Gentlemen, we have kept you here long enough. We would like to thank you very much for your testimony.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED TO LOUIS CALDERA

QUESTION SUBMITTED BY SENATOR ARLEN SPECTER

WOLVERINE AND GRIZZLY PROGRAM CANCELLATION

Question. Secretary Caldera, the current Army budget restructures procurement in the fiscal year 2001–2005 timeframe by providing $4.5 billion for selection and procurement of a medium armored vehicle to equip the Army's newly redesigned combat units. However, the cost of the Army's new initiatives has meant the termination of several major programs and the restructuring of others. The terminated programs include United Defense's Grizzly obstacle breaching system, General Dynamic's Wolverine heavy assault bridge, and others. Recently, Chief of Staff General Eric Shinseki has stated that he had sought to retain the Grizzly and Wolverine programs as part of the ongoing recapitalization effort for the service's heavy forces. Please comment on this situation and explain why the Army now wants to retain these important programs, but did not budget for them.

Answer. The Army's heavy forces require responsive mobility support for commanders to conduct decisive operations and to fight and win our nation's wars. The Grizzly and Wolverine are designed to fix shortfalls in combat force mobility. These systems could fulfill the Army's gap crossing and obstacle breaching needs well into the 21st Century. By providing the ability to negotiate obstacles wherever and whenever encountered, the Grizzly breacher and Wolverine heavy assault bridge provide commanders the flexibility of maneuver to decisively engage threats. The Army budgeted for Grizzly and Wolverine by fully funding research, development, test, and evaluation, and included procurement funding to buy systems for a reinforced heavy armored corps. However, the Office of the Secretary of Defense directed termination of the Grizzly and Wolverine program in program budget decision 745. An overall increase to Army funding levels is necessary to ensure full funding of the Grizzly and Wolverine programs.

ARMY HERITAGE CENTER AND NATIONAL ARMY MUSEUM

Question. Secretary Caldera, we spoke in March 1999 and again on April 4th of this year about the construction of the Army Heritage Center and Museum in Carlisle, Pennsylvania. On both of those occasions, you voiced the Army's full support for the project. However, recent Army statements regarding the construction of the national Army museum in the Washington area have raised serious concerns about the Army's commitment to the Carlisle site. Do you maintain your commitment to ensure the Carlisle site becomes "the finest Army museum in existence in the world?" To that end, what active steps has the Army taken in the last six months to provide assistance in planning and coordinating the project with the Military Heritage Foundation and others in Carlisle?

Answer. We remain fully committed to building the best possible Army Heritage Center at Carlisle Barracks, to include the Military History Institute and the Army Heritage Museum, both intended to be world-class facilities. The President's budget for fiscal year 2001 includes funding for the Academic Research Facility, the new home of the Military History Institute. This success represents a great effort on the behalf of the Army Staff during the last six months to identify, justify, and secure funding.

The Department of the Army has provided more professional and technical support to the planning process for the Army Heritage Museum than has ever been provided to any museum in the Army museum system. To facilitate the best possible plan and design, the most senior curators in the Army, engineers from the Baltimore District, and members from several Army Staff directorates have teamed up with Army personnel from Carlisle Barracks, members of the Military Heritage Foundation, representatives of the local and commonwealth governments, and private contractors. Preliminary negotiations with respect to story lines seem promising. The Center of Military History (CMH), as it continues its ongoing program to fully catalog over 700,000 artifacts not yet on display, has agreed to apportion an impressive fraction of them to the Carlisle facility. During the last six months, CMH and the Army museum system have catalogued approximately 70,000 such artifacts. Detailed choices will be made as the museum design matures.

The Army does not view the museum proposed for Carlisle and the museum proposed for the Washington area as competitors, but rather as members of the same team synergistically working together to tell the Army story to the American public. Each will have its themes independently developed, and each will play to a different audience, but they will both have the same goal: to foster a closer relationship between the U.S. Army and the public it serves.

BIOMETRICS INITIATIVE

Question. Secretary Caldera, I am interested in the subject of biometrics and its application to "information assurance" in the Department of the Army and throughout the Department of Defense. I am advised that one of the lessons learned regarding the conflict in Kosovo is the need for increased "information assurance."

Mr. Secretary, the Army has an important leading role in biometrics testing and evaluation. Last August, Army Under Secretary Dr. Bernard Rostker and Lieutenant General William Campbell, Chief Information Officer of the Army, accompanied me to West Virginia to visit the 3,000-person FBI identification facility, which—I am told—is the largest biometrics facility in the world. Both have been enthusiastic supporters of my biometrics initiative. Do you share this enthusiasm? The fiscal year 2000 Defense appropriation included, at my request, $15 million for fiscal year 2000 for the biometrics initiative. How much has been released and obligated? When will the remainder be released? In his latest report on the Army's biometrics initiative, General Campbell indicated that the Army plans to open a biometrics office

soon somewhere in the Military District of Washington, and is also planning to open a test and evaluation facility in north central West Virginia within the next 90 days. How are these plans progressing?

Answer. We are optimistic about integrating biometrics into all facets of our military operations. Our information assurance and technologists agree that biometrics will significantly enhance the security of access to our systems as well as play a significant role in protecting ourselves from viruses and other malicious code attacks. We are committed to the establishment of a biometrics fusion center test and evaluation facility, and we have appointed a director for Army biometrics. We look forward to your continued support of this technology for the Army.

In regard to the fiscal year 2000 appropriation and the $15 million you provided, $5 million has been released and obligated. This money was used to conduct legal, sociological, and cultural assessments of biometrics. It was also used to execute a major feasibility study to develop biometrics technology into the Department of the Army with further integration of this technology DOD wide. The remaining $10 million is expected to be released to the Army in the next few weeks.

We are in the process of opening a local office in the Military District of Washington for biometrics. The Director for Army Biometrics recently approved the final design and specifications for an office in northern Virginia. The office will soon be ready for occupancy. The Army intends to acquire a 3,000 to 6,000 square foot facility to begin development of the Biometrics Fusion Center (test and evaluation facility). The Director for Army Biometrics also visited Clarksburg, West Virginia, on May 15 with a senior GSA representative to survey temporary office space for the housing of the Biometrics Fusion Center. However, of the five locations presented, none were deemed acceptable for either security or convenience reasons. Another trip to the Clarksburg/Bridgeport area is planned, and we will keep you informed on our accomplishments and status.

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

ARMAMENT RETOOLING AND MANUFACTURING SUPPORT PROGRAM

Question. Secretary Caldera, the Office of Army General Counsel and the Executive Advisory Committee of the Armament Retooling and Manufacturing Support (ARMS) Public-Private Task Force support clarification in the statute of a number of administrative procedures now permitted in regulation. An amendment to the original ARMS Act is currently pending before Congress that would accomplish this goal. These procedures, involving the program's innovative real estate and financial techniques, are vital if ARMS is to continue to realize its great potential. Without the amendment, the ARMS program could be terminated, along with over $38 million a year in supplemental revenue to the Army. Will you confirm for the Congress the Army's continuing support for the proposed ARMS amendment as well as your personal desire to see the amendment enacted this year?

Answer. The Army continues to support the ARMS program as recently endorsed by a senior Defense and Army general officer level panel that reviewed the accomplishments and continuation of this program. In reference to proposed ARMS amendments, the Army reported to Congress on January 15, 2000, that after evaluating five areas, two areas required improvement. The reports asked for legislative clarification for other consideration and contract length as written in current the ARMS Act. Congress' proposed amendment provides clarification for these two areas, as the Army requested.

PLAN COLOMBIA

Question. Secretary Caldera, I was severely disappointed to hear that Colonel Hiett contributed to his wife's drug smuggling crimes through his money laundering activities. While I support counterdrug operations in theory, events like this call into question the appropriate level of U.S. military involvement. Does the Army support a cap on U.S. military involvement?

Answer. The Army is working hard along with the entire Department of Defense (DOD) to support the efforts of the commander-in-chief, United States Southern Command (SOUTHCOM), to coordinate our military and counterdrug programs with Colombia. The Army shares the view of both SOUTHCOM and DOD that a troop cap would impair the flexibility of the operational commander to respond with adequate resources to the challenges as they develop in Colombia. However, if Congress determines that it is necessary to establish a cap, we would allow other non-counterdrug programs to continue. These exceptions should allow for non-combatant evacuation operations, assignment of military personnel for embassy duty, disaster

relief operations, and non-operational transit of personnel such as port-calls, and other routine and recurring engagement activities.

SCHOOL OF THE AMERICAS

Question. Secretary Caldera, the School of the Americas continues to attract controversy over human rights abuses in South America. A recent report claims that, despite the efforts you mentioned to promote human rights and the role of the military in a democracy, this new curriculum exists on paper only. Of the 31 courses available at the school, only five are related to human rights, democracy, or humanitarian issues, and less than 18 percent of the students took these courses in 1999. Further, although the School of the Americas offers a "Train the Trainer" course on human rights, no students attended the course in 1997, 1998, or 1999. What is the Army doing to ensure participants get balanced training with sufficient focus on human rights, democracy, and humanitarian issues?

Answer. First, let me reiterate that there is no evidence that supports a causal relationship between attending a course at the School of the Americas and subsequent criminal or illegal activity. What is taught at the School of the Americas is the same instruction and doctrine that are given to U.S. soldiers. We do not teach our soldiers criminal behavior, and we do not teach this to anyone else.

I also want to stress that every student attending every course presented at the School will receive mandatory human rights instruction that covers international humanitarian law, ethics, rule of law, the role of a military in a democratic society, the just war theory, and a human rights case study. That is the price of admission to the School. Minimum instruction is eight hours for courses less than four weeks, 12 hours for courses between four and 24 weeks, and 40 hours for courses longer than 24 weeks. This classroom instruction is reinforced by situational exercises in field training, which in the case of the 49-week command and general staff officer course totals more than 210 hours. The human rights training curriculum is overseen by a special committee which meets quarterly and includes a prominent human rights lawyer and human rights experts from the Department of State. This is the most comprehensive human rights instruction in any Department of Defense institution.

The widely circulated comment about the human rights train-the-trainer course is often used to imply that there is no human rights training at the School of the Americas. I hope my previous comments will put this myth to rest. In the case of the human rights train-the-trainer course, it was designed in 1997 at the request of the U.S. Southern Command. The class program of instruction was developed in 1998, and it was placed into the 1998–1999 course catalogue. The normal security assistance resource cycle requires almost two years between course offering to initial attendance in order to advertise a new course and program students. In 1999, there were no students scheduled for the course at the School, so the School took the course to the students. Courses were conducted in Colombia, Venezuela, and Paraguay. The statistics used by critics do not reflect this fact. This year, 25 students attended the course at the School of the Americas at Fort Benning, Georgia.

Finally, the comment that only five of 31 courses are related to human rights, democracy, and humanitarian issues, and only 18 percent of students took these courses is incorrect. As stated above, every student in every course receives instruction in human rights and the role of a military in a democratic society. The quoted statistics do not reflect this key fact. Instruction related to humanitarian operations and counterdrug operations are embedded in the command and general staff officer course, officer basic courses, and Joint operations course, among others. All of the helicopter courses are closely related to our counterdrug programs. These courses are also conducted at a more senior level where we are training selected military, law enforcement, and civilian leaders. The School of the Americas remains a professional military training and education facility whose curriculum responds to the needs of the Commander-in-Chief, U.S. Southern Command, who reviews every course every year. He continues to ask the School to expand into new areas where he sees needs, and the growth will come in new courses in disaster relief operations, international operational law, counter-drug interoperability, and transnational security threats. These courses should be expanded international military education and training and will bring in greater numbers of civilian, law enforcement, as well as military personnel.

Again, let me assure you that America's sons and daughters serving in uniform at this School are the examples we want teaching and instilling our nation's ethics and values to others. We believe that the U.S. Army is a valuable role model in teaching military professionalism as well as the role of a military in a democratic society to the militaries of Latin America and the Caribbean.

MANAGEMENT REFORMS REGARDING THE U.S. ARMY CORPS OF ENGINEERS

Question. Secretary Caldera, as I recently discussed with you and General Shinseki, the U.S. Army Corps of Engineers provides a vitally important role to Americans throughout the nation. We sincerely appreciate the noble efforts of the Corps and regret that this issue has become so politicized. One of my remaining concerns, however, is the damage to the reputations of our military leaders in the Corps of Engineers. These honorable soldiers made huge sacrifices in order to protection our nation, but their careers were severely damaged by the tremendously unfair attacks in the media. What is your view of the character and service of the Corps' leaders?

Answer. I agree that the Corps of Engineers plays an invaluable role in the protection and development of our nation's critical water resources and am confident that the Corps' strong tradition of service to our nation in these areas will continue. You have expressed concern that the recent allegations concerning the Corps may have damaged the reputations of its military leaders. For the most part, the issues that have surfaced have not been directed at individual Corps leaders. To the extent that specific allegations of impropriety have been made against individuals, the Army Inspector General and other appropriate entities are analyzing those allegations. I am confident that these individuals will be fairly treated by these processes, which are designed to be objective and unbiased.

QUESTIONS SUBMITTED BY SENATOR ROBERT C. BYRD

MANAGEMENT REFORMS REGARDING THE U.S. ARMY CORPS OF ENGINEERS

Question. Mr. Secretary, I was very disappointed with your March 30 memorandum in which you implemented management reforms in the civil works program of the Army Corps of Engineers, despite the strongly stated Congressional interest in any management changes of the Army Corps of Engineers and, specifically, a letter from Chairman Stevens, Senators Domenici, Reid, Cochran, Inouye, and me to Secretary of Defense William Cohen. I was also particularly surprised that the Army took such dramatic steps without the benefit of learning the outcome of any of the myriad investigations that are being conducted on the Corps and its activities.

However, I was pleased to learn of your April 7 notification announcing that you, after consulting with the Office of the Secretary of Defense, have ". . . decided to suspend the implementation of these reforms for a reasonable period of time in order to allow for a broader discussion with Members of Congress on the need for these reforms."

Would you please share with me the definition of "a reasonable period of time" in context of the April 7 notification? How and when will Members of Congress be given the opportunity to participate in a broader discussion of the need for these reforms?

Answer. As you know, I announced these management clarifications in an effort to improve the Army Civil Works program. These clarifications are grounded in Title 10 of the U.S. Code and are intended to clarify responsibilities, improve communications, and strengthen accountability within the Civil Works program. These clarifications are in no way related to the inspector general's investigation regarding the Upper Mississippi River Study.

At the request of Senators Stevens, Warner, and Smith, I agreed to suspend the reforms for a reasonable period of time pending further consultation. In making this decision, I did not envision that the reforms would be suspended for a specific period of time. I believed that, instead, through our discussions, we would agree on a path forward. As I continue these discussions, I remain optimistic that this will prove true because we all share a common goal of improving the Civil Works program.

Question. The June 2000 retirement of General Joseph N. Ballard, Chief of Engineers, Corps of Engineers causes me some concern in view of the Army's reaction to the recent attention the Corps has been receiving. When will a new Chief of Engineers be put into place? What are the agency's plans for a smooth, seamless, and timely transition between Chiefs of Engineers?

Answer. As with all major Army commands that rotate leadership, the Chief of Engineers will change command this summer. I am confident that this will be a timely and smooth transition. In addition, our strong civilian leadership of the Civil Works program will continue to provide executive and policy leadership over this important program.

QUESTIONS SUBMITTED TO GEN. ERIC K. SHINSEKI

QUESTION SUBMITTED BY SENATOR TED STEVENS

APACHE PROBLEMS

Question. Can you provide us with an update on the Apache fleets flying status and technical problems? A recent report suggested that there are 45 outstanding Apache safety issues. Can you identify some of these problems and give us a sense of what steps the Army is taking to correct the deficiencies? What are the Army's highest priorities for the Apache program as we begin work on the fiscal year 2001 defense spending bill?

Answer. All Apache aircraft are operational today; however, the AH–64D Longbow Apache is operating on a flight limitation for night operations due to generator and electrical anomalies. The Longbow is cleared for day flight and limited to 100 feet above the highest obstacle at night until a qualified materiel solution is implemented. It is expected to take approximately two months to implement the fix.

There are a total of 40 open system safety risk assessments on the Apache fleet. These assessments are rated from low to high, where high is the most risk we assume before grounding the fleet. The Longbow conversion eliminates the one high and 14 of the 25 medium risk assessments. We specifically looked at how to eliminate all of the medium and high-risk assessments from the Apache fleet. In the near term, we are looking at a reliability enhancement program to ensure the fleet is reliable and cost effective. Long term, we are looking to redesign the drive train and rotor system to meet the additional weight demands anticipated for this aircraft and reduce the operation and support costs for these subsystems.

The highest priority for the Apache is to address readiness and sustainment issues. These readiness and sustainment fixes will be incorporated into all multiyear II AH–64D aircraft. We will also begin reliability improvements to the remaining AH–64A Apache fleet and the multiyear I Longbow aircraft beginning in fiscal year 2002.

QUESTION SUBMITTED BY SENATOR ARLEN SPECTER

TRANSFORMATION AND BIOMETRICS

Question. General Shinseki, I was pleased to have you visit my office on February 24, 2000, and to have received your briefing on the need to transform the Army. Please explain how the role of biometrics fits into plans for the Transformation and modernization of the U.S. Army.

Answer. Information superiority remains a key enabler for the Army's Transformation. The Army's reliance on command, control, communications, computers, and information technology to achieve information superiority dictates that the Army have a robust information assurance program to secure its networks. Biometrics is a key element of our information assurance program. Biometrics is a readily available commercial technology that can ensure continuous user identification and authentication within our military information and information-based networks. The focus of the transformed Army is to be strategically responsive and dominant across the full spectrum of operations and not be burdened by cumbersome overhead requirements like conventional logons, user IDs, and passwords. Biometrics will allow soldiers to be validated as an authorized user by their mere presence, thereby reducing the insider threat and reducing unauthorized access and penetration. The enormous potential biometrics technology offers the transformed Army is a key reason why we are moving forward on biometrics initiatives.

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

WHITE SANDS/HIGH ENERGY LASER WEAPONS

Question. The DOD is now considering its plans to centralize and consolidate its directed energy programs. As you know, I am a strong proponent of lasers and directed energy weapons.

General Flohr at White Sands is developing a plan to address the test and evaluation capabilities for laser weapons systems at the Range.

General Costello approved the Army's Directed Energy Master Plan (DEMP) earlier this year. General Costello is a big supporter of laser technologies and foresees the Army playing an important role in developing and fielding laser weapons systems.

Would each of you comment on the Army's plan and any future plans to commit Army funds to support laser weapons programs?

Answer. The U.S. Army Space and Missile Defense Command (SMDC) DEMP provides the strategy for near-term and far-term directed energy technology development and integration into air and missile defense forces. The strategy is to pursue directed energy technologies, which offer the potential for leap-ahead capabilities for future warfighters. The DEMP summarizes potential directed energy threats and achievable technology development programs that could lead to fielded systems. As technology development programs contained within the DEMP are presented for resourcing consideration, they will compete within our normal program objective memorandum (POM) and budget development process, with priority given to those programs that directly support the Army Transformation and Objective Force.

The Army recently reprogrammed $500,000 of its fiscal year 2000 science and technology funds for SMDC to begin exploring technologies that are the key drivers for application of high-energy, solid-state lasers on the tactical battlefield. For fiscal year 2001, the Army has created a new applied research program element to investigate the applicability and utility of solid-state lasers to perform a counter-air munitions defense mission and to support the survivability of the Future Combat System. In fiscal year 2002 and beyond, the Army plans to fund a robust solid-state laser science and technology program. Initial efforts will focus on development of a prototype device, lethality studies, and evaluation of techniques to enhance laser beam propagation.

TACTICAL HIGH ENERGY LASER

Question. General, could you give me an update on the progress of the testing of the Tactical High Energy Laser (THEL) program at White Sands Missile Range? What are the plans for the Army after completion of the current run of testing at White Sands? (THEL has a $5.7 million shortfall to complete testing in fiscal year 2000).

Answer. Currently, the THEL demonstrator is undergoing field testing against live Katyusha rockets in flight at the high energy laser systems test facility (HELSTF) at White Sands. The system has already demonstrated the capability to detect, acquire, track, and point the high power laser against operational Katyusha rockets in flight. It is anticipated that the system will demonstrate the ability to shoot down a single rocket with its high power laser beam in June 2000. After single rocket shoot down, the demonstration test and evaluation (DT&E) phase of the program begins at HELSTF to engage a series of salvo launches representative of the operational requirements for the system.

After the completion of the THEL DT&E testing, the Army plans to evaluate the results as it applies to Army requirements to decide whether to participate in further development of the THEL system with Israel. Israel has expressed an interest in jointly developing a follow-on version of the THEL that is mobile, which would begin to address more of the operational issues of interest to the Army associated with fielding a high power laser based weapon system. With regard to the $5.7 million shortfall to complete the THEL testing, the Army has not been able to identify a funding source within the Army or the Office of the Secretary of Defense to cover the United States' share of the shortfall. However, Israel has committed to providing their share of the shortfall in fiscal year 2000, possibly allowing continuation of the DT&E phase at a reduced level until additional funding becomes available.

SOLID STATE LASER

Question. General, as you know, I have been interested for quite some time in the development of the solid state laser, a program which will deliver lethal kills, without the use of chemicals on the battlefield that could pose dangers to our soldiers and civilians. What is the current status of this program in the Army?

Answer. The Army recently reprogrammed $500,000 of its fiscal year 2000 science and technology funds for SMDC to begin exploring technologies that are the key drivers for application of high-energy, solid-state lasers on the tactical battlefield. For fiscal year 2001, the Army has created a new applied research program element to investigate the applicability and utility of solid-state lasers to perform a counter-air munitions defense mission and to support the survivability of the Future Combat System. In fiscal year 2002 and beyond, the Army plans to fund a robust solid-state laser science and technology program. Initial efforts will focus on development of a prototype device, lethality studies, and evaluation of techniques to enhance laser beam propagation.

DIRECTED ENERGY MASTER PLAN

Question. General, what is the Army's position on the coordinated Directed Energy Master Plan (DEMP) and its funding requirements in future years?

Answer. The U.S. Army Space and Missile Defense Command DEMP provides the strategy for near-term and far-term directed energy technology development and integration into air and missile defense forces. The strategy is to pursue directed energy technologies, which offer the potential for leap-ahead capabilities for future warfighters. The DEMP summarizes potential directed energy threats and achievable technology development programs that could lead to fielded systems. As technology development programs contained within the DEMP are presented for resourcing consideration, they will compete within our normal program objective memorandum (POM) and budget development process, with priority given to those programs that directly support the Army Transformation and Objective Force.

FOOD STAMPS

Question. How many active duty Army personnel currently live in families that receive food stamps? How many in the Army Reserve? Army National Guard? How many of these families are in on-base housing? Off base housing? What is your estimate of the likely increase in Army food stamp recipients based on Secretary Cohen's recent announcement.

Answer. We estimate that 3,590 active Army personnel receive food stamps. Sixty percent receive food stamps and live on post while the remaining 40 percent receive food stamps and live off post. The likely increase in Army food stamp recipients based on Secretary Cohen's recent announcement is estimated to be approximately 4,050. As you know, however, the Department of Agriculture determines eligibility criteria for the food stamp program.

The Army Reserve and Army National Guard do not track food stamp data. However, based on military base pay, plus housing and subsistence allowances, no Active Guard/Reserve soldier would qualify for food stamps under today's eligibility guidelines. If eligibility were based on military base pay only, 828 Active Guard/Reserve soldiers would qualify for food stamps.

Question. Do you believe that Army personnel being on food stamps is a problem? Why has it been acceptable up to this point? What actions do you recommend the Army take to eliminate the problem?

Answer. Military pay is intended to be sufficient to meet the basic needs of all members—this is a fundamental premise of the all-volunteer force. To find some members eligible for the food stamp program is surprising to some and raises the question of the adequacy of military pay. Since we prefer that no soldier require food stamps, we applaud the Congress' aggressive approval of increasing military pay and ask that you continue to provide robust annual pay raises. Soldiering is an affair of the heart. However, soldiers must be able to afford to go where their hearts lead them.

PAY RAISE

Question. Quite obviously, last year's pay raises and repeal of past pension reform did not solve the Army's retention problems. Do you believe that the gap between the compensation for senior leadership and enlisted personnel is a factor? By this I do not mean the basic pay level of enlisted personnel; I do mean the size of the gap between the bottom and the top.

Answer. We believe the pay raise of this past year and the repeal of past pension reform had a positive impact on our retention program. Last year, the Army exceeded its retention mission by 7,147 soldiers. This year, we are on a path to again exceed our mission, which was increased over last year's, by nearly 2,000 soldiers. We have no evidence to suggest that the gap between the compensation for our senior leaders and the enlisted force has impacted our retention program. Pay is certainly a key factor to soldiers making long-term commitments to the Army, but not the only factor. Because of the great support from Congress, we also have a very robust retention bonus program that has been a major factor in retaining the types of soldiers we need to meet our future readiness needs. Quality of life programs and reducing operational tempo also play into the equation, and we continue to work those issues hard.

INFORMATION OPERATIONS VULNERABILITY

Question. The Army's Vision calls for Transformation to a force that is more responsive, agile, versatile, lethal, survivable, and sustainable. The survivability of

the force is going to be accomplished by employing technology that provides maximum protection to forces at the individual soldier level.

Many of these systems rely on the ability to transmit and receive digitized information. No matter how versatile and successful these weapons become, they could easily be rendered useless with the technology available today. Despite this, I understand that vulnerability analysis of the Army Research Laboratory (ARL) is underfunded.

What effect will the shortfalls have on the Army's ability to provide field support for information operations vulnerability analyses of these tactical systems? Absent additional funding, can the Army address the funding issues raised by the GAO report which identified specific funding requirements to ensure implementation of the Army's information protection plan?

Answer. In today's information intensive environment, the information warfare threat can come in many forms, from simple mischief makers, to sophisticated tactical countermeasures targeted at U.S. military weapons or command, control, and computer systems. As the pace of information technology (IT) has increased, so has the proliferation of threats to IT based Army tactical systems. Threats to Army tactical systems vary greatly in terms of intent, sophistication, technical means, and potential impact, yet they all must be considered. Traditionally, validated threat documents have been used to identify specific threats to tactical systems. These documents have proven inadequate because the information operations (IO) threat is dynamic—literally changing in real time.

The ARL, when conducting IO vulnerability analyses, identifies current relevant threats, as well as their likelihood of occurrence by working with the intelligence community. ARL's IO analyses directly address vulnerabilities to IO threats. Their risk analysis studies concurrently support DOD certification and accreditation requirements that are mandatory for the operation of Army tactical systems while being a key component of the acquisition process for new tactical systems. For fiscal year 2001, the Army has programmed as much funding as affordable under the current budget. Continuous and rigorous IO threat definition cannot be maintained with current funding shortfalls, resulting in the Army not understanding or being able to mitigate a significant portion of the evolving threat.

The findings of GAO Report Number NSIAD–99–166 "Battlefield Automation: Opportunities to Improve the Army's Information Protection Effort," dated August 11, 1999, are consistent with the Army position that information operations vulnerability analysis (IOVA) is important to the protection of digitized forces. For fiscal year 2001, the Army has programmed as much funding as affordable under the current budget. However, IOVA remains underfunded. The Army has identified and prioritized this shortfall on the fiscal year 2001 unfunded requirements list. Additionally, the Army has taken steps to ensure IOVA is integrated into system development and fielding beyond fiscal year 2001. No system will proceed to a milestone III procurement decision without first having undergone a thorough information assurance vulnerability assessment and incorporating appropriate solutions.

TEST AND EVALUATION

Question. General, as you are well aware, I have been interested for quite some time in the Army's progress in making instrumentation upgrades at White Sands Missile Range—the Army's premier testing facility. A new state-of-the-art communications control center will open at White Sands late next month. This control center provides new communications and instrumentation for the day-to-day operations at the Range. With your help, and the Army's help, we were able to get this new facility completed within the last three years. Would you discuss for the Committee the Army's current state of testing and evaluation programs and elaborate on your major needs and unfunded requirements?

Answer. The Army Test and Evaluation Command (ATEC) was established in October 1999 and is responsible for operational testing, developmental testing, live-fire testing, and all evaluation within the Army. The Army is required to adequately resource test and evaluation in the following areas:

Acquisition Category (ACAT) II–IV Operational Testing.—Operational testing for ACAT II–IV systems is resourced by funds provided to ATEC. Acquisition program managers fund operational testing for ACAT I systems. The minimum acceptable level of funding for ACAT II–IV program testing is 65 percent of anticipated testing requirements. ATEC will be required to plan, execute, and report on over 80 operational tests of ACAT II–IV systems over the program objective memorandum (POM) period in support of acquisition program milestone decisions. This number will increase over time as program manager projections solidify. The purpose of operational testing is to ensure a unit equipped with a weapons system can accom-

plish assigned missions and that the weapons system is operationally effective, suitable, survivable, and lethal. Fiscal year 2001 funding provides 46 percent of the funding necessary to conduct required operational testing of ACAT II–IV systems. Over 30 operational tests will not be funded by ATEC, and program fielding and production will be delayed, or the program manager will be required to pay unprogrammed costs for testing. The fiscal year 2001 bill is $8.9 million. Unfunded requirement is $56 million over the POM years.

Continuous Evaluation of Testing.—The Army Evaluation Center (AEC) conducts operational, live-fire, and technical evaluation for all Army acquisition programs. AEC provides integrated technical, operational, and live-fire evaluations to support major acquisition program milestone decisions. The minimum acceptable level of AEC funding is 70 percent of anticipated evaluation requirements. Fiscal year 2001 funding provides 68 percent which drops over the POM to 59 percent of required funding for integrated operational, technical and live-fire evaluation of over 500 acquisition programs necessary to meet acquisition milestone decisions that are intended to support the Transformation. The fiscal year 2001 bill is $725,000. Unfunded requirement is $28 million over the POM years.

Test Capability and Test Facility Modernization.—The Developmental Test Command (DTC) conducts technical testing of all Army acquisition programs, ensures national test capabilities are available to program developers, and ensures developmental test workforce and facilities are responsive to program schedules. In order to ensure efficiency of the test workforce and remain responsive to the dynamics of program executive office and program milestone schedules, DTC must be funded to accomplish 80 percent of the customer workload. DTC must also modernize and upgrade essential test ranges and test facility infrastructure. DTC is responsible for Aberdeen Test Center, White Sands Missile Range, Yuma Proving Ground, Aviation Technical Test Center, Redstone Technical Test Center, Cold Regions Test Center, and the Electronic Proving Ground. Current funding provides for a 64 percent testing capability in fiscal year 2002 to 2004 and 75 percent in fiscal year 2005 to 2007 to support known testing requirements of key weapons systems and technical insertions necessary to meet acquisition milestone decisions that are intended to support the Transformation. The Army submitted a fiscal year 2001 unfunded requirement (UFR) for $14 million. This UFR provides minimum level of test capability to support testing requirements for critical Army systems. Additionally, a test facility modernization objective of $10 million per year is required to begin to stem deterioration of Army test facilities. Fiscal year 2001 to 2007 funding does not provide for any required test facility modernization. Overall, unfunded requirement is $130 million over the POM years. In addition to Army-funded requirements discussed above, DTC is also responsible for Dugway Proving Ground (DPG). In fiscal year 1997, DPG's test funding was transferred to the Office of the Secretary of Defense Chemical/Biological Defense Program (CBDP) in compliance with Public Law 103–160. DPG's funding posture is more dire than the other DTC test ranges, averaging 43 percent test capability with zero modernization since fiscal year 1996. The CBDP POM has recognized a $5 million per fiscal year modernization requirement; however, the UFR for test capability is $32 million over the POM years.

Instrumentation for Developmental Testing.—Programmed resources fund only minimal technological advancement and sustainment of DTC range instrumentation, perpetuating a backlog of test instrumentation requirements. The backlog of requirements impacts technology advancement and creates test costs and inefficiencies that could be avoided. This lack of technology development and modern instrumentation increases the risk that the ranges will be unable to collect required test data, and that test results will be inaccurate, allowing inadequate equipment to enter the Army inventory. These requirements represent instrumentation shortfalls in chemical and biological modeling, on-board miniaturized vehicle instrumentation, advanced technology laboratory testing of multi-sensor guided missiles, pre-launch missile flight safety prediction, low-cost bridge testing capability, cost reduction in acoustic scoring, modernization of airborne video and automated time, space, and position information data analysis. If additional funding is not provided, testing high-performance, digital, sensor dependent weapons and support systems with manual, intrusive, low bandwidth, obsolete instrumentation will result in lost or incomplete test data, inefficiencies and test delays, and increased cost and risk to Army program managers and program executive offices.

Digitization of instrumentation and real-time data collection and processing capabilities are essential. Lack of modernization of instrumentation will eventually result in the deterioration of test capabilities to the point where testing can no longer be safely conducted and required data parameters necessary to evaluate the performance and effectiveness of Army weapon systems will not be collected. The Army submitted an fiscal year 2001 UFR for $27.56 million. This UFR provides funds for

upgrade and replacement of test instrumentation. Current funding provides 56 percent of the requirements from fiscal year 2002 to fiscal year 2007.

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

FORT LEONARD WOOD AND ARMY TRANSFORMATION

Question. General Shinseki, while I applaud your effort to fill combat units at 100 percent, I'm concerned of the impact this may have to the institutional training and development base. Earlier you said drill sergeants and instructors would be manned at 100 percent also, but there are other functions at institutional training bases such as mechanics, soldiers who process new soldiers, equipment operators, doctrine writers, concept developers, etc. where military are required as well. I'm concerned we may be mortgaging our future. How do you plan to handle the functions I just listed?

Answer. Maintaining the highest level of proficiency in the institutional training base is as important as our objective to fill combat units at 100 percent. Providing the best training and professional development for our soldiers is a key component to ensuring the Army's full-spectrum capability. However, to implement our initiative to fill combat units at 100 percent, we will take some risk in the fill of our institutional base generating force structure. To mitigate this risk, I have directed the staff to work with our major command headquarters to minimize this risk in functions critical to training and garrison operations, such as those at Fort Leonard Wood, Missouri. Through the recent Defense Reform Initiatives Directive and Federal Activities Inventory Reform Act policies, we have identified the manpower associated with all functions in our base generating force structure. We have developed procedures to monitor the resourcing of these functions in our total army analysis (TAA) process. We are also conducting a study of missions and functions in our base generating force to determine where we can re-engineer organizations to more efficiently use the military manpower in those essential functions. We will use TAA to effectively allocate our force structure personnel resources to ensure the appropriate fill of all our manning requirements as we implement the Army's Transformation initiatives.

Question. General Shinseki, on my recent visit to Fort Leonard Wood, I was impressed by the prevalence of multi-service training there. I think our taxpayers would be pleased to know that all the Services have come together to lower the total cost of training engineers, military police, and truck drivers, for example. However, I was disappointed by the lack of investment into these facilities. I understand the Army and Marines teach employment of non-lethal weapons, a subject that appears to be very relevant to the Army Vision and Transformation. I think non-lethal weapons will help provide the array of versatile, affordable assets needed, particularly as you deploy for peace operations. What provisions are being made to support this course and the increased requirements it may have placed on it? Do you and the other service chiefs think you can come together to support improving these facilities—not just for the growing demand in such areas as non-lethal individual weapons, but for engineers and truck drivers as well?

Answer. The U.S. Marine Corps (USMC) is the Department of Defense proponent for non-lethal weapons (NLW). The USMC conducts the only existing NLW instructor course (NLWIC) at Fort Leonard Wood. A board has recommended that the NLWIC be consolidated among the Services beginning fiscal year 2001. A cost analysis identified an initial one-time cost of $434,200 for new construction at Fort Leonard Wood to support the NLWIC. The Army student input will earn two Army instructor positions for the course. The USMC has requested funding from the Joint non-lethal weapons directorate for the initial one-time cost. The planning and development for the initial construction is complete and will be put into action as soon as the funding is received. The Army is considering implementation options, pending the outcome of the USMC funding request.

The Services can come together to support improving these facilities as evidenced by the recent funding of two of eleven facilities projects required to support non-lethal weapons training, joint engineer, and truck driver training in fiscal year 2000. The Marines funded $350,000 to construct a NLW training facility at range 17. The Army funded $617,000 for various improvement projects for truck driver training at 11 training sites. The remaining requirements will compete for funding in future year programs for operations and maintenance or military construction funds.

FULL-TIME SUPPORT

Question. General Shinseki, the National Guard's number one legislative priority is full-time support. Last year, the Army Guard identified 49,000 as the minimum number needed to put the Army Guard back onto the road to recovery. This past month, a full-time support requirements study was completed by the Army Guard and approved by Assistant Secretary of the Army, Manpower and Reserve Affairs, and Director, Force Programs, which identified a high-risk requirement of nearly 60,000 for the Army Guard. Please discuss the Army's plan to assist the Guard in meeting these requirements.

Answer. The study you noted was the culmination of the Army's extensive review of its full-time support (FTS) requirement determination process. The study validated the total level of FTS manpower required to meet Department of Defense deployment standards. Realizing that it is cost prohibitive to satisfy 100 percent of the total manpower requirement, the Army formalized a criteria-based methodology based on Office of the Secretary of Defense readiness metrics to determine acceptable risk. With respect to current force structure and deployment scenarios, the Army National Guard will require nearly 60,000 Active Guard and Reserve and military technicians to achieve levels required to meet identified high-risk readiness levels.

The Army quantified high-risk levels as a percentage of the total manpower required. Levels of FTS should, as a minimum, be 90 percent for units deploying in less than 30 days; 80 percent for units deploying between 30 to 75 days; 70 percent for units deploying between 75 to 180 days; and 65 percent for those units deploying after 180 days. As a point of reference, these units today are resourced respectively at only 65 to 70 percent, 60 percent, 55 percent, and 35 to 40 percent.

Resourcing to these levels is a matter of affordability within the Army. We cannot do it from our current projected total obligation authority, and thus will need outside support. Our plan is to incrementally increase our FTS program over an 11-year period beginning in fiscal year 2002 and continue through fiscal year 2012, keeping in mind that changes in force structure and deployment criteria will impact our requirements.

AVIATION MODERNIZATION—BLACKHAWK HELICOPTER

Question. General Shinseki, as we discussed last month, the Army National Guard currently has more than 390 Hueys grounded due to safety concerns. The Army National Guard's (ARNG) utility fleet of Hueys is more than 29 years old, and its aging Blackhawk fleet is about 19 years old. I understand that the ARNG comprises nearly 50 percent of the Total Army's aviation force and a majority of that is made up of utility helicopters. While you've recognized that aviation modernization is a serious readiness problem Army-wide, it seems that the bulk of the problem lies within the ARNG's utility fleet. The Army Guard's current unfunded requirement for Blackhawk helicopters is $148.8 million for 16 additional Blackhawks, but the requirement is even greater. States and communities rely on this resource in times of crisis and the nation relies on it for its defense. What is the plan to rectify this dreadful situation, and can it be addressed by funding only a few Blackhawks per year?

Answer. The Army aviation modernization plan submitted to Congress on March 31 presented a concept that fields a more modernized and relevant aviation force. This is particularly true for the ARNG utility helicopter units where our goal is to divest of all UH–1 Huey aircraft by fiscal year 2004 and equip those units with a more capable and deployable UH–60 Blackhawk. The modernized force calls for the ARNG aviation units to reflect the same structure as the active component. Over the next four years, our challenge is to move aircraft within the ARNG and from the active component to resource the new structure and facilitate the divestiture of the UH–1. The Army Staff has begun planning to achieve this result. Also, we have continued to recognize the requirement for additional procurement and fund the procurement of UH–60s throughout the program objective memorandum period of fiscal year 2002 to 2007.

To address the immediate problem of UH–1 readiness, the Army has placed on contract the procurement of additional engines for the UH–1s. Though we do not intend to return all grounded UH–1s to service, our goal is to sustain a fleet of sufficient quantity to act as a bridge to the modernized force. State mutual support agreements will ensure resources are available for emergency situations.

The path ahead for the utility helicopter fleet is continued procurement of the UH–60 to support UH–1 divestiture and modernization, and focus on the recapitalization and sustainment of those UH–60s in the force.

BRADLEY M2A2 ODS

Question. General Shinseki, the Army has stated that after it upgrades all its active Bradley Fighting Vehicles any outdated Bradleys will reside in the Army National Guard (ARNG) and will not be fit for combat because they are not capable of keeping up with the improved, digitized force. As I understand it, the Army Guard's current unfunded requirement for Bradleys in fiscal year 2001 is $81.3 million for the upgrade of 65 Bradleys. Would you please discuss the plan to modernize the National Guard's Bradley force?

Answer. The ARNG Bradley force is modernized through both the cascading of active component Bradley A2 versions and the procurement of Operation Desert Storm (ODS) versions through Congressional adjustments to the President's budget. The enhanced brigades of ARNG Bradley force will be equipped with the A2 or A2 ODS version of the Bradley Fighting Vehicle. The Army fought Operation Desert Storm with the A2 version and it will remain fit for combat in the years to come. Unfortunately, funding limitations have forced the Army to limit active component modernization to utilizing the Bradley A2 as the baseline vehicle from which to upgrade. This means less Bradley A2's are available to cascade to the ARNG. The Army would clearly prefer to remove older version Bradleys from the ARNG, but fundamentally cannot afford to do so. Consequently, Bradley A0's and the M113 family of vehicles will remain in the ARNG's legacy force combat units. With constrained funding, our focus remains on upgrading the maximum amount of Bradleys to the most current version—the Bradley A3—and fielding these systems in brigade sets with the M1A2 system enhancement program tank and developing a viable Bradley A2 recapitalization program. Through Congressional adjustments from fiscal year 1997 to 2000, the Army is upgrading 193 Bradley A0's to Bradley ODS versions for the ARNG. The 218th South Carolina ARNG will be fielded 133 vehicles in fiscal year 2001. The 30th North Carolina ARNG will be fielded an additional 60 vehicles in fiscal year 2002. A potential fiscal year 2001 adjustment of $81.3 million will provide the Army the ability to upgrade further Bradley A0's to the ODS configuration as well as procure artillery and air defense variants for the ARNG. Procuring modification kits for Bradley ODS fire support vehicle variants would reduce the total procurement, but would ensure greater combat variant compatibility with their associated active component units.

ARMAMENT RETOOLING AND MANUFACTURING SUPPORT PROGRAM

Question. General Shinseki, I understand that PriceWaterhouseCoopers recently evaluated the success of the Armament Retooling and Manufacturing Support (ARMS) program and concluded that it is meeting or exceeding all of the goals laid out in the original enabling Act and by the Army. Do you believe the ARMS program is a worthwhile program that should be continued? Should Congress provide additional funding for the program?

Answer. For the last several years and currently, the Army has continued to support the ARMS program during the budgeting process within available total obligation authority (TOA). Realizing limited TOA does not fully support the ARMS program commercialization efforts, the Army listed the ARMS program as a fiscal year 2001 unfunded requirement. Thus, additional funds provided by Congress would be executable.

In addition to PriceWaterhouseCoopers' evaluation, the Under Secretary of Defense for Acquisition, Technology, and Logistics convened a senior Defense and Army general officer level panel to review the accomplishments and continuation of the ARMS program. This panel agreed that the Department should continue the ARMS program within affordable funding authority.

QUESTIONS SUBMITTED BY SENATOR MITCH MCCONNELL

MOUNTED URBAN COMBAT TRAINING FACILITY

Question. Where does the Army conduct training for mounted forces in urban terrain? Is Fort Knox's Mounted Urban Combat Training Facility adequate to assist in training future medium brigades in urban warfare?

Answer. The Army has not designated a specific location dedicated to train mounted forces in urban terrain. However, the Army does train its light forces to fight with mounted units in urban terrain during training rotations at the Joint Readiness Training Center (JRTC) at Fort Polk, Louisiana. The Army has six large military operations on urban terrain (MOUT) collective training facilities located at Fort Polk, Fort Hood, Fort Bragg, Fort Knox, Fort Drum, and Fort Benning. Two

new facilities are under construction at Fort Campbell and Fort Wainwright. However, units do not typically train with mounted forces inside these facilities. The Army is taking the necessary action to update our MOUT doctrine, training procedures, and training facilities necessary to support the new doctrine. The Army's combined arms MOUT task force (CAMTF), spearheaded by the infantry center, is updating the Army's doctrine to include mounted forces, artillery, aviation, combat support, and combat service support units. The CAMTF is also working with the other services, particularly the Marine Corps, to coordinate doctrine and identify common training requirements that will maximize the use of our new and existing MOUT training facilities. When the doctrine and facilities update is complete, the Army will be able to train with dismounted and mounted forces at several installations. The Fort Knox Mounted Urban Combat Training Facility is one of the Army's most modern urban warfare training facilities. Although the Army continues to build the training strategies for the medium brigades, this facility appears to be adequate to facilitate training the medium brigades in urban warfare. MOUT is not just a light infantryman's fight—it takes the entire combined arms team to win. No opponent can beat us in an open fight, and we must ensure that we can defeat any adversary that thinks they can challenge us inside cities.

FORCES COMMAND STAFFING IMPACT ON TRAINING AND DOCTRINE COMMAND

Question. You have announced your intention to fully staff all Forces Command (FORSCOM) units. Where will these extra soldiers come from, and specifically, what will the impact on the Training and Doctrine Command (TRADOC) units be?

Answer. Our initiative to man the force has four phases. The first phase, which will be accomplished by the end of this fiscal year, is to fill the 10 active divisions, separate brigades, and our armored cavalry regiments to 100 percent of their authorized fill. The rest of the Army will drop slightly in strength as we redistribute soldiers to these units. Next year, we will fill those table of organization and equipment (TOE) units that are identified to deploy within the first 30 to 45 days of a major theater war (MTW) to 100 percent, and again the remainder of the Army will share the remaining inventory. During fiscal year 2002, the rest of the TOE Army will be manned to 100 percent, with the remaining inventory shared among the institutional Army. In fiscal year 2003, the institutional Army will be manned to 100 percent of their authorizations. At this point, the entire Army is to be manned at 100 percent, thus eliminating all remaining Army-wide shortages.

For us to be successful throughout the duration of this process, we will have to continue to reduce attrition and meet our recruiting and retention missions. Additionally, we have developed a plan to reduce the size of the table of distribution and allowance (TDA) Army, while minimizing the impact on those affected installations. TRADOC has been a key player in that process. With regards to the impact on TRADOC, we will continue to man those key components of the training base, such as drill sergeants, recruiters, and classroom instructors, at 100 percent throughout this period. The biggest impact on TRADOC will be with skill-level one soldiers—private to specialist—because we did not meet recruiting goals over the past three years. Noncommissioned officer strengths will decline slightly but will remain sufficient to meet our training missions.

FISCAL YEAR 2000 RECRUITING AND RETENTION GOALS

Question. Has the Army met recruiting and retention goals to date in 2000? Are you satisfied with the results thus far?

Answer. As of the end of the recruiting ship month of April, the Army has a recruiting shortfall of 2,233. An additional 5,000 contracting opportunities are being made available in August and September to give us the opportunity to make up this shortfall. We remain cautiously optimistic that the recruiting initiatives we have put in place will help us to achieve our fiscal year 2000 accession requirements by year's end.

The Army has exceeded its fiscal year 2000 retention mission through the second quarter of this year in all three categories: initial term, mid-career, and career. We fully expect this success to continue throughout the remainder of the year and could not be more pleased with the great work that is being done by commanders and their career counselors.

GREEN TO GRAD PROGRAM

Question. Can you explain your Green to Grad proposal?

Answer. What has been commonly referred to as the Army's Green to Grad Program is a program in development which is designed to position the Army as an institution to which highly motivated young people are attracted because it is a

place where one can earn a degree while serving the country. The program is being designed to allow eligible soldiers the opportunity to obtain higher education degrees by maximizing the use of technology-based distance learning opportunities. Currently, proposed features for a soldier include tuition assistance, a laptop computer, printer, and an internet service provider account.

INTERIM BRIGADE LOCATIONS

Question. What is the Army's timetable for deciding on where future interim brigades will be stationed? If decisions have already been made, what are they?

Answer. We have not made any final decisions regarding which specific brigades will be converted to the interim brigade design. Our analysis will consider both active component and reserve component unit candidates. Our timetable will be driven by our ability to achieve prerequisite conditions in a number of functional areas to ensure successful transition from the Initial Brigade Combat Teams—the two brigades at Fort Lewis—to an Interim Brigade Combat Team organization. We are finalizing a management plan to help us synchronize the many actions that must occur. Our analysis of which brigades to convert will also consider how to best meet the requirements of the geographic commanders-in-chief.

QUESTIONS SUBMITTED BY SENATOR RICHARD C. SHELBY

TRANSFORMATION AND ARMY AVIATION

Question. General Shinseki, you and I have talked at some length about the Army's Transformation. It presents a difficult but not insurmountable challenge. Would you please comment on Army aviation programs which will assist in transforming the Army into a lighter more lethal force?

Answer. Army aviation is a key enabler for both the Army Vision and the Army strategy to implement the Vision. Army aviation is uniquely suited to enhance the Transformation of the Army into a lighter, more lethal force that is strategically responsive and dominant across the full spectrum of operations. Army aviation exhibits the characteristics of this new force with the capability of being responsive, deployable, agile, versatile, lethal, survivable, and sustainable. From an organizational perspective, the Army aviation force will transform from the current pure organizations into a multifunctional battalion organization, with reconnaissance, attack, and utility assets that will allow the force to be easily task-organized for specific operations without sacrificing capability. From an aircraft perspective, the RAH–66 Comanche is the centerpiece for the Transformation of Army aviation. Comanche provides a state-of-the-art helicopter capable of performing armed reconnaissance and light attack missions across the entire spectrum of operations. The enhanced survivability, digital versatility, increased lethality, self deployability, and field sustainability makes the Comanche the embodiment of the Army Vision. Army aviation will maintain warfighting capability by sustaining, recapitalizing, and modernizing the fielded aviation systems by accomplishing those readiness and sustainment actions necessary to ensure they maintain their combat overmatch. The aviation force will also divest the legacy fleets of UH–1 and AH–1 aircraft. These aircraft are experiencing ever rising support costs and ever decreasing operational readiness, and the Army supports continued procurement of the UH–60 to divest UH–1s and modernize the force. Lastly, aviation training methods must also be transformed. The Training and Doctrine Command has taken the initiative to meet the requirement to divest itself of UH–1s, invest in more modern training aircraft, and improve the quality of training through a program known as Flight School XXI. The investment by Army aviation in people, organization, materiel, and doctrine will all contribute to a more capable, lethal force, and fulfillment of the Army Vision.

TECHNOLOGY INVESTMENTS

Question. General Shinseki, investment in technology is a serious issue to me. I am concerned that the Army is eating its technological seed corn. I have been informed that $90 million was removed from missile technology lines for fiscal year 2000 through fiscal year 2003, reportedly to pay for procurement. I believe that as the Army gets leaner and more mobile it will need smaller, more lethal and affordable multi-mission missiles. General, how can we maintain our technological edge without a sufficient investment? What are your thoughts on reversing this trend?

Answer. The Army's top priority is the Transformation to the Objective Force. The results from our science and technology (S&T) program over the next few years are key to its success. To keep our combat overmatch edge, missile technology is one of the major thrusts in our fiscal year 2000 S&T investment strategy. Army pro-

grams are focused on developing smaller, more lethal and affordable multi-mission missiles. The Army has increased, not decreased, its S&T investment in missile technology during the past few years. In the fiscal year 1998 budget, we requested $426 million for missile S&T. In fiscal year 1999 and 2000, we requested $432 million and $436 million, respectively. This year's budget request was $455 million for missile S&T. It is clear that the total missile technology funding for the period of fiscal year 2000 to fiscal year 2003 is increasing each budget cycle. We believe that this is the proper funding level for missile technology and is sufficient to keep our technological edge.

BALLISTIC MISSILE DEFENSE ACQUISITION

Question. General Shinseki, I understand that the Department of Defense has directed that Service program managers and program executive officers, who are responsible for the execution of Ballistic Missile Defense Organization (BMDO) acquisition programs, will report directly to General Kadish. How has the Army responded to this change in acquisition alignment? What are your thoughts on the proper role of the Army in the acquisition and operation of ballistic missile defense systems?

Answer. We are still working with BMDO to finalize the details of this arrangement. We want to ensure we do this right, as it could have a profound impact on our ability to develop the Army's future acquisition leadership. We also want to ensure that missile defense programs are balanced and maintain the focus on fielding systems to the warfighters.

As the user of missile defense systems and force provider for the geographic commander-in-chiefs (CINC), our responsibility is to field the best equipment on time to meet warfighter needs. This makes for a tough challenge in working through the trade-offs between research and development, procurement, operations, support, and sustainment. We face this challenge in all our programs; however, missile defense requires coordination with BMDO throughout system development. As the user of the equipment, the Army must stay involved throughout the development process to ensure the fielded product is supportable and meets Army and CINC requirements.

THEATER HIGH ALTITUDE AREA DEFENSE SYSTEM FIELDING

Question. General, the Theater High Altitude Area Defense (THAAD) system is scheduled to be fielded in fiscal year 2007. With the ever-increasing threat posed to our troops and installations by the proliferation and possible use of theater ballistic missiles, I am concerned that we are not fielding systems sooner. Can THAAD be fielded sooner than fiscal year 2007?

Answer. We think THAAD can be fielded sooner. THAAD is currently funding constrained and could be fielded almost two years sooner if it received additional funding of $150 million in fiscal year 2001, $190 million in fiscal year 2002, and $80 million in fiscal year 2003. This acceleration would also maintain the program at low risk. THAAD is on track for its milestone II decision in the next few weeks. Fielding sooner will provide our deployed forces unprecedented levels of protection from tactical ballistic missiles, as well as their only protection from numerous fielded medium range ballistic missiles like the no dong and shahab-3.

HIGH ENERGY LASER TECHNOLOGIES

Question. The Committee continues to strongly support the development and exploitation of the potential for high-energy laser technologies in revolutionary, leap-ahead applications for military weapons. These technologies offer the potential for speed-of-light, highly lethal engagements; high kill probabilities at long ranges; and reduced logistics support. These capabilities appear to have particularly appropriate application to support your vision for the Army of the future. What is your vision for the development of these technologies and the subsequent exploitation of these capabilities in future Army applications? How does the Army plan to support this work with budget and programming priorities in this year's budget and in the future? Where do you envision these efforts being centralized?

Answer. High-energy laser technologies, particularly the emerging solid-state devices, clearly offer significant potential to current forces as well as both Interim and Objective Forces. These devices offer the potential to provide the force with a capability to defeat a wide variety of advanced threats in a relatively small configuration that is easily transportable by the means envisioned for the Objective Force. Solid-state technologies could greatly simplify logistics support to a rapidly deployable force. We must provide the investment necessary to mature these technologies and

verify the lethality predictions in time to support force structure issues in the middle of this decade.

The Army recently reprogrammed $500,000 of fiscal year 2000 science and technology (S&T) funding for directed energy efforts at the Space and Missile Defense Command. These funds will be used to begin exploring areas that are the key drivers for application of high-energy, solid state lasers for advanced weapon systems. A new applied research program element was created in fiscal year 2001 in the S&T program to investigate the application of high-energy, solid state lasers for counter air munitions defense on the tactical battlefield and support the survivability of the Future Combat System.

We agree with the position stated in the Department of Defense laser master plan. This report, produced by the high energy laser executive review panel, offers a new management approach by creating a Joint technology office to be located with the Office of the Secretary of Defense (Deputy Under Secretary of Defense (S&T)). Oversight for this office will be provided by a board of directors consisting of senior acquisition executives and advice will be provided by a technology council of senior science and technology executives. We believe this will ensure a well-coordinated program, visible at the highest levels, appropriately funded, reflecting the priorities of all the services.

QUESTION SUBMITTED BY SENATOR DANIEL K. INOUYE

JOINT STARS (JSTARS)

Question. We have watched with interest your efforts to transform the Army, particularly the introduction of the new Interim Brigade Combat Team (IBCT) into the force structure. How do you see Joint Stars (JSTARS) supporting this new concept?

Answer. The JSTARS common ground station (CGS) will continue to provide near real-time continuous correlated view of the commander's battle space for the IBCTs just as it does for today's brigade commanders. The JSTARS CGS will provide every brigade and IBCT commander with the capability to receive, process, and display near real-time moving target and synthetic aperture radar imagery, broadcast signals intelligence, near-real time tactical unmanned aerial vehicle video, as well as access to high-quality secondary imagery from theater and national sensors. This capability provides each brigade and IBCT an unprecedented level of information to conduct indications and warning, situational awareness, force protection, correlated targeting, and battle damage assessment operations. The result is that all brigade and IBCT commanders will have the critical knowledge of who, what, when, and where throughout their battle space as well as the capability to precisely target and engage high-value, high-payoff targets with organic and supporting weapons systems. Brigade and IBCT commanders' ability to view moving target and synthetic aperture radar imagery is crucial for the Army's vision of a light, mobile, lethal, and survivable combat team.

SUBCOMMITTEE RECESS

Senator INOUYE. We will meet again tomorrow, Wednesday, April 26, at 10 o'clock in the morning, to receive testimony from the Secretary of Defense and from the Chairman of the Joint Chiefs.

Thank you very much. The subcommittee stands in recess.

General SHINSEKI. Thank you, Senator.

Mr. CALDERA. Thank you, Senator Inouye.

[Whereupon, at 12:18 p.m., Tuesday, April 25, the subcommittee was recessed, to reconvene at 10 a.m., Wednesday, April 26.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2001

WEDNESDAY, APRIL 26, 2000

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:03 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Cochran, Domenici, Bond, Shelby, Inouye, Hollings, Leahy, Lautenberg, Harkin, Dorgan, and Durbin.

DEPARTMENT OF DEFENSE

OFFICE OF THE SECRETARY OF DEFENSE

STATEMENT OF HON. WILLIAM S. COHEN, SECRETARY OF DEFENSE

OPENING STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. Good morning, Mr. Secretary, Mr. Chairman. It is nice to have you before us again today. Let me start off by saying how much we appreciate what you have been doing. Mr. Secretary—Bill—you do not mind if I call you Bill. You were one of us, and you have distinguished yourself in this position as Secretary of Defense, and you have been very active in keeping us informed, so that we would not be critical based on ignorance anyway.

But Mr. Chairman, this has been a tough period so far, and it is not going to be any easier with regards to money. We want to thank you for coming here.

There are a series of priorities we want to discuss with you, Plan Colombia, health care, missile defense. We have had a series of hearings, as you know, that have dealt with our total national security, and considering the men and women under your Department and your command, General.

We have tried to keep these on track, despite some rather strange budgets we have had to deal with, and circumstances that have led to using funds we have appropriated for purposes other than we originally intended them to be used for. But through it all I think we have kept a very good relationship with the two of you and I do want to commend you for presenting to us a budget that calls for a real increase.

We have, it is no secret, decided to increase beyond that. I do think that this budget will go a long way towards meeting the needs of the men and women of the Armed Services. There is a pro-

vision for National Guard and Reserves here that we commend you for. We are very appreciative of your action in making that available.

I have a series of questions, of course. We all do, and I have a long statement that I do not intend to give. I will put it in the record, and we will put in the record all the statements that have been prepared by you and everyone at the table, with the hopes that we will all try to shorten it so we can get down to your statements.

I do want to emphasize the fact that there are still some problems here before us jointly, problems of retirees and the problems basically of how to catch up with this deferred maintenance that I think will plague us if we do not find a way to deal with them to the maximum extent possible this year. We are going to call on you once again to work with us in a partnership for the benefit of the total defense of our country, and particularly the men and women that volunteer to serve us. Again, I thank you for coming here. This may be—I do not know, Bill, it may be your last trip down the aisle here, but we are pleased to be able to visit with you this morning.

[The statement follows:]

PREPARED STATEMENT OF SENATOR TED STEVENS

Secretary Cohen, General Shelton, let me welcome you again before the subcommittee, to discuss the Department's fiscal year 2001 budget.

As you know, we have undertaken a series of hearings this year with the military services, and to review several specific programs advocated by the Department.

These priorities include the "Plan Colombia" initiative, health care, and missile defense.

Through these hearings, the committee has received testimony that indicates the increased funding provided by Congress during each of the past five years has had a real impact on our national security.

Funding added by Congress has kept the missile defense program on track for deployment of the national missile defense system in 2005.

Increased modernization funding made possible achieving the $60 billion target for procurement reached in the fiscal year 2001 request.

Finally, the congressionally mandated pay and retirement benefit changes appear to have stemmed the downward trends on recruiting and retention.

Even these successes leave us much work to do this year, and in the year's ahead.

Mr. Secretary, I want to commend you for presenting to the Congress the first real increase in the budget for many years.

Your efforts demonstrate to the men and women of the Armed Forces the determination we all share to provide an adequate quality of life for them, and their families, and the tools and training to do their jobs right.

In particular, this budget goes a long way to meet the needs of the National Guard and the Reserves. They are an integral and essential part of the force, and this budget recognizes their needs.

Even with the enhanced funds requested in the budget, and an additional $4 billion made available under the budget resolution, there are many challenges facing us this year.

Gen. Shelton, you have focused attention on the inadequacies in the current healthcare system for military personnel and retirees.

Your concerns about these matters sends a powerful signal to all these communities of the recognition by the Joint Chiefs that efforts must be made now to remedy the lack of access to care for our retirees.

We look forward to working with you on this initiative this year, in partnership with the Armed Services Committee and the House.

In the end, we must fit all these needs under the fiscal cap set for fiscal year 2001.

Quite frankly, I'm not sure yet how we will get the job done.

The first step must be to get the supplemental bill for fiscal year 2000 done, and ensure you can get through the remainder of this year. I welcome any comments you might have on that.

As always, we will get the job done here on this committee through the wise counsel and hard work of our distinguished ranking member, Sen. Inouye. Let me now recognize Sen. Inouye for his opening statement.

STATEMENT OF SENATOR DANIEL K. INOUYE

Senator STEVENS. Senator Inouye.

Senator INOUYE. Thank you. I wanted to join you in expressing our gratitude to the leadership team here. Mr. Secretary and Mr. Chairman, you have been very helpful to this committee, I need not say, and I have watched the improvements that have come forth as a result of your leadership. For example, I believe we had about the highest level on readiness, recruiting, and retention. You have done well in procurement. You have got $60 billion for each now to replace aging weapons systems. You have got an increase of $12 billion in overall budget, but we do have problems.

For example, we do not have the supplemental before us, and if it is not brought forth in a timely fashion, then the Army is going to really take it in the neck, and we also have infrastructure problems of replacing and rebuilding old buildings, but I am not too worried, because under your guidance we are going to do well.

I can assure you that we are prepared to do whatever we can to be of assistance. Thank you very much, sir.

[The statement follows:]

PREPARED STATEMENT OF SENATOR DANIEL K. INOUYE

Good morning, I want to join my Chairman in welcoming you, Mr. Secretary and General Shelton.

Based on the testimony we have received this year, I would offer that the Defense Department is better off on readiness, recruiting and retention than in the past few years.

I would also note that the administration has finally reached its goal of $60 billion for procurement to replace our aging weapons systems.

With the budget $12 billion more than last year, it appears that we may be on the right track.

However, we cannot rest easy.

We have not yet provided you with a supplemental appropriations bill to cover your costs in Kosovo for this year.

We know that our forces are still stretched thin around the globe with some missions simply not being done.

And the one area with the greatest shortfall remains infrastructure.

We simply are not doing enough to repair, rebuild, and replace our facilities, here at home.

Mr. Secretary, General Shelton we do appreciate all that you do to safeguard our defenses and the progress that you have made in the past couple of years to address many of the critical issues that we faced. We thank you for that and look forward to your statements today on these and other issues.

Senator STEVENS. Unless there is objection, we will follow the normal early bird routine and recognize members in the order in which they came into the room. I was the exception. I am sorry.

And we will use a 5-minute clock, and I would ask you gentlemen to help us observe the 5-minute clock so we can all be fair in the allocation of time here this morning, and we will stay as long as the two of you wish to continue to answer questions.

The next Senator on the list is Senator Shelby.

STATEMENT OF SENATOR RICHARD C. SHELBY

Senator SHELBY. Mr. Chairman, I will defer my time and hope to listen to the Secretary.

STATEMENT OF SENATOR ERNEST F. HOLLINGS

Senator HOLLINGS. I will put my statement in the record. We are already being recognized for questions?

Senator STEVENS. No. Just for opening statements.

Senator HOLLINGS. I will put my statement in the record. I thank Secretary Cohen and General Shelton for their outstanding job. Thank you.

[The statement follows:]

PREPARED STATEMENT OF SENATOR ERNEST F. HOLLINGS

Thank you Mr. Chairman, and thank you Mr. Secretary and General Shelton, distinguished Chairman of the Joint Chiefs of Staff. Let me begin by congratulating you Mr. Secretary for submitting to us a balanced, robust budget this year. There are many exciting initiatives in this year's budget as well as clear headway on military health care and quality of life for our soldiers. Military health care is of particular interest to me and the men and women in uniform that I visit in South Carolina. If we do not take care of the soldiers and their families we will not be able to carry out our National Security Strategy. Likewise if we do not provide adequate health care and benefits for our retirees, we cannot call upon them to help us to recruit new candidates for the armed services. I look forward to working with you to ensure that our men and women in uniform receive the support they deserve as they respond to the high frequency of strenuous international conflicts.

It was widely believed that as a result of the end of the Cold War that the United States would be able to reap the benefits of the so-called "peace dividend"—that is buy fewer guns and more butter. If one looks at the chart of U.S. government spending on defense over the period since the fall of the Berlin Wall it is true—spending on defense has been ramped down. The Congress, in conjunction with the White House, shifted resources away from Defense largely in an effort to reduce overall government spending. We all remember the dreaded BRAC rounds. As painful as they were—and I know personally with the closing of the Charleston Navy Base—the reduction in DOD infrastructure provided windfall efficiencies inside the military complex.

Moreover, the Pentagon began to pay closer attention to fiscal responsibilities and embodied the efficient financial management that would make the CFO of a Fortune 500 company proud. Gone are the days of the $500 hammer. In part the efficiencies that were wrung from the excesses of a Cold War force structure have helped create the fertile conditions that fostered the unprecedented economic boom that this country has enjoyed over the last eight years. In a sense we have reaped "the peace dividend".

However, with the frenzied pace of deployments to unstable regions in the world, the lasting infrastructure build-ups, and the over-stretch of our force structure globally, it appears that the days of apple pie and ice cream are over, the check has come due. Since the end of the Cold War in 1989, procurement spending has declined 59 percent in real terms yet the armed forces have been sent into over 25 different countries to serve in differing capacities. These divergent forces, decreases in defense spending and a corresponding increase in engagement has caused great strains on our men and women in uniform who are called upon to carry out these missions.

Essentially we have two options: provide more funding to support our men and women in uniform or curtail the number of overseas missions that we support. I am a firm believer in providing our troops with the most advanced weapons and systems possible to help them achieve the assignments given to them, but I am careful to point out that the United States as a global superpower, cannot police the world over. We must operate within the framework of our National Security Strategy, and this doctrine must be paramount. We should lend our support to multinational and unified interagency conflict resolution efforts. We should lead by example yet encourage our allies to play a greater role in their own regional defense.

I look forward to the testimony that both our distinguished witnesses will give today and look forward to working with them and my colleagues this year to ensure that we provide a robust and comprehensive national defense.

Senator STEVENS. Senator Dorgan.

STATEMENT OF SENATOR BYRON L. DORGAN

Senator DORGAN. Mr. Chairman, let me just echo my thanks to Secretary Cohen and General Shelton for their service to our country.

Senator STEVENS. Senator Cochran.

STATEMENT OF SENATOR THAD COCHRAN

Senator COCHRAN. Mr. Chairman, there are a couple of provisions in the budget request that concern me, and I hope the Secretary will be able to address them this morning. One is the assumptions for base closure rounds in 2003 and 2005.

My concern is whether or not there is any realistic expectation that that is going to occur, and whether or not the administration is going to make any specific request of Congress to close bases, and what information you can provide to us on that count, and also the stretching out of the shipbuilding construction program. The reality is death, if not the serious economic squeeze on the industrial base and vendors who are involved. I am talking specifically about the DDG–51 ship construction plans, the LHD–8 construction plan, and whether or not funds are going to be made available to keep the construction on schedule, or extend it out to a point where we are really going to see a serious decline in our capacity to build ships in the future.

Senator STEVENS. Senator Bond.

STATEMENT OF SENATOR CHRISTOPHER "KIT" BOND

Senator BOND. Thank you, Mr. Chairman. Secretary Cohen, General Shelton, first our sincere thanks to you and the men and women of the Armed Forces who every day are making great contributions around the globe. Their patriotism and professionalism is something of which we are all proud, and we hope you will convey that to the members of the Department of Defense, and a special thanks to our old friend and former colleague Bill Cohen for the great job you have done, and if this is your last hearing here we have appreciated your leadership, and I recall very explicitly your frankness in dealing with us in this committee, and acknowledging that we needed more money, as the chairman has already referred to, for the missions that have been assigned, and I think we are scrambling to catch up.

But I appreciate your standing up for these things. I understand that you all have challenges funding for Kosovo, your main concern about operating tempo, recruiting retention shortfalls, aging equipment, insufficient budgets. We have already mentioned, I believe—there have already been mentioned here the concerns we have on health care for the military and the retirees. We will have questions about that, and also a question or two about the National Guard, and we thank you for being here, and thank you, Mr. Chairman.

Senator STEVENS. Senator Harkin.

STATEMENT OF SENATOR TOM HARKIN

Senator HARKIN. Thank you, Mr. Chairman. I would like to join you in welcoming Secretary Cohen and General Shelton. Again, we thank you for your great service to our country. As a veteran myself, I strongly support the needs of military readiness and pay increases and improvements in the quality of life of our soldiers. That is why I am always concerned about items that pop up that look like elements of waste and abuse.

For the last 10 years, I have waged an effort against waste and abuse in the Medicare program. First it was said, well, it is not that big a deal. Well, then the General Accounting Office (GAO) said, well, it is about $23 billion, which is not chump change. That is just in Medicare, but we have been going after it and ferreting it out, and so I have taken that also to the military, and when I see things like the procurement budget up to $60 billion, I want to make sure that it is money well-spent.

Last year we found out there were Army trailers sitting in storage, 6,550 of them sitting in storage because they are unsafe, that cost more than $50 million. And now I have got a new report saying it is going to cost $22 million more just to fix them up at a minimum. There are a lot of examples. We are paying millions of dollars extra for simple brand-name items like boxes of cereal. We are paying $714 for a $47 electrical bell, $76 for a 57-cents screw. We have all heard these stories before.

I guess what I am saying is that this is an ongoing problem. The Navy last year wrote off $3 billion in inventory, wrote it off, $3 billion. It was shipped between facilities and never recorded as received. The GAO concluded the system was highly susceptible to fraud and abuse because receipts for items, including classified and guided missile launchers, were never filled out or never required, and the GAO was not able to find out about some items because no records of the shipments existed at all; $3 billion just written off. Well, again, we need ongoing efforts to ferret out this kind of waste and abuse.

One last item of a more parochial nature, perhaps. In the State of Iowa, Mr. Secretary, we had an Army ammunition plant in Eastern Iowa that had been assembling nuclear weapons for a number of years. We recently found out that a lot of these workers were exposed, like they were at Paducah. The Department of Energy is doing a great job in helping us to work with them, to inform them about what they were exposed to, but the Department of Defense still will neither confirm nor deny that nuclear weapons were assembled there.

Well, they have not been assembled there in over—about 25 years now, I guess, but it seems to me not only silly but inconsistent. Here we have the Department of Energy (DOE) saying yes, the Department of Defense saying, well, we will not confirm or deny it. This has left a lot of the people that worked there who took oaths, signed oaths saying they would not reveal what they did there, concerned that if they were to talk about this openly, that they might fall under the purview of the law, and of the oaths that they took to not discuss what they were doing at that plant.

I would hope the Department of Defense could work with the Department of Energy to get over this hurdle and let people know that yes, we did assemble nuclear weapons there. Everyone knows it, DOE knows it, and we can move ahead and let these people know that they can indeed come forward and talk about what they did there.

Thank you, Mr. Secretary. Thank you, Mr. Chairman.

[The statement follows:]

PREPARED STATEMENT OF SENATOR TOM HARKIN

Thank you, Mr. Chairman. Before I begin, I would like to welcome warmly our former colleague, Secretary Cohen, as well as General Shelton. Both of you have provided strong leadership for the Department.

This year is a landmark of sorts in the defense budget. The Defense Budget Authority is passing the $300 billion mark for the first time in fiscal year 2001, with $306.3 billion in the President's request, and $310.8 billion in the budget resolution. And while the stock market indices may be bouncing around, the graphs of projected defense spending head straight for the stratosphere. As a veteran myself, I strongly support the real needs of military readiness as well as pay increases and other improvements in the quality of life of our soldiers. That's why I am incensed when I see so much money continuing to be wasted rather than meeting the real needs of our troops. And with an $18.2 billion increase in the budget resolution, what we have here is the Regis Philbin budget—it hands out millions to everyone without asking any of the hard questions.

And there are so many important questions to be asked. With the procurement budget shooting up to $60 billion, we need to ask if it's being spent well. Last year I found out that there are 6,550 trailers sitting in storage because they are unsafe to use. These are basic trailers for hauling loads behind trucks, but the Army took them and paid for them without adequate testing. The Army can't buy a trailer that works, but we're asked to go ahead and pay for a National Missile Defense system that isn't adequately tested either.

There are many more examples I could give. Chemical weapons protection suits may have been distributed to our troops even though they have holes in them. The Defense Department paid millions too much for simple brand-name items like boxes of cereal. And after reforms that were supposed to end the era of $640 toilet seats, it turns out we're paying $714 for a $47 electric bell and $76 for a 57 cent screw.

The record on items and money already owned by the Pentagon is no more encouraging. The Navy wrote off $3 billion in inventory that was shipped between facilities but that was never recorded as received. The General Accounting Office concluded the system was highly susceptible to fraud and abuse because receipts for items, including classified guided missile launchers, were never filled out or were not even required, or the GAO was unable to find out because no records of the shipment existed at all.

As we look at giving the Pentagon extra billions, we also should note that at the end of 1998 there was a $9.6 billion difference between the Defense Department's records and the U.S. Treasury's records.

The Pentagon doesn't know what it has in stock or how much money it has; it buys things that don't work and pays too much for them. Are they ready for a large increase in funds? We have critical needs in this country for school construction, better-paid teachers, universal health insurance, prescription drug coverage for seniors, and on and on. We cannot afford to continue throwing money at the Pentagon when so much leaks out in waste and fraud.

There is one other issue I would like to bring up. The Defense Department has a policy to "neither confirm nor deny" that nuclear weapons were ever at any site. We know that there were nuclear weapons at the Iowa Army Ammunition Plant because the Department of Energy now tells us that the old Atomic Energy Commission assembled the weapons there until 1975. But because of the "neither confirm nor deny" policy, the Army can't talk about it. The Department of Energy can, but the Army can't.

This inconsistency is not just silly; it's a serious problem. The Department of Energy just announced a major initiative to help former workers who have health problems that may have been caused by chemical and radioactive exposures at nuclear weapons plants. We are now trying to get the former workers at the Iowa plant, who were trained never to talk about their work, to come forward and talk about what they did so they can get help. But while I, and the Energy Department,

encourage openness, the Army can "neither confirm nor deny" that nuclear weapons were even there. For the former workers, many of whom also worked for the Army at the same site, this silence sends the wrong message. The Army even petitioned the Pentagon to lift the restriction in a similar case, but the petition was denied. I greatly appreciate the Army's cooperation in reviewing records of the nuclear weapons work and cleaning up the site, but this secrecy about work that ended 25 years ago makes no sense. I hope you will review this policy and strictly enforce secrecy when it is necessary for our protection, but practice openness when it benefits your workers and the Nation.

Thank you, Mr. Chairman, and I look forward to hearing from Secretary Cohen and General Shelton.

Senator STEVENS. Senator Leahy.

Senator LEAHY. Mr. Chairman, I will have some questions for the record, and I note for the Secretary of Defense that I wrote back in February to Deputy Secretary of Defense, John Hamre about the new alternative to nonself-destructive land mines. I understand today that a draft, or response is coming up to me.

I want both you and General Shelton to know this is a matter that I am going to take great personal interest in. I am concerned about the so-called battle override feature on the system. I would like to get us closer to the Ottawa convention, rather than further away, and so I will look forward to that draft. I will have some follow-ups, Mr. Chairman, once I have received the response, but it is something that I will want to follow up with both of you later on on.

Thank you.

Senator STEVENS. Thank you. Senator Lautenberg.

STATEMENT OF SENATOR FRANK R. LAUTENBERG

Senator LAUTENBERG. Thank you, Mr. Chairman. I will put my full statement in the record, but I want to add my compliments and my commendation for the service Secretary Cohen and General Shelton have given the country.

I know for Secretary Cohen the question was whether the objectivity that was required in the job would be there, and without a shred of doubt he has passed the partisan business and gone right ahead with his job in such a good fashion that I think his mark will be indelible in the history of Secretaries. I also commend General Shelton, for his fine job.

Mr. Chairman, I support the increased spending for defense in this budget, but I am struggling with what may have to be done in terms of making adjustments with the other accounts also so vitally important. Also, Mr. Chairman, I am disappointed that we are not able to be looking at a supplemental that would take care of current serious needs in defense and other places, and I hope there is something we can do about it, and again I would close with a commendation to both of the distinguished people sitting at the desk.

[The statement follows:]

PREPARED STATEMENT OF SENATOR FRANK R. LAUTENBERG

Thank you Mr. Chairman and good morning and welcome to Secretary Cohen and General Shelton.

Let me say first that I want to thank and recognize the military for the outstanding job it has done in Kosovo and in many other places throughout the world. The country should be proud of the job our soldiers, sailors, marines and Air Force

men and women, along with their civilian colleagues, have done to make the world less dangerous to the United States and our allies.

Mr. Chairman, the Administration proposed an overall defense discretionary budget of about $306 billion for fiscal year 2001 and $1.6 trillion over the next five years. This includes defense funding that is handled by other subcommittees, though the bulk is handled by this subcommittee.

This is a significant amount of money and represents about half of total discretionary funding. This fiscal year 2001 level would represent an increase of about $12 billion over the current fiscal year 2000 level and would be almost $2 billion more than what was assumed for fiscal year 2001 in last year's Budget Resolution.

On top of the President's requested increase for the military, the recently passed fiscal year 2001 Budget Resolution raised Function 050 by an additional $4 billion for fiscal year 2001. We also probably will be appropriating additional funding in some type of supplemental for defense for fiscal year 2000.

Mr. Chairman, I support having a strong defense and have generally supported the Administration's proposed increases for defense. Providing for national security is a critical responsibility of the federal government and it would be reckless to provide less than what is needed for defense. But I also believe it would be wasteful and counterproductive to spend more than necessary on the military, given all the other demands on federal resources—especially at a time when the United States has strong allies and no peer adversary when it comes to national security.

The United States spends more than double what Russia, China, and the so called "rogue states" spend on defense combined. And that does not include the defense spending of our allies, which if included would make this defense spending comparison even more in our favor.

I have some burden sharing concerns also. Many of our allies are large economically strong nations that could and should do more in defense but spend significantly less as a percentage of their GDP on defense than we do. Shortfalls in the military capabilities of some of our allies were apparent in Kosovo. It is imperative that our allies increase their defense spending to eliminate these shortfalls.

Some justify huge spending increases for the military by pointing to estimates of large budget surpluses in future years. But those projections generally are based on highly questionable assumptions about Congress' willingness to make cuts in other programs. Actual surplus levels could be much smaller.

We must also realize that our national security is based on more than just how much we spend on defense. These funds must be spent efficiently and effectively. Spending money on the diplomacy and foreign assistance accounts, areas that have been severely constrained for many years, can also contribute to national security. We must also adequately fund our domestic needs and infrastructure because we know that the foundation of national security is a strong economy.

So, Mr. Chairman while I believe it is imperative that we provide the funds necessary for defense, the defense budget should also be subject to intense review to ensure that we are properly balancing the numerous and varied spending needs of the nation.

Thank you Mr. Chairman.

Senator STEVENS. Senator, it is our intention to be marking up the military construction (MILCON) bill and the agriculture bill the week of the 8th, and we will split that supplemental. The defense portion on the MILCON annual bill, the bill for fiscal year 2001 and the nondefense portion on the agricultural and it is our hope that we would be able to get both of those through conference and to the President as quickly as possible. We do have a plan now that I think we can pursue. I hope all Members will help us do that.

Last but not least is, the chairman of the Budget Committee, who was successful in getting us this additional money this year for defense, Senator Domenici.

Senator DOMENICI. Mr. Chairman, might I just ask of you how long you think we will be here this morning? Do you have kind of a guess? Will we be here another hour, or hour and a half?

Senator STEVENS. The head can absorb what the seat can endure, Senator. It depends upon how long these two gentlemen wish to stay seated there.

Secretary COHEN. That would be another half-an-hour, Senator Domenici.

Senator STEVENS. We will be going under the 5-minute allocation of time.

Senator DOMENICI. I will not make a statement at this point. I will return from another meeting, and I hope you are still here, at which time I will ask questions. Thank you very much.

Senator STEVENS. Thank you.

Gentlemen, as I said, your statements will appear in the record as though read. We will be pleased to have your comments, and then we will go through the routine for our questions. Thank you very much, Mr. Secretary.

SECRETARY COHEN'S OPENING REMARKS

Secretary COHEN. Thank you, Mr. Chairman, Senator Inouye and members of the committee. Mr. Chairman, as you indicated, this is my last appearance before this committee, and I want you to know how important it has been for me to have your support.

This is one of the most demanding jobs. I have had the wonderful experience of having served 24 years in both the House and in the Senate combined, and to go from the world's greatest deliberative body to be the civilian head of the world's greatest military is more than one can ever expect during their lifetime, and I will tell you that as much as I enjoyed my time here in this body, and I did truly enjoy those 18 years, nothing can compare to being the Secretary of Defense of the world's greatest military.

Every day that I go out and see the men and women who are serving us, and seeing how good they are, and how disciplined and patriotic and selfless, and to see, aside from the morning headlines to go out in the field, and to see how well they are performing and how enthusiastic they are about their work and what they are doing, and how gratified they are, you cannot help but come back totally optimistic about the future of this country.

So I want to take this occasion publicly to thank President Clinton, because he did something that is virtually unprecedented by asking me to serve in his administration, to send a signal that national security should wear no political label, no party label. I think was a very courageous act on his part, to be willing to offer one of the most important positions in the Cabinet to a member of the opposite party, and I have been grateful to him ever since for giving me this opportunity.

And I might point out that the chairman and I and before him General Shalikashvili, we have had the extraordinary privilege of working through some very difficult times, but I wanted, too, to thank both you, Mr. Chairman, Senator Inouye, and all the members of the committee, and another farewell I suppose is in order for Senator Lautenberg. I believe this is Senator Lautenberg's final year in this body, and to commend him for his service not only during wartime, but also in the wars up here on Capitol Hill. We may have disagreed from time to time on issues, but we worked together on many more.

Mr. Chairman, I have a brief statement. I will submit it for the record. I looked at the chairman's submission for the record. It is

61 pages. Senator Domenici, he has agreed to read every word so you can get back in time.

FISCAL YEAR 2000 SUPPLEMENTAL APPROPRIATIONS

I will simply summarize a couple of the key points here. I think you have all expressed the disappointment that we feel in not having a supplemental passed by this time. I know that you, Mr. Chairman, worked very hard, and I thank you also for the 4.5 increase in the budget resolution, Senator Domenici, for achieving that, but the fact that we do not have a supplemental does put extraordinary pressure on the services, particularly the Army.

I used the authority I have to shift some $200 million from the Navy and the Air Force. It was not exactly an easy thing for them to agree to, but to shift those funds over to the Army to cover the operating expenses that we currently have with the Kosovo operation.

And if we are unable to get the funding by the end of May, then I think you all are aware that the Secretary of the Army has already testified, and General Shinsecki have testified what that will mean in terms of the final quarter, so I do not need to belabor that point, but it will have serious consequences as far as training and readiness, real property maintenance, and the potential to affect personnel and other matters.

So hopefully we can receive that funding by the end of May, but beyond that I think some other draconian measures will be in order.

We have achieved some of the peak effectiveness as far as our operations and our sustainment. I also want to take this occasion to emphasize the importance of the full and prompt approval of the supplemental appropriations request for international affairs, the 150. I know that perhaps it is not a strong sentiment for the funding of that account, but I must tell you, unless we get the civilian side of things right in Kosovo, it is going to make it that much more difficult and that much longer before we can depart, so I did want to express my strong support for the full funding of the function 150.

PRIORITIES IN FISCAL YEAR 2001 PRESIDENT'S BUDGET

Mr. Chairman, I will just touch quickly on a couple of things I wanted to focus on this year. For the first 2 years I tried to focus on how do we balance this need of maintaining operational readiness and then start to get the accounts up for the procurement.

Senator Inouye pointed out we finally achieved the $60 billion mark that was set so many years ago but always proved elusive. Every year we used to see the situation where the $60 billion mark was at a desired level of spending for procurement, but it was always just off into the future. Well, we now have achieved that, and over the future years defense plan (FYDP) in the next 5 years we will go up, calculated to go to $70 billion.

Now, that will mark roughly a 46 percent increase in procurement during that timeframe, and that is going to be a tremendous benefit to all who are serving this country, so I thank you for your support of that.

So we have dealt with pay raise last year. Thank you for increasing even what we requested. That has had a major impact. That plus the retirement change and pay table reforms had a major impact in the field.

I have been out to reenlist soldiers and sailors, and I ask them each time, why are you doing this? Well, you are listening to us. You heard us on the need for pay increases and changing retirement benefits, and we have had a turn-around in sentiment on retention.

Two other areas that have been of most concern to me have been the housing and the health care. On housing, we in this budget, as you know, included some $3.1, as I recall, billion in the budget for the 5-year period to eliminate the inequity that currently exists, and that is that those that live off-base are required to pay on an average almost 19 percent out of their pocket for their housing cost. That is completely unfair, and so we put the $3-plus billion into the budget to eliminate that inequity.

It is going to require a change in law, and hopefully that will have the strong endorsement of all concerned, but we should not have a situation where people are required or forced to live off base because we do not have on-base housing adequate for them, and say but you have got to pay almost 20 percent out of your pocket, that plus transportation cost, and all that is associated with the inconvenience of being off-base comes directly out of their pockets, and so one thing I have tried to do is address that in this final budget.

And just as we are addressing that in the budget, of course there was a new study that came out that imposed changes in reimbursement rates. Some went higher, some went lower, and we found a great inequity, and the moment we spotted that we changed it as well, so we are trying to deal very seriously with the housing situation as you all are aware. We have got a long way to go in terms of rehabing and replacing much of the housing that currently exists to make sure that we provide adequate housing for the men and women who are serving us.

On the operations and maintenance (O&M) funding it is fully sufficient. I will tell you there is no margin for major cuts, and I know that from my own experience in this body that at the end of the year usually we find ourselves in a situation making undistributed O&M cuts.

I will tell you that I have dedicated myself, Senator Harkin, to looking for ways in which we can eliminate fraud and waste. I worked with you very closely while I was here, and especially on the Aging Committee in trying to make changes in our health care field in terms of fraud and abuse, and we were successful, and I have tried to dedicate myself to finding ways in which we can do that in the Department of Defense as well. I will tell you there is not any margin for us to absorb further cuts in the operation and maintenance funding.

I have already touched upon the $60 billion, and a final priority requiring special mention is full funding for the chemical weapons demilitarization program. That is going to be critical to have full funding for that if we are going to meet our obligations under the

chemical weapons convention and to assure that those aging munitions are safely destroyed as quickly as possible.

That, Mr. Chairman, is the sum, and I will answer the questions as they come. I know that base closures and other types of issues have been raised in the opening statements, but let me just conclude by saying that I look at our position around the world and I know that we are overstretched. We are engaged in many, many operations, but I would also say that we are looked upon by virtually everyone as a stabilizing force in the world, and to our great credit our presence in all the regions that we are currently deployed is having an important and salutary impact in promoting stability, and when there is stability, investment usually follows, and where there is investment there is an opportunity for prosperity and promoting our common ideals.

PREPARED STATEMENT

I think we have made and continue to make and will continue to make an enormous contribution to the security not only of this country but to that of our allies and friends, and hopefully each Congress in the future will support the Department, then the Department will work, as we have worked, with you. As you have indicated, it is a partnership. There should be no dividing line. We should not be firing across the Potomac at each other. This is something we all have a common interest in, and it is incumbent upon those who succeed me to work with you as a full partner in this great cause of promoting our national security.

Thank you, Mr. Chairman.

[The statement follows:]

PREPARED STATEMENT OF WILLIAM S. COHEN

Mr. Chairman, members of the Committee, it is a pleasure to be here for this wrap-up hearing on President Clinton's fiscal year 2001 Department of Defense (DOD) budget request. You previously received my full statement detailing our fiscal year 2001 request and had a productive hearing with John Hamre shortly before he completed his brilliant tenure as Deputy Secretary. So today I will highlight only a few budget issues and leave plenty of time for your questions and comments.

FISCAL YEAR 2000 KOSOVO SUPPLEMENTAL APPROPRIATIONS

Before getting to fiscal year 2001, I want to emphasize the escalating criticality of President Clinton's fiscal year 2000 Kosovo supplemental appropriations request. Further delays in approval threaten to weaken our force readiness and undermine NATO efforts to foster stability in this critical region.

I am very disappointed that final passage will not occur by the end of April. This delay has required me to take steps to try to prevent it from damaging Army readiness, which is our most serious concern. Most notably, I am shifting over $200 million from Navy and Air Force accounts to the Army—using the flexibility Congress granted the Secretary of Defense for managing the Overseas Contingency Operations Transfer Fund. This shift will be disruptive for the Navy and Air Force, but it will enable the Army to fulfill its planned unit rotations to the National Training Center for the rest of the fiscal year.

Now, the Department is running out of options. If the requested fiscal year 2000 Kosovo supplemental appropriations are not available by the end of May, the Military Services will have to initiate very disruptive actions and move toward cancellation of major fourth quarter activities that would damage the readiness, military capabilities, and troop morale of our armed forces.

Hardest hit would be the Army, which would have little choice but to curtail or postpone major training, operations, maintenance, personnel actions, procurement, and other activities that it has authority to control. The Army's initial actions in June would likely include decisions to defer all minor construction and real property

maintenance and to eliminate overtime and delay promotions for its civilian personnel for the rest of the fiscal year. By July, the Army would likely have to severely cut back maintenance, home station training, and supply purchases.

America's armed forces work exceedingly hard to operate at peak effectiveness and sustain high readiness. They need our resolute support. I urge you and your colleagues to move quickly to complete work on our shared objective: to provide our military men and women the funds needed to sustain their unparalleled excellence and to fulfill the missions assigned them.

I also want to emphasize the importance of full and prompt approval of the fiscal year 2000 supplemental appropriations request for International Affairs (Function 150) Kosovo and Southeast Europe programs. The requested funds will support essential civilian programs and peace implementation efforts vital to a prudent exit strategy for Kosovo and achievement of long-term stability in the Balkans.

PRESIDENT CLINTON'S FISCAL YEAR 2001 BUDGET

Turning now to next year's budget, the President's request is a strong plan for sustaining America's military excellence and continuing the transformation of our defense posture for the post-Cold War era. The new budget protects President Clinton's commitment to preserving the high readiness and quality of U.S. forces in the years ahead.

I am pleased that the Congress' fiscal year 2001 budget resolution includes a sufficient defense topline to support all the programs and priorities in the President's request. Working with you and our other defense committees to achieve that support now becomes the Department's primary focus. To that end, let me briefly comment on some of my key spending priorities.

Our new budget seeks to continue to put people first with strong pay and benefits proposals. I especially want to highlight our Basic Allowance for Housing (BAH) plan to eliminate by 2005 the out-of-pocket housing costs of our military members. I also want to emphasize the Department's resolve to continue to make much-needed improvements to military health care—which is increasingly expensive, but more important than ever. Recruiting and retention constitute a huge challenge for the Department. Pay and benefits alone cannot overcome this challenge, but they need to be seen by our servicemen and women as sufficient compensation for the sacrifices of military life.

Regarding our other top priority of readiness, the new budget fully funds the Military Services' Operation and Maintenance budgets so that their training, maintenance, and other key goals can be met. The budget will ensure that U.S. forces will continue to be fully capable of executing the National Military Strategy and that the readiness of first-to-fight forces will remain high.

Our proposed O&M funding is fully sufficient, but it includes no margin to absorb major cuts. Therefore I want to caution against undistributed O&M cuts that are made on the basis that they will compel the Pentagon to cut waste or bureaucracy. The ultimate effect of these undistributed cuts is to impair and reduce force readiness. I want to assure this committee that I am doing everything I can to streamline DOD infrastructure and prevent waste. We are making progress, and I urge your support so we can do much more. But achieving greater savings will take more than legislative provisions mandating such savings. And as I have stressed repeatedly, by far the best way to achieve greater streamlining is for Congress to approve two additional base closure rounds.

Another critical priority in our proposed budget is the modernization of our weapons and supporting systems. For fiscal year 2001, we are proud to have reached our goal of $60 billion for procurement. But this is a beginning, not an end. The President's Budget calls for procurement to climb to over $70 billion by 2005. And even higher levels will be needed in the years beyond 2005—as many of our new-generation systems enter full production. Achieving these procurement spending levels will be one of the major challenges for my successors and for future Congresses.

For now, in the fiscal year 2001 budget our challenge is to invest our modernization dollars most wisely. I am convinced that the President's request does that, with an allocation of procurement and RDT&E spending resulting from rigorous scrutiny by the Department's civilian and military leadership. As you approach your decisions on our spending priorities, please let the Department know where we need to justify our modernization plans more convincingly. The Department of Defense and Congress need to continue to work together closely to modernize and ensure the future combat dominance of U.S. forces.

A final priority requiring special mention is full funding of our Chemical Weapons Demilitarization program, which is critical to ensure compliance with the Chemical

Weapons Convention and to ensure that these aging munitions are safely destroyed as quickly as possible.

CLOSING

I want to close by thanking members of this committee for maintaining such a highly productive and cooperative relationship with the Department and our civilian and military leaders. This hearing seems likely to be my final one with this committee, so I want to publicly salute your hard work and support on behalf of our national security. You should feel very proud of your substantial contributions to the unparalleled excellence of America's armed forces.

Senator STEVENS. Thank you, Mr. Secretary. I mentioned we would mark up the MILCON bill and the agriculture bill on the 9th. We will also mark up the foreign assistance bill. We will cover the 150 accounts that you have mentioned, in the hopes that they can move rapidly, too.

General.

STATEMENT OF GEN. HENRY H. SHELTON, CHAIRMAN, JOINT CHIEFS OF STAFF

General SHELTON. Chairman Stevens, Senator Inouye, other distinguished members of the committee, let me first of all say it is an honor to be with you here again and to report on the state of America's Armed Forces. Chairman Stevens, up front let me also thank each member of this committee for their very staunch support that our men and women in uniform have received from you during this past year, and I speak for the Active, the Guard, and the Reserve.

You have got my rather lengthy written statement that was referred to by Secretary Cohen and so I will ask that that be included in the record and just make a few comments to address the priorities and concerns I have, and then move on to your questions.

First of all, since appearing before this committee last year, I have had the opportunity to visit our troops in the Middle East and in the Balkans and Asia and in many other places around the globe, as I know many of you have and, as always, I came away, as I am sure you do, impressed not only by what they are doing, but also by the enthusiasm with which they carry out their somewhat tough missions on many occasions that we give them.

I can tell you the troops are fully aware of the great support they have received from you, the Members of Congress, and also from the administration, and also in particular in the increased budget last year and the improvement in procurement and operations and pay and retirement, and the other things that affect their quality of life.

Your efforts have sent a very powerful signal to our troops in the field, and I have no doubt, have been very instrumental in helping us turn around some of the recruiting and retention challenges that we have faced.

Today, I think the force is relatively healthy, although it is stretched, and I would also tell you that unit personnel shortages continue to plague many of the units in the field. Our men and women in uniform continue to do a great job safeguarding America's interest around the globe and helping keep the peace in what you know is a very complex and dangerous world that we live in, and our people in uniform are the very best in the world, as I am sure you have observed as you went out to visit with them.

However, the current operating tempo (OPTEMPO), the current tempo of operations, if you will, is having an effect on them and also on the family members. We still encounter frequent, often unexpected and persistent deployments, and that, of course, produces stress. Ultimately, if we are not careful, too many protracted deployments will inevitably disrupt our operating budgets and cause lost training opportunities and, of course, that always accelerates the wear and the tear on the equipment, which then leads to additional recapitalization requirements.

But most importantly, I think a high pace of operations impacts quality of life, and it could, if we are not careful, jeopardize our capability to retain the great quality force that we have worked so hard to build, and I can tell you that the Joint Chiefs are tackling the personnel tempo (PERSTEMPO) with the great support, I might add, of Secretary Cohen, to try to tackle this PERSTEMPO issue and lower that in as many areas as can.

Of course, we have got some great help from the members of this committee and from the Congress and the administration in terms of increasing the assets in some of our low density, high demand units. As I reported last year, we continue to seek innovative ways to help us lower that, and we will continue to do that, but at the same time we also are very cognizant of the fact that we must work very hard to try to use all the tools in our kit bag to solve our problems for the United States before we commit our troops to extended deployments.

This year, of course, with the help of the Secretary the Joint Chiefs and I are focusing on another key issue that was raised by Senator Bond, and that is TRICARE, our military health care system. As we are all aware, TRICARE, which is America's largest health care provider, and the one that is tasked to provide health services both in peacetime as well as in war, is simply not user-friendly.

While many service members and their families are normally very pleased with the care that they receive once they have entered into the system, and I say that normally it is rated as outstanding care by our doctors and our nurses and by other health care providers, they are frustrated with the system as a whole.

It is, quite frankly, immensely complex, as you might imagine. It is administratively confusing, and it is not very customer-oriented and, of course, we all agree that our service men and women deserve better, and we in fact are working that issue very hard, particularly in some of those areas that deal with the administration and the management of the system, and we have gotten great support out of the Secretary and out of Dr. Bailey in improving that.

Likewise, those who have served in the Armed Service for a career, those retirees who gave the very best years of their life in the defense of America, also deserve quality health care. TRICARE from our perspective must be fixed, and the overall military health care system must be improved if we are to sustain the quality of force that we have today, and also if we are to keep faith with those who have served with honor.

Mr. Chairman, at the end of the day, fixing TRICARE is not only the right thing to do, it is the smart thing to do, as it sends a strong signal to all those that are serving today, but also to those

that are considering a career in our Armed Forces, and it keeps a commitment that we have made to our retirees.

Mr. Chairman, I would like to shift from that to some other dimensions of our readiness issue. In my testimony to the committee last year, I noted that our forward-deployed and first-to-fight forces remain capable of carrying out and executing our national military strategy, and that remains true today.

I also spoke of the difficulties we have experienced in maintaining readiness, and a number of reasons for these readiness problems, including higher-than-anticipated OPTEMPO, increased wear and tear on aging and overused equipment systems and personnel issues and again, thanks to the great support of the Congress and the administration, this readiness picture has started moving in the right direction.

Last year's budget, Secretary Cohen commented on the additional support that was received from Congress arrested the very steep decline in purchasing power we had experienced over the previous several years, and also enabled us to fund our most critical readiness requirements. It enabled us to fund the Bosnia operation, and our efforts to increase the recapitalization of equipment and facilities.

Most importantly, Congress' timely approval of the 1999 emergency nonoffset supplemental last May enabled us to meet the unprogrammed costs that we had encountered as a result of the Kosovo operation without negatively impacting our other programs. We must sustain the momentum that we have gotten started.

That is why, Mr. Chairman, the package of initiatives that are proposed in the President's 2001 budget is so important to not only the Joint Chiefs but to our uniformed commanders as well. This forward-looking budget we think addresses and helps us obtain our quadrennial defense review (QDR) goals and also helps us to reshape our forces to reflect the changing threats we face. It funds a broad array of programs that are designed to protect America's interest and our forces against terrorism, against chemical-biological attacks, as well as other asymmetrical threats.

It also funds some of the Kosovo lessons learned, and allows us to improve some of the low density, high demand elements of the force, specifically the additional squadron of the EA–6B electronic aircraft, increased funding for precision munitions to bring those accounts back up to where they should be, our unmanned aerial vehicle (UAV), and our intelligence and surveillance capabilities which also are another low density, very high demand part of our war-fighting capabilities.

Overall, this budget will fund our critical readiness requirements. It supports the quality of life initiatives that we have initiated. It meets our QDR procurement goals, and it supports the reshaping of our forces while it continues to allow us to streamline and reform within.

Prompt congressional action to provide the requested emergency nonoffset supplemental to replace the dollars that are already obligated, as addressed by Secretary Cohen and you, Mr. Chairman, are necessary to protect our readiness for the remainder of the year.

And let me also add my support for the 150 account, which is critical in terms of fulfilling our obligations to reach the long-term solution in Kosovo, and it allows us to get those elements of the rule of law and civil implementation in place that would be critical so that we can, in fact, reduce our long-term troop commitments into that area.

And while there are many important measures proposed for funding in the current supplemental, including such things as resources to help Colombia carry out the fight against narcotraffickers, by far the critical aspect to the service chiefs and me is the provision to reimburse the Department of Defense (DOD) for the money already spent in Kosovo, and without rapid approval of this funding we are going to be forced to divert sources, as you heard General Shinseki and Secretary Caldera testify to yesterday, and as Secretary Cohen mentioned. But the impact will also be felt by the Army, the Navy, the Air Force, and the Marine Corps.

Mr. Chairman, let me turn for just a few minutes to the threats and challenges that we face from abroad. As I said earlier, although the United States enjoys relative peace now, the international security environment remains complex and dangerous. As a worldwide power, a global power, we have global security commitments and, of course, our interests in many cases are challenged almost on a daily basis.

My written statement goes into some detail about our challenges in the Balkans, the Middle East, Korea, and East Timor, but I would like to spend just a few minutes on the situation that we see happening in the Balkans.

As you know, today we have a sizeable force committed in the Balkans, in Bosnia and in Kosovo, and while some violence continues, U.S. forces, along with our NATO allies and our coalition partners have been successful in establishing a relatively safe and secure environment. While the North Atlantic treaty organization (NATO) may need to make some minor adjustments to the size of Kosovo protection force (KFOR) in the near term to meet current security requirements, including the increased threats that have been identified in the Prezevo Valley, the southern region of Serbia, we must remain wary of taking on new missions in Kosovo.

KFOR's mission today is clear, and any extension of that mission would require approval of the North Atlantic Council. At the end of the day, however, I am less concerned with mission expansion than with mission extension, and though I would support some short-term increases to KFOR to secure the gains that we have made thus far, soldiers, of course, are not the long-term answer to what we face in Kosovo in terms of achieving self-sustaining peace.

American soldiers in Bosnia and Kosovo are just that. They are soldiers first and foremost. They are not policemen, and they lack the training and the experience to effectively police the large civil societies that we find in the Balkans. As this committee well knows, in Kosovo and in Bosnia achieving a lasting solution is going to require us to successfully accomplish a host of civil, political, and economic tasks not the last of which is the establishment of a rule of law, a functioning court system, and an effective police force. I remain concerned today about the slow progress in civil im-

plementation in Bosnia, and the glacial pace that we see occurring in Kosovo.

For long-term success, it is incumbent upon the United Nations and Organization for security and cooperation in Europe (OSCE) and other governmental and nongovernmental organizations to move in and fill the void that has been created by the lack of effective civil institutions. It is not enough to say that KFOR will perform missions until UNMIK, the United Nations Mission in Kosovo, is able to take over.

We must determine how much smaller KFOR can become and still allow UNMIK to operate successfully, and we must continue to press the international community and the donor nations to meet their obligations. While the U.N. administration is putting forth a good effort, they are often handicapped by a lack of resources and personnel.

Mr. Chairman, I have talked about how the force is being employed today and what our priorities are for the coming year. I would like to spend just a few minutes in closing about what we are doing to meet future threats and to ensure that our forces are ready for tomorrow. We of course want to ensure that we have forces that are not only trained and ready, but also are as versatile and as capable as they are today.

Today's forces benefit from the tough decisions made by my predecessors and yours. We, too, have an obligation, I think, to make the right choices now to ensure that our successors inherit the best possible military to defend our Nation's interests in the future. Balancing our current readiness and sustaining the quality of our people against modernization for the future will often conflict, but all are very important. As all of you are aware, today America spends about 3 percent of its GDP on defense, where as late as 1987 we were spending approximately 6 percent.

America has been the beneficiary of a great peace dividend, the result of having won the cold war. But if we are to sustain the world class force that we have today, a world class but very heavily used, I might add, it is critical that we continue to work on the quality of life issues that are faced by this force, and also continue to provide appropriate funding to ensure that we continue to modernize the force and recapitalize the equipment that we are using very heavily.

For our part, to ensure tomorrow's joint force remains the world's best, we have been moving forward to turn our conceptual framework for transforming the U.S. military into reality. We are engaged in updating and refining our Joint Vision to build on the solid foundation of Joint Vision 2010, and to meet the challenges of the 21st century and maintain forward momentum.

One of the principal mechanisms that we are using to turn Joint Vision into a reality is Joint Experimentation. The Secretary has assigned the Commander in Chief of U.S. Joint Forces Command as the executive agent for this very important process for the Department, a process that, I might add, complements, not replaces, the existing experimentation efforts that are being carried out by our Services.

Ultimately, the Joint Experimentation process will play a vital role in key decisions on how to build the joint force of the future,

including systems, strategy, force structure, and doctrine. We have also refined our Joint Requirements Oversight Council procedures to better accommodate a review of the war-fighting requirements on the front end of the process, when it is easier and less expensive.

We are already beginning to see the first fruits of this effort. This year, U.S. Joint Forces Command will begin experimenting with its first integrating concept, which is rapid, decisive operations, how a Joint Force Commander can determine and employ the right balance of air, land, sea, amphibious, space, and information-based capabilities to defeat any adversary.

Rapid, decisive operations emphasizes critical functional concepts, including attack against critical mobile targets, which focuses on near simultaneous sensor-to-shooter data flow and high speed, long-range weapons; common operational picture, fusing information from multiple sources into a common picture of the battle space to enable commanders to move rapidly and confidently based on maximum knowledge of enemy, neutral, and friendly positions: joint interactive planning, a virtual collaborative system enabling planners to assess wide spectrum information and commanders to react quickly to changing events: and adapted Joint Command and Control which will leverage advances and information technologies to revolutionize the structure of the Joint Task Force Headquarters, ultimately providing the warfighter with the most effective and efficient operational command and control.

The objective of this massive effort is nothing less than a Joint Force that will be persuasive in peace and decisive in war, and I believe that we are off to a good start under the leadership of Admiral Hal Gehman at U.S. Joint Forces Command.

Mr. Chairman, let me close with one important observation that parallels Secretary Cohen's closing comments. As all of you are aware, in a very troubled world today many people turn to America for hope and for resurrection. They turn to America for a bedrock of values, democracy, liberty, and the rule of law. They unabashedly seek the very freedoms for which we stand. If they do not turn to us as a first option, they normally will turn to us as a last resort. This tells me that the light that is America burns brighter than ever, and that the light that is fueled by America's sons and daughters who wear their country's uniform in times of peace and war is very important.

I think that America's forces today remain fundamentally sound, and are capable of fulfilling their role of executing our national military strategy. Together with the Congress and the administration, we are transforming our military forces to ensure that they remain ready to meet the threats to America's security in the 21st century, just as we have in the past.

PREPARED STATEMENT

Mr. Chairman, thank you very much for the opportunity of appearing here today, and for the opportunity to make a statement, and now Secretary Cohen and I are prepared to take your questions.

[The statement follows:]

PREPARED STATEMENT OF GEN. HENRY H. SHELTON

It is an honor to report to the Congress today on the state of the United States Armed Forces. At the outset, I would like to pay tribute to our men and women in uniform. As always, they serve our country selflessly, often far from home and loved ones, defending our Nation and its interests and helping to keep the peace in a still dangerous world. America can—and should—take great pride in its soldiers, sailors, airmen, and marines. They represent the United States at its very best.

I intend to discuss three broad categories of concern in this statement: (1) Sustaining a Quality Force, concentrating on those programs that benefit our people and are critical to maintaining the health of the force; (2) Supporting the National Security Strategy, specifically the readiness of the force to meet often-competing demands of this strategy; and (3) Building Tomorrow's Joint Force—what we are doing today to prepare for tomorrow's challenges.

SUSTAINING A QUALITY FORCE

America's military strength is built on a foundation of quality people, trained and ready forces, and an effective modernization program. While each of these elements is absolutely essential, one is first among equals—people! Without motivated, skilled, and committed people, we cannot exploit the full potential of our advanced weapons systems on the battlefield. Further, without the support of strong military families, we cannot sustain a force capable of meeting the demands of this new century. To preserve a high quality, professional military we must provide the quality of life that our service members and their families expect—and deserve.

As I have in the past, allow me to express my appreciation of Congress' strong support of America's uniformed men and women through the passage of several significant pieces of legislation in 1999. The first systematic reform of pay tables in half a century; the almost $14.0 billion in military pay increases—the highest in 18 years; and the $5.9 billion in retirement reform were bold steps that recognized the value of our high-quality, hard-working personnel, especially our experienced mid-career service members. I hear a lot of favorable remarks from the troops when I visit them, as I'm sure you do. Taken together, this pay and retirement reform package was an essential step in sustaining a viable All Volunteer Force. We must continue to meet this challenge in the future.

Military Health Care

Last year, I testified that we were in the midst of a long-term program to restructure the military medical community's ability to better support its wartime mission and assess whether our managed health care system—TRICARE—was meeting its twin goals of improving access and holding down costs. We ask our service members to be ready to serve anywhere; they and their families deserve no less than an adequate health care system.

In survey after survey, we have learned that TRICARE simply is not user-friendly. While service members and their families are normally pleased with the care they receive from doctors, nurses, and other health care providers, they are frustrated by other aspects of TRICARE. It is, quite frankly, immensely complex, administratively confusing, and not customer-friendly. Due to the region-based structure of TRICARE, there is no consistency or standardization for appointments, benefits, claims, and enrollments across duty stations.

To significantly improve how we meet the health needs of both our active duty and retired service members, and their families, we are recommending a phased approach. In the near term, we would include implementing business practice improvements and fully funding the Defense Health Program. Several of these improvements are already underway and include: automatic enrollment for all Active Duty Family Members into TRICARE Prime and making easy-to-understand enrollment materials available across all TRICARE regions. To ensure that all of our members know who is responsible for their care, those enrolled in TRICARE Prime will know who their Primary Care Manager (PCM) is by name. Active duty members and their families assigned to remote areas need to have the peace of mind that the same benefit will be provided to them regardless of where they are located. Additionally, members with complex illnesses and extensive treatment plans require clinical case management experts to help the patient successfully navigate the system, reducing delay and frustration while ensuring quality and continuity of care. Finally, TRICARE requires that members re-enroll every time they transfer from region to region. Enrollment in one region must be honored in all regions.

The claims process is another major source of frustration for our Active Duty members and their families. We must have a system that ensures the government, not the beneficiary, receives the bills. Additionally, the protracted time it takes con-

tractors to pay provider bills creates a disincentive for providers to remain in the network. My staff is working closely with Dr. Sue Bailey, ASD (Health Affairs), to fix or remove these major irritants.

In the near-term, the Joint Chiefs would like to see improvements in the overall health care benefit. For years our recruiters have promised health care for life for career members and their families. As we all know, that is not what they receive. To honor this promise, the President's budget includes the expansion of TRICARE Prime Remote for active duty family members and the elimination of co-pays for all active duty family members enrolled in the TRICARE Prime network.

The Chiefs and I recognize the compelling need, to provide more comprehensive coverage for our retirees and their family members. Where specific TRICARE coverage is not available, we must offer them other benefits. Our intent is to reduce out-of-pocket expenses.

Let me stress that the Joint Chiefs' commitment to quality healthcare for all military members, including retirees, remains firm. Keeping our promise of ensuring quality healthcare for military retirees is not only the right thing to do, it also is a pragmatic decision because it sends a strong signal to all those considering a career in uniform.

Housing

Housing has an obvious and immediate impact on the quality of life for our servicemembers, making it an important priority. Thanks in large measure to Congress' targeted funding to improve quality-of-life of the force, the Services have established plans to eliminate inadequate housing for our unaccompanied enlisted personnel by 2008.

At the same time, almost two-thirds of all military housing, or approximately 180,000 units, are considered inadequate. The Services are preparing family housing masterplans to meet the Defense Planning Guidance requirement to revitalize, divest through privatization, or demolish inadequate housing by 2010.

The Services will be working closely with the Congress this year on a three-pronged strategy to improve family housing. These measures include the Secretary's initiative to raise allowances for off-post housing, continued funding for revitalization and construction of new units on-post, and privatization in areas where that approach is cost-effective. Congress' support of the budget request and the request to extend privatization authority for another 5 years will help improve the housing outlook for our service members and their families.

Recruiting

The need to recruit and retain quality people is the bedrock for the force and remains a significant challenge for all the Services. As the Congress well knows, recruiting and retention are often related—but they present very different sets of challenges. Let me first address recruiting.

The current recruiting challenge is complex and affected by a number of factors including a robust, job-rich economy, a reduced willingness on the part of young Americans to volunteer for military service, the much larger number of high school graduates pursuing college degrees, and the smallest cohort of 18-to-23 year olds to recruit from in the history of the All-Volunteer Force.

The Navy and Marine Corps met their recruiting objectives in 1999, while the Army fell short about 6,300 soldiers, achieving 92 percent of its recruiting goals. The Air Force, meanwhile, achieved 95 percent of its goal, falling short by about 1,700 airmen.

Building on the tremendous support of the Congress and the Administration, the Services are taking aggressive steps to recruit enough quality men and women for a vital All-Volunteer Force. For example, the Services have significantly increased their recruiter force and budgets to continue to achieve the quality of accessions that fall in line with DOD guidelines. The Services are also offering larger enlistment bonuses and college fund incentives, as well as pursuing new advertising strategies.

Retention

Because of the quality of the people we recruit, and the significant training they receive, the private sector is anxious to outbid us for their services. The perception of a more stable and predictable lifestyle in the private sector also presents an attractive alternative to military service, given the increasing demands we are placing on a much smaller force. Long duty hours, frequent moves, disruptions in a spouse's employment, and extended family separations—separations that could include the risk of death, injury, or capture—are all burdens borne by our service members and their loved ones.

Though the jury is still out and we continue to walk a personnel tightrope, it appears we may be turning the corner on retention, thanks in large measure to the Congress' support of our efforts to improve pay and the military retirement system. We must sustain the momentum. This year we need your support on improving the military health care system.

I am pleased to report that the Army exceeded its aggregate retention goals by 5,000 personnel in 1999, which helped to overcome recruiting shortfalls and meet end strength requirements.

While the Navy met its end-strength numbers, retention of first term sailors fell short of requirements, which could spell danger for effective management of future petty officer needs. Retention of Naval Aviators, Surface Warfare Officers and SEALS also remains a continuing concern.

The Marine Corps met all of its goals, with retention concerns limited to aviators and chronic shortages in specific high-demand, low-density specialties, such as intelligence, electronic maintenance, and logistics.

The Air Force missed its retention goals in all enlisted categories, causing it to fall short of the adjusted fiscal year 1999 end-strength requirement by about 5,000 personnel. On a positive note, while the Air Force pilot continuation rate struggled to reach 41 percent, aviator bonus "take rates" jumped to 62 percent overall, underscoring the importance of targeted bonuses and incentives, in addition to general improvements in military compensation across-the-board.

In today's Total Force, concerns about recruiting and retention in the Reserve Component must also be addressed. While the Army National Guard, Air National Guard, and Marine Corps Reserve substantially met their recruiting goals, the Army, Naval, and Air Force Reserves fell considerably short. Additionally, the Navy and Air Force Reserves failed to meet their end strength requirements, reflecting continuing retention challenges.

Equal Opportunity

America's Armed Forces reflect American society, with its diverse experiences, goals, and expectations. Our task is to transform these young men and women into a cohesive, well-trained force, always cognizant of the right of our service members to be treated with dignity and respect. America's sons and daughters deserve the opportunity to succeed and work in an environment free of discrimination and harassment. Nonetheless, equal opportunity is more of a journey than a destination and there will always be room for improvement. The Armed Forces remain committed to providing equal opportunity and fair treatment as core values for all its members. This commitment reflects the very best of what our country offers.

SUPPORTING THE NATIONAL SECURITY STRATEGY

At the beginning of the 21st Century, the United States currently enjoys relative peace and security. The international security environment, however, remains complex, dangerous, and unpredictable. Even as the threat of global war recedes and former enemies now cooperate with us on some issues, very real threats to our citizens and interests remain. Though we currently face no peer competitor, openly hostile regional adversaries fielding potent forces have both the desire and the means to challenge the United States militarily. Transnational organizations and forces threaten our interests, our values, and even our physical security at home and abroad. And, while our military strength remains unmatched, both state and nonstate actors may attempt to circumvent our strengths and exploit our weaknesses using methods that differ significantly from our own. Attacks on our information systems, the use of weapons of mass destruction, domestic and international terrorism, and even man-made environmental disasters are all examples of asymmetric threats that could be employed against us. Indeed, some already have.

To deal successfully with these challenges, the 1999 National Security Strategy stresses the fundamental need for U.S. leadership and engagement abroad to shape the international environment and position our military to respond rapidly to a full spectrum of emerging crises. If the United States were to withdraw from international commitments, forsake its leadership responsibilities, or relinquish military superiority, the world would surely become more dangerous and the threats to American citizens and interests would increase. Within their capabilities, therefore, our Armed Forces are committed to peacetime military engagement as the best way of reducing the sources of conflict, preventing local crises from escalating, and shaping the international environment.

The National Security Strategy also recognizes that countering the wide range of threats that we face requires an integrated approach involving both interagency and multinational cooperation. An integrated approach brings to bear all instruments of national power—military, economic, information, and diplomatic—to achieve our na-

tional objectives, unilaterally if necessary. And, whenever possible, it makes optimum use of the skills, resources, and political support provided by multinational military forces, regional and international organizations, and non-governmental organizations. We will continue to improve our abilities to effectively operate as one element of unified interagency and multinational efforts, while encouraging other organizations to do likewise. At the same time, we are also improving our capabilities to support state and local civil authorities in response to growing threats to the US homeland, such as terrorism and Weapons of Mass Destruction.

Peacetime military engagement (PME) can help ameliorate potential sources of conflict, promote more efficient operations among participating nations, and ensure access to key infrastructures. Through these means, PME assists in reducing response requirements while supporting the fundamental, overarching purpose of the U.S. military—to fight and win our Nation's wars.

The Theater Engagement Plan (TEP) process brings this "shaping" element of our National Military Strategy fully into the arena of deliberate planning and national-level oversight. We are continuing to evolve and refine the TEP process and philosophy. A standardized automated database, the Theater Engagement Planning Management Information System (TEPMIS), is being developed to provide a tool for all CINC engagement managers to use in planning, analyzing, executing, and assessing engagement programs and activities. Additionally, the regional engagement and presence joint warfighting capabilities assessment (REPJWCA) team is planning a study that will ultimately be used to identify engagement requirements, shortfalls, and resource implications.

Peacetime military engagement, however, does not supplant the core requirement to have a military capable of deterring and, if necessary, defeating nearly simultaneous large-scale, cross-border aggression in more than one theater, in overlapping time frames. The defense of America's lives, territories, and interests is, and must remain, a cornerstone mission of our Armed Forces. This capability defines the U.S. as a global power, ensuring that our Nation will be able to protect its vital interests or fulfill its international commitments with military power when confronted with more than one crisis. It also deters opportunistic aggression against our interests or those of our friends elsewhere in the world if we become involved in a major conflict. Furthermore, this capability provides needed flexibility and responsiveness against the possibility that we might encounter unknown threats, or threats larger or more difficult than expected.

Overall Readiness Assessment

The starting point for any assessment of the readiness of the Armed Forces must be our ability to execute this National Security Strategy, including the most demanding scenario—fighting and winning two nearly simultaneous major theater wars in overlapping time frames.

Though military readiness has been challenged in many ways over the past year, our Armed Forces remain capable of executing our military strategy. The combat operations conducted against the Milosevic regime in Serbia last year—Operation ALLIED FORCE—demonstrated once again that our deployed and first-to-fight units remain very capable. Well-trained and armed with the best equipment in the world, our forward-deployed forces in the Balkans, the Persian Gulf, and the Western Pacific executed a demanding range of missions superbly. Although we remain capable of executing our current strategy, the risks associated with the most demanding scenario have increased. We assess the risk factors for fighting and winning the 1st Major Theater War as moderate, but lower readiness levels of later-deploying forces combined with capability shortfalls in our lift and other critical force enablers result in high risk for the 2nd MTW.

As I have explained in the past, this does not mean that U.S. forces would not prevail in either contingency. We eventually would win, but longer timelines increase the potential for higher casualties.

Readiness of the Force

In my prior testimony to the Senate Armed Services Committee, I spoke of the difficulties we experienced maintaining current readiness. At that time, we identified problems that, if left unchecked, would have eroded the readiness of our Armed Forces.

We also identified a number of reasons for these readiness issues including the higher than anticipated OPTEMPO, increased wear and tear on our aging and overused equipment, as well as personnel and quality of life issues.

Thanks to the great support of the Congress and the Administration, the readiness picture is starting to move in the right direction. The $112 billion increase in the fiscal year 2000 President's Budget (PB) across the FYDP, and the additional

funding support from Congress, arrested the steep decline in purchasing power we had experienced over the last several years. This increased buying power enabled us to fund military compensation improvements, operations in Bosnia, our most critical readiness requirements, and our efforts to increase recapitalization of our equipment and facilities.

The fiscal year 2001 PB protects this $112 billion commitment to current and future readiness. Specifically, it provides $1.4 billion in fiscal year 2001 for increases in fuel prices above those in last year's request ($3.3 billion total in fiscal year 2001–05). It also provides $2.2 billion more for on-going operations in Bosnia, Kosovo, and Southwest Asia ($6.2 billion of new funding in fiscal year 2001–05).

The fiscal year 2001 PB also builds on last year's substantial quality of life initiatives. It fully funds a military base pay raise of 3.7 percent (ECI plus 0.5 percent) in fiscal year 2001, as well as the Congressional changes to our military retirement reform initiative. Equally important, it requests and adds resources necessary to reduce off-base housing out-of-pocket costs for our soldiers, airmen, sailors, and marines from about 18.8 to 15 percent in fiscal year 2001. By fiscal year 2005, these housing-related out-of-pocket expenses should be eliminated. Finally, the importance of military health care is reflected in significant increases to the Defense Health Program (DHP) in fiscal year 2001. Although this budget addresses most of our health care problems, there is more that we need to do in this area, as I have discussed earlier. I look forward to working with you as we tackle these problems over the next year.

Notwithstanding all these funding increases, we still face challenges primarily due to excess infrastructure, unbudgeted contingency operations, and higher than expected maintenance costs for our aging equipment and infrastructure.

We continue to have excess infrastructure, and any funds applied toward maintaining unneeded facilities diminishes our capacity to redirect those funds toward higher priority modernization programs. Closing bases is painful, but it provides the opportunity to significantly reduce excess capacity and reinvest the resultant savings in modernization and readiness accounts. Accordingly, our fiscal year 2001 PB proposes and funds new base closure and realignment (BRAC) rounds in fiscal year 2003 and fiscal year 2005. We look forward to the Congressional support essential for BRAC to achieve needed savings.

Continued timely funding for contingency operations is also crucial to preserving the readiness of our Armed Forces. Almost a year ago, we embarked on a major buildup of forces in the Balkans in support of Operation ALLIED FORCE. The cost of this response totaled nearly $2 billion in unforeseen fiscal year 1999 expenses.

Additionally, the follow-on mission sending U.S. forces into Kosovo as part of KFOR resulted in an additional $1 billion of unprogrammed fiscal year 1999 expenses. These costs could not have been met within the existing defense budget without impacting readiness. However, thanks to Congress' timely approval of an emergency supplemental appropriations in May 1999, we avoided having a negative impact on other programs.

We are currently involved in peacekeeping operations in Kosovo and East Timor, and have forwarded an fiscal year 2000 supplemental request seeking additional funding to meet these requirements. Prompt Congressional action to provide emergency non-offset funding to replace dollars already obligated is essential to protect readiness in the latter half of this fiscal year.

Current Readiness vs. Modernizing the Force

The fiscal year 2001 PB has nearly a 2 percent real growth compared to the fiscal year 2000 appropriated level. This is the first time in over eight years that we have submitted a budget request with real growth.

This forward-looking budget continues us on the path of achieving our Quadrennial Defense Review (QDR) procurement goals. Specifically, our fiscal year 2001 procurement request is $6.1 billion above the fiscal year 2000 appropriated level. This funding allowed us to achieve the QDR procurement goal of $60 billion in fiscal year 2001. This is now the fourth year of significant real growth in our procurement funding. Ultimately, these funding increases will go a long way toward fielding replacements for aging systems and gaining the new capabilities essential to continued U.S. battlefield supremacy.

The fiscal year 2001 budget seeks to reshape our forces to reflect changing threats and lessons learned. It supports the Army's new vision that stresses lighter, more lethal/agile/deployable forces that have a smaller logistical footprint. It funds a broad array of programs to protect U.S. forces and interests against terrorism, chemical-biological attack, and other asymmetric threats. It adds over $2 billion for National Missile Defense.

The fiscal year 2001 PB also funds Kosovo lessons learned. Specifically, the budget supports the formation of an additional squadron of EA–6B electronic warfare aircraft to be operational in fiscal year 2003. It also provides strong funding for munitions, UAVs, and communications-intelligence-surveillance capabilities.

The budget reflects the Department's expanding efforts to improve and streamline its support activities so they function better and cost less. Under the umbrella of the Defense Reform Initiative (DRI), our efforts are showing positive results, and the substantial savings achieved or identified are being allocated to readiness, modernization, and other priorities.

In a nutshell, the fiscal year 2001 PB funds key readiness indicators, supports quality of life initiatives, meets the procurement goal of $60 billion in fiscal year 2001, supports the reshaping of U.S. forces to reflect changing threats and lessons learned, and continues streamlining and reform initiatives.

Despite these efforts, I am not convinced that we have turned the corner yet. Many units continue to be plagued with personnel shortages. History tells us that readiness is fragile and that, once it starts down, it requires considerable resources, time, and attention to regain. There is still much that needs to be done in order to sustain the momentum. To avoid mortgaging future readiness, we must have sustained funding to meet the competing demands of maintaining current readiness, sustaining the quality force, and funding modernization.

We look forward to fiscal year 2001 Defense Authorization and Appropriations Bills that are a powerful endorsement on behalf of our soldiers, sailors, airmen, and marines, and their families, and sustains the readiness enhancements provided in the fiscal year 2000 bills. Doing so will allow us to keep our current readiness posture high while preparing for tomorrow's challenges.

OPTEMPO Concerns and Readiness Reporting Improvements

It is clear that the current tempo of operations, or OPTEMPO, continues to have a significant impact on service members and their families, and therefore remains a concern for the Joint Chiefs and the CINCs. Frequent, often unexpected, and persistent deployments stress the force and stretch scarce mobility assets, ultimately degrading readiness and increasing the risk to our ability to execute the most demanding MTW scenarios. In the long run, too many protracted deployments will inevitably disrupt operating budgets, cause lost training opportunities, and accelerate wear and tear on equipment. Most importantly, unchecked OPTEMPO impacts quality of life and could jeopardize our ability to retain the high-quality people we need for tomorrow's force.

Measuring readiness is an ongoing process and we continue to assess how Operation ALLIED FORCE and the long-term deployments to both Bosnia and Kosovo affect the force. In the aggregate, ALLIED FORCE may delay readiness improvements we sought through the emergency supplemental and top line increases. For example, though the supplemental budget request was fully funded this year, it will take up to two years to manufacture replacements for certain types of munitions. In addition, long-term deployments to the region represent a major force commitment that will be with us for some time to come.

Our experience in the Balkans underscores the reality that multiple, persistent commitments place a significant strain on our people and can erode warfighting readiness. Rapidly withdrawing from a commitment like Bosnia or Kosovo to support a major theater war would require a quick decision by the National Command Authorities to allow time for units to withdraw, retrain, redeploy, and be used effectively. This could mean the late arrival of some forces for MTW employment.

While operational tempo is often a function of unpredictable world events and our global commitments, the Services, Joint Staff and CINCs are all taking steps to reduce its impact on the force.

First, we have increased our global sourcing of units to fill deployment commitments, and more equitably distribute the workload across the force. This includes substituting units with similar capabilities and increasing the use of the Reserve Component, contractor support, and coalition or host nation support.

Second, we have expanded our Global Military Force Policy, or GMFP, to improve worldwide management of Low Density/High Demand (LD/HD) assets. These include U–2 and RC–135 surveillance aircraft and crews, Psychological Operations (PSYOPS) and Civil Affairs specialists, EA–6B electronic warfare aircraft, and other units and platforms with unique or preferred capabilities. GMFP ensures senior level visibility into LD/HD allocation and provides top-down direction to prioritize requirements and balance them against available resources in order to preserve the long-term readiness of these critical assets. The Joint Staff, in conjunction with the Services, is assessing each of our LD/HD capabilities to determine which force structure increases will best meet CINCs' requirements. For some of our most over-

worked assets, we have already acted through the POM process to increase our numbers.

Third, as we closely monitor current overall readiness, we continue to refine the tools and procedures to improve our readiness reporting and assessment process. We have developed, in conjunction with the Services, an improved Tempo Management process that provides senior level visibility into how we are using the force. Tempo thresholds and metrics are regularly briefed within our Joint Monthly Readiness Review (JMRR) forum. The focus of our readiness reporting system remains assessing and managing risk in executing the National Military Strategy by placing resources where they are needed most. We have increased the level of detail available within our readiness assessment systems and reports to Congress to ensure problem areas are highlighted to senior leadership within the Services, my staff, OSD, and Congress.

In consonance with new Congressional reporting requirements outlined in the Fiscal Year 2000 Defense Authorization Act, we will assess readiness over three broad areas: unit readiness, institutional training, and defense installations. This will be accomplished by: (1) enhancing the existing Global Status of Resources and Training System, or GSORTS; (2) providing an annual assessment of the readiness of DOD's individual training establishments to provide qualified personnel to operational units; and (3) establishing a common installation reporting methodology that annually assesses the effect of facility readiness on operational missions. These reporting requirements were implemented as part of DOD's Readiness Reporting System on 1 April, 2000.

Capability Concerns

Joint Staff, CINC, and Service assessments have confirmed that much of the risk in executing MTW scenarios is driven by significant capability shortfalls. These fall into six areas: (1) intelligence, surveillance, and reconnaissance; (2) logistics sustainment; (3) command, control, communications and computers; (4) mobility and en route infrastructure; (5) defense against terrorism and weapons of mass destruction; and (6) information vulnerabilities.

For each of these areas, where possible, we have implemented measures that will reduce the impact of these capability shortfalls. For the most part, long-term fixes in these areas are funded within the FYDP, but will not be fully implemented until fiscal year 2009. A continued commitment to increased resourcing will help alleviate these capability deficiencies. While recent funding increases should prevent further deterioration of current readiness, they will not guarantee the levels of readiness needed to significantly reduce risk in executing the National Military Strategy.

Airborne Intelligence, Surveillance, & Reconnaissance (ISR)

Over the past year, many theater CINCs have consistently raised concerns about ISR asset shortages, specifically, the availability of airborne reconnaissance platforms, trained aircrews, pilots, linguists, and sensors.

Many ISR assets are categorized as Low Density/High Demand (LD/HD) because demands for these assets continue to outpace the current inventory. To more efficiently and effectively use current airborne ISR assets, the Joint Staff developed a peacetime airborne ISR reallocation plan that responded to CINC peacetime requirements. In addition, a more detailed requirements-based request process was put in place to better assess and prioritize CINC needs. This new process should ensure the most critical CINC information needs are met while managing tasking on limited ISR resources. We are also evaluating alternate collection means such as allied or non-airborne ISR capabilities to reduce demand on LD/HD ISR systems. Finally, an ongoing effort to increase the numbers of airborne ISR assets will increase their availability.

For the longer-term, my staff is assessing ISR deficiencies as the basis for my recommendations to the Secretary of Defense. We will continue to closely monitor and manage these crucial warfighting enhancement assets to ensure we can meet our most pressing needs.

CJCS Exercise Program Reductions

An important component of joint readiness and the CINCs' theater engagement strategies is the CJCS Exercise Program. This is the principal tool for achieving joint and multinational training. It provides combatant commanders with their primary means to train battle staffs and forces in joint and combined operations, to evaluate war plans, and to execute their engagement strategies. This critical program also provides a vehicle for DOD to assess the military's ability to satisfy joint national security requirements and to enhance and evaluate interoperability between the Services.

To reduce the impact of OPTEMPO on people, I directed an overall 30 percent reduction in joint exercise man-days between fiscal year 1996 and fiscal year 2001—a goal that has already been met. Additionally, this directive resulted in reducing the number of joint exercises from 277 in fiscal year 1996 to 189 in fiscal year 2000.

The additional fiscal year 2000 Congressional reductions in the CJCS Exercise Program Service Incremental Funding make it more difficult for this important program to match essential training with the need to reduce OPTEMPO/PERSTEMPO. The CINCs are unanimous in their concerns about the impact that these further reductions will have on the readiness of the first-to-fight forces. We seek Congressional support in restoring this program to its former level.

Headquarters Reductions

The Fiscal Year 1998 National Defense Authorization Act, as continued for fiscal year 1999 and fiscal year 2000, mandated headquarters reductions. The current language requires an additional 15 percent cut over three years. While reductions in headquarters staffs are generally a good idea, there are compelling reasons why we seek relief for the Joint Staff and the combatant commander staffs from this mandate.

Specifically, the Goldwater-Nichols Act, and subsequent legislation, and implemented accommodations of the Packard Commission greatly increased my responsibilities and those of my staff, as well as the combatant commanders. The Joint Staff, for instance, assumed significant additional responsibilities for force integration and budgeting.

Each succeeding Unified Command Plan also added commands and missions, to include theater engagement, space planning/operations, and joint force integration and training. For example, the Strategic Air Command was transformed from a specified command into a new unified command, STRATCOM. TRANSCOM was activated to assume global airlift, sealift, and traffic management responsibilities.

Additionally, continued joint mission increases, as well as emerging missions, typically come with a need for a high degree of combatant commander headquarters support. Mission area increases include counter-drug, theater engagement, force protection, missile defense, computer network defense/attack, and development of joint warfare concepts, capabilities, and doctrine.

The combination of increased responsibilities, more mission areas, and the cuts already taken mean that further reductions come with serious risk, and will impede our ability to provide effective management and oversight of readiness, force development, and operations.

AC/RC Integration

In coping with an increasingly demanding security environment, the role of our Reserve Components has grown markedly as the active force has drawn down. In virtually every domestic and overseas mission, from disaster relief in the continental U.S. to humanitarian assistance in Central America to ongoing operations in Iraq, Bosnia, and Kosovo, our Reservists and National Guardsmen have performed magnificently in important and, in many cases, indispensable roles. Since the beginning of operations in Bosnia and Kosovo, a total of more than 19,000 Reserve Component personnel have been activated for duty in the Balkans. Another 5,600 were activated for NATO's Operation ALLIED FORCE against Milosevic's forces under the authority of a Presidential Reserve Call-up (PRC). Almost 10,000 Reservists and National Guardsmen have served throughout Southwest Asia since the end of the Gulf War.

Effective integration and utilization of the men and women in our Reserve Component will continue to be key elements of Joint Personnel Readiness and are critical to the success of the Total Force. Often the capabilities they provide—such as civil affairs, psychological operations, and civil support—are found predominantly in the Reserve Components. We have made a number of steps in creating a true Total Force, and I am enthusiastic about the opportunities inherent in the "Chairman's Ten"—the Reserve Flag and General officers provided by the Congress for assignment to the CINCs. This program will allow us to tap the tremendous skill and expertise in our Reserve and Guard officers, and aid the CINCs in the full range of their responsibilities. The first assignment—Commander, Joint Task Force Civil Support—has already been made. We will have the rest in place by the end of this calendar year, including such key positions as Deputy Director for Operations, Plans, and Policy at SOCOM, Chief of Staff to TRANSCOM, and the Director for Logistics for STRATCOM.

Clearly, the wide range of contributions by the Reserve Components continues to be a bright spot as we strive to match available resources to a demanding mission load. Their service also demonstrates the enduring value and relevance of the cit-

izen-soldier. We will continue to look for innovative ways to capitalize upon the strengths of our Reserve Components, our trump card for maintaining high readiness levels in these challenging times.

Force Protection

Whether the units deployed are Reserve or Active, wherever our troops go force protection is a top priority for commanders. The tragic bombings of our embassies in Tanzania and Kenya in 1998 reminded us again that terrorists can strike anywhere, at any time. During my testimony last year, I noted that our adversaries—unable to confront or compete with the United States militarily—spend millions of dollars each year to finance terrorist organizations that target U.S. citizens, property, and interests. Consequently, our Combatant Commanders and the Services continue to focus on force protection issues as a first order priority.

Six important force protection initiatives have increased our antiterrorism efforts. First, the Joint Staff Integrated Vulnerability Assessment Teams and CINC and Service Vulnerability Assessment Teams assist installation commanders and force protection officers in refining existing plans and providing assessment lessons learned which are made available to all commands.

Second, we continue to improve our Antiterrorism Force Protection Training Program which provides antiterrorism awareness training to all DOD military and civilian personnel and their families, specialized training to Antiterrorism Force Protection Officers, "pre-command training" to prospective Commanders, and operational level seminars to our most senior officers.

Third, the Combating Terrorism Readiness Initiative Fund provides an important means for our Combatant Commanders to fund time-critical, emergent requirements that cannot wait for the normal budget or acquisition processes.

Fourth, the Operations and Intelligence Fusion Initiative recognizes the importance of timely dissemination of terrorist threat information from the intelligence community to the operators in the field. We are making progress toward the goal of having fully coordinated Joint Operations and Intelligence Fusion Cells at all levels.

Fifth, we have embarked on a major effort to provide minimum force protection standards for Military Construction (MILCON) projects. DOD has recently approved prescriptive standards for construction of new high occupancy buildings, including barracks, dining halls, and recreation facilities. The additional cost involved depends upon such things as construction location, required vehicle standoff distance, and the threat level, but is not expected to significantly increase the overall construction cost.

Finally, during the past year we completed an Antiterrorism Best Practices Study that examined some of our allies' best efforts to combat terrorism at the strategic, operational, and tactical levels. We discovered several different approaches that merit closer evaluation. For example, several of our allies' antiterrorism strategies include more proactive engagement with local communities in higher threat areas. They found that gaining the trust and confidence of local citizens makes it far more difficult for terrorist organizations to effectively operate within their communities. As we consider the lessons from this study, we must continue to carefully balance any potential increased risk to our men and women against expected force protection benefits.

Key technology enablers, such as threat analysis and warning, explosive device detection, and early detection of WMD, also enhance our ability to counter terrorism.

Our best efforts notwithstanding, we know that terrorism will remain a serious threat as we move further into the 21st century. We cannot afford to subscribe to a "zero casualty" mentality. Our enemies will continue to test our resolve, both at home and abroad. While we cannot prevent every attack, we can lower both the threat and the consequences of terrorist incidents. Therefore, it is imperative that we have the resources and training needed to put appropriate procedures in place.

Counterdrug Forward Operating Locations

Progress continues on U.S. Southern Command's Forward Operating Locations (FOLs) to replace counterdrug aerial detection and monitoring missions formerly flown by DOD and interagency aircraft from Howard Air Force Base in Panama. Since the first of May, we have staged air operations from Curacao and Aruba, and Manta, Ecuador. Additionally, we recently signed a long-term access agreement for a third FOL in Central America. Thus far, our total numbers of hours on station are equal to or greater than when we flew from Howard. However, we need to increase our operations in the "source zone" (SZ): Colombia, Peru, and Bolivia.

The SZ is our number one counterdrug (CD) priority and we are taking several steps to increase our presence there. Our detection and monitoring coverage shortfall was mainly driven by the physical condition of FOL Manta, Ecuador, which restricts our forces to single plane, Day Visual Flight Rules operations. The result has been fewer hours flown over southern Colombia and the rest of the SZ than desired. USCINCSO has directed his Air Force component commander to develop a plan to increase the capability of the airfield as soon as possible. As of 1 April of this year, we have the capability to fly 3 aircraft from Manta at night and in any weather. This will go a long way toward overcoming the current coverage shortfall. Longer-term, we will need to address some other infrastructure deficiencies at the FOLs, such as ramp space and support, operations, and maintenance facilities.

USCINCSO's implementation concept is a phased approach. He recognizes the requirement to operate from the FOLs in an expeditionary manner, but also believes that such operations are not sustainable in the long term. Certain safety and infrastructure improvements will need to be completed before commencing full-scale operations to maximize our use of these airfields, but construction is planned only where existing host-nation facilities are unavailable. For example, we are planning for "expeditionary construction" of structures using concrete foundations and metal skin siding exteriors. All of this is designed to meet minimum requirements while minimizing costs. When the projects are completed, we fully expect to replicate the level of detection and monitoring flown from Howard Air Force Base, without increasing costs or OPTEMPO of the Services.

The Department of State (DOS), which has the lead on securing long-term access agreements, concluded a 10-year agreement with Ecuador in November, 1999 and a Curacao/Aruba agreement with the Dutch in March, 2000. Official negotiations for a FOL in El Salvador resulted in a draft agreement that was signed on 31 March 2000.

FOLs are not bases, but staging airfields, owned and operated by the host nation as part of our collective efforts to stem the flow of illegal narcotics into the United States. Without these FOLs, we would be unable to effectively carry out our detection and monitoring mission and would fall well short—50 percent—of the historical source zone coverage provided from Howard AFB. Coverage in the deep source zone, the area identified as "critical" in the President's National Drug Control Strategy, would be severely degraded.

Personnel Recovery

Recovery of our personnel behind enemy lines, or in the vicinity of enemy forces, is one of our most important tasks. And it is one we take very seriously. To consolidate personnel recovery responsibilities under one agency, the Joint Personnel Recovery Agency was established as an entity under U.S. Joint Forces Command on 1 October 1999.

In addition to organizational changes, we are working to field a new-generation handheld survival radios with integrated communications and GPS capability to increase the probability of survival and successful recovery. Additionally, the V–22 Osprey holds great potential for combat search and rescue operations, and the Air Force is exploring its utility in this area. Finally, we are looking into some areas that merit increasing interaction between DOD and the interagency, such as standardized survival, evasion, resistance and escape training for non-DOD personnel at risk of capture.

Global Hot Spots

While there are many areas of interest around the world, three specific regions continue to occupy much of our attention and resources: the Korean peninsula, the Balkans, and Southwest Asia. Instability and tension in these areas pose the greatest potential threats to U.S. interests, and consume more energy and resources than any others. Additionally, East Timor bears some discussion, since U.S. forces remain involved in the peacekeeping effort there.

Korea

Despite a collapsed economy and an ongoing struggle to feed its own population, the North Korean government continues to pour its limited resources into the military and to pursue a policy of confrontation with South Korea and neighbors in the region. Additionally, it represents a nation capable of launching a significant conventional attack on U.S. forces with minimal warning.

More than one million North Korean troops serve on active duty, the vast majority deployed within hours of the DMZ and South Korea's capital city, Seoul. Infiltration by North Korean special forces and provocations such as last year's Yellow Sea clash over fishing rights continue to exacerbate tensions between the two governments, while ongoing development of long-range ballistic missile technology worries

all countries in the region. Finally, North Korea's repeated threats to walk away from the Agreed Framework that curtailed their nuclear production program have been unsettling to the international community.

The North Korean challenge remains one that we must—and do—take very seriously. We have pursued a number of initiatives in recent years to enhance the capabilities of both our forces forward deployed on the peninsula and our reinforcing elements, as well as the forces of our South Korean Allies. As I testified last year, we now have better U.S. tanks, better infantry fighting vehicles and better artillery, as well as improved attack helicopters and aircraft, on hand in Korea. We have also deployed Patriot missile defense systems, improved surveillance capabilities, and assisted with a number of upgrades to South Korean forces. Our naval forces have greatly stepped up their anti-SOF activities, while forward-deployed Marine forces stand ready to reinforce the peninsula on short notice. We have upgraded our prepositioned stocks as well, substantially improving our ability to reinforce the peninsula with ground troops from the continental United States.

These measures are particularly important to support the dramatic shift in U.S. policy toward Pyongyang proposed by former Secretary of Defense William Perry following his visit to North Korea in May of last year. He concluded that North Korea's development of long-range missiles and the capability to build nuclear weapons created an instability that compromised previous policies. Mr. Perry advocated a new, dual-track strategy: a positive path, called Mutual Threat Reduction, designed to improve relations leading ultimately to normalization; and a negative path, called Threat Containment, consisting of increasing containment, isolation, and military readiness. The U.S. is currently pursuing the Mutual Threat Reduction path, which promises improved bilateral relations in exchange for a Democratic Peoples Republic of Korea commitment to continue negotiations to eliminate their long-range missile program and enter into discussions about their nuclear weapons program. If this approach fails, then the Threat Containment path will be pursued.

While this strategy holds promise, our defensive posture in Korea must remain both viable and strong as long as the threat remains. North Korea's substantial chemical and biological weapons capability, coupled with its continued pursuit of ballistic missile technology, will demand our attention for the foreseeable future.

Southwest Asia

Long-term U.S. interests and the potential for instability combine to focus our attention and concern in Southwest Asia as well. Saddam Hussein's continuing disregard for the United Nations and the agreements he previously signed, his belligerent actions to challenge enforcement of U.N. sanctions, and the military threat he poses to the neighboring states all require that the U.S. and our allies maintain a substantial, capable, and ready military force in Southwest Asia. Additionally, powerful reinforcing units in the U.S. are prepared to move quickly should conditions warrant a rapid deployment of any additional assets.

Our resolve and the ability of our forces in Southwest Asia have been tested throughout 1999. In the wake of Operation DESERT FOX at the end of 1998, Saddam Hussein has increased his belligerence against U.S. and coalition forces enforcing the Iraqi No-Fly-Zones. On a regular basis, Iraqi forces fire anti-aircraft artillery and surface-to-air missiles against U.S. and coalition aircraft, forcing them to act in self-defense.

The U.S. military presence in the region includes land-based fighter and bomber forces, an aircraft carrier battle group with strike aircraft and cruise missiles, and substantial ground forces that can be reinforced within days. In recent years we have built up our pre-positioned stocks of weapons and supplies, considerably improved our strategic lift, and developed a crisis response force in the United States that can deploy to the Gulf region on very short notice.

The current posture of our deployed forces in the Persian Gulf is one example of our efforts to reduce the number of soldiers, sailors, airmen, and marines deployed overseas on contingency operations, while still maintaining sufficient capability to meet our security responsibilities and commitments around the world.

Balkans

The Balkan region continues to be a key area of interest and involvement, and U.S. forces remain committed throughout the area. In Bosnia-Herzegovina, up to 4,600 U.S. servicemen and women are supporting the NATO multi-national Stabilization Force, or SFOR. Approximately 5,500 personnel are deployed to Kosovo, and another 600 are deployed to the Former Yugoslavia Republic of Macedonia (FYROM) and Greece, all in support of NATO's Kosovo Force, or KFOR.

In Bosnia, while NATO military units continue to maintain a safe and secure environment, progress in civil implementation remains slow, but steady. A restruc-

turing of SFOR has reduced the U.S. contribution by about 25 percent, from 6,200 to 4,600 personnel, this year.

The KFOR mission in Kosovo has significantly increased the U.S. presence in the region, not just in Kosovo, but in the FYROM as well. While some violence continues, U.S. forces—along with NATO allies and coalition partners—have contributed to establishing a safe and secure environment in Kosovo, and enhanced regional stability. To create a lasting and durable solution, however, a host of civil, political, and economic tasks still must be accomplished to build a better future. The United Nations Mission in Kosovo is helping in this recovery process and one of the next challenges for the international community will be to properly fund, organize, equip, and train the new Kosovo Protection Corps.

The Milosevic regime in the Federal Republic of Yugoslavia remains a source of tension throughout Southeastern Europe. The ability of the United States to use all the instruments of national power—political, economic, as well as military—while convincing our Allies to do the same, may help prevent another conflict in the region. Positive developments in regional stability, democratization, and economic revitalization include NATO's Southeastern Europe Initiative—initiated at the Washington Summit—and the European Union-sponsored Stability Pact for Southeastern Europe. Both initiatives look toward regional integration and cooperation in finding regional solutions to the challenges in the Balkans.

East Timor

Following cessation of open hostilities in East Timor, the challenge for the international community is to help rebuild a civil structure, essentially from scratch. The United Nations Transitional Administration for East Timor (UNTAET) has this responsibility. The U.N. mandate for the peacekeeping component of UNTAET calls for a force of up to 8,950 troops plus 200 military observers. The U.S. contribution to the UNTAET mission consists of a small number of U.S. military officers serving as observers. Also, as part of normal regional exercises from the U.S. Pacific Command, other U.S. personnel contribute to humanitarian and civic action efforts through exercises configured to assist in building infrastructure and restoring some social services. These activities are coordinated by the U.S. Support Group East Timor (USGET), consisting of staff and support personnel.

The central security issue for East Timor remains the maintenance and security of the border with West Timor. We remain cautiously optimistic of eventual stability in light of the Wahid government of Indonesia's expressed intentions to disarm and sever relations with the militias.

Mozambique

In response to heavy rainfall and cyclone-induced flooding across the southeastern Africa region, the Secretary of Defense authorized Operation ATLAS RESPONSE to support humanitarian assistance and disaster relief efforts in South Africa, Mozambique, Zimbabwe, and Botswana. Over 700 military personnel from all U.S. Services participated in Joint Task Force ATLAS RESPONSE, providing a unique capability to the relief effort. A U.S. Coast Guard Search and Rescue controller team worked with USAID and local agencies to provide immediate lifesaving services. The Civil Military Operations Center (CMOC) staff coordinated the multinational relief effort and trained IO and NGO personnel to perform this duty when the joint task force redeployed. Helicopter and airlift crews flew nearly 1,050 tons of relief supplies to villages in southern and central Mozambique. C–130s equipped with KEEN SAGE imaging capabilities provided near real-time data to the Government of Mozambique—information that helped officials prioritize road and bridge repair projects. After three weeks, the situation in southeastern Africa had stabilized and allowed for the transition of these responsibilities back to local and international relief organizations.

BUILDING TOMORROW'S JOINT FORCE

Even as we focus on the present we must look to the future to ensure that tomorrow's force is as ready, and even more capable and versatile than today's. Today's force benefits from some of the tough decisions made by my predecessors and yours. We have an equal obligation to make the right choices today to pave the way for our successors. Given finite resources, balancing current readiness and taking care of our quality people against modernization for the future will often conflict—but all are equally important. To ensure that tomorrow's Joint Force remains the world's best, we are moving forward to make Joint Vision 2010—our conceptual framework for future joint operations—a reality. Additionally, we are engaged in developing the next Joint Vision document that builds on the JV2010 foundation and maintains the momentum forward toward the future.

Joint Experimentation

The Secretary of Defense has assigned the Commander-In-Chief, U.S. Joint Forces Command (JFCOM) to serve as the executive agent for joint warfighting experimentation. Joint Experimentation is the principal mechanism for translating JV2010 into reality. The Joint Experimentation Program will complement—not replace—existing Service experimentation efforts. Experimentation will also include efforts to improve our interoperability and effectiveness with multinational partners.

To facilitate joint, service-leveraged, and multinational experimentation efforts, JFCOM has developed and published a cornerstone document depicting the way ahead. Campaign Plan 00, a comprehensive six-year effort covering the years 2000–2005, is designed to identify new concepts, processes, organizations, capabilities, and technologies that will enable dramatic improvements in our joint warfighting. The results of these experiments will be captured within an interdependent package of doctrine, organization, training, materiel, leadership and education, people, and facilities recommendations. Following the completion of each series of experiments, a package of recommendations will be delivered to me for approval and follow-on implementation, where applicable, within the joint force.

The annual JFCOM campaign plans are bold approaches to joint force and operational concept development. The plans emphasize experimentation in two areas: (1) integrating concepts and (2) functional concepts. Integrating concepts describe an overarching warfighting approach and provide the context and focus for the functional concepts. The functional concepts are critical to achieving the overarching integrating concept capability.

In the near term, JFCOM will be experimenting with its first integrating concept: Rapid Decisive Operations. This concept focuses on the joint force at the operational level. It describes how a Joint Force Commander can determine and employ the right balance of air, land, sea, amphibious, space, and information-based capabilities in an intense non-linear campaign to defeat an adversary's strategic and operational centers of gravity. The Rapid Decisive Operations Integrating Concept emphasizes the following four functional concepts considered critical for the future:

—*Attack Operations Against Critical Mobile Targets*.—A system with advanced sensors, near-instantaneous sensor-to-shooter data flow, and high speed, long range accurate weapons that allows rapid identification and engagement of armor, Surface-to-Air Missiles, Theater Ballistic Missiles, and other mobile targets to enhance offensive operations and improve force protection.

—*Common Relevant Operational Picture*.—Provide timely, fused, accurate, consistent, and relevant information from multiple sources into a readily understandable, scalable, and interactive depiction of the joint battlespace. This picture depicts information on friendly and enemy force dispositions while enhancing attack operations and minimizing fratricide.

—*Joint Interactive Planning*.—A virtual, collaborative system which enables planners to access a wide array of information and planning efforts from numerous sources to improve decisions, enable faster response time and allow commanders to react quickly to changing events.

—*Adaptive Joint Command and Control*.—Leverages advances in information technologies to revolutionize the structure of the Joint Task Force Headquarters and the dissemination of information to the Joint Force, as well as provide the joint warfighter with the most effective and efficient operational command and control.

The capstone event within the joint experimentation program for this year will be Millennium Challenge 00. This joint experiment provides an overarching joint context and scenario for the integration of four Service-based experiments into a single joint event. The Service events are the Army's Joint Contingency Force Advanced Warfighting Experiment, the Navy's Fleet Battle Experiment Hotel, the Air Force's Joint Expeditionary Force Experiment 00, and the Marine Corps' Millennium Dragon.

Ultimately, the joint experimentation process will influence everything about the Joint Force of 2010 including strategy, doctrine, organizations, training, materiel, leadership and education, facilities, and recruiting. By examining our assumptions and refining our future warfighting concepts in the crucible of joint and multinational experimentation, we can best achieve the full potential of JV2010. Our objective remains the same: a Joint Force that is persuasive in peace, decisive in war, and preeminent in any form of conflict.

Military Transformation

Department of Defense transformation will result from the Revolution in Business Affairs (RBA), which modernizes Department-wide business practices, and the Revolution in Military Affairs (RMA), which profoundly changes military forces and capa-

bilities. As reported to the President and Congress, this military transformation relies upon progress and change within six critical areas. Development and experimentation by the Services, CINCs, and JFCOM will eventually enable the Services to provide a truly interoperable and compatible joint force with Joint Vision 2010 operational capabilities. These critical areas include:

—*Science & Technology*.—We will exploit the information revolution and our Nation's dynamic and innovative technological capabilities to achieve new levels of force integration and force effectiveness.

—*Service Concept Development*.—We will work closely with the Services to provide a compatible joint force framework that maximizes Service core competencies, while maintaining a highly effective, interoperable and compatible joint and combined force in execution.

—*Joint Concept Development*.—We will strive for joint interoperability and compatibility through Service-based and joint-leveraged experimentation designed to produce interdependent initiatives.

—*Robust Implementation*.—Service, joint, and multinational experimentation is a long-term investment that will yield recommended breakthrough capabilities and force enhancements for military transformation. The specific processes for the recommendation and approval of experimentation results are currently under development. We seek the means to thoughtfully, but rapidly, institute a package of recommended changes within our forces in the areas of doctrine, organizations, training, materiel, leadership and education, personnel and facilities.

—*Multinational Transformation Activities*.—We seek to encourage and support multinational transformation activities among our potential partners. We will develop the means to interface with and enhance the interoperability of combined forces.

—*Exceptional People*.—Our people are the key to lasting institutional change. We will continue to invest heavily in leading, educating, training, and caring for our military and civilian personnel and their family members in every affordable way.

Additionally, I am undertaking initiatives that will further institutionalize military transformation through:

—*Metrics Development*.—We are in the process of developing metrics for military transformation. Metrics are the key measures to judge the overall progress of transformation in so many inter-related and interdependent areas. In this effort, we will be supported by a 21st Century information and decision center known as the Joint Vision Integration Cell.

—*Joint Doctrine Process Improvement*.—Joint doctrine is the engine of change and is key to the transformation effort—it wins wars, saves lives, saves money, and is the foundation of all military operations. We are transforming the joint doctrine development program to ensure that we get doctrine into warfighters' hands in a timely manner. We are in the process of modifying the development process by leveraging information technologies to reduce the development timeline for a joint publication. In the area of joint doctrine development, we are working hard to include the contributions of our interagency and multinational partners to ensure that our joint forces are capable of operating as part of combined joint task forces within an interagency environment.

—*Joint Doctrine Training and Education*.—Technology will play a leading role in transforming joint doctrine. The emerging capability to distribute information and apply doctrine knowledge heralds a new era of opportunity in the military. The Internet and CD–ROM based distributed learning methodology employed to enhance doctrine awareness promises quality doctrine education to every member of the U.S. military. Information and hands-on training formerly available only to those people able to participate in resident education now will be available to all participants. The critical elements of efforts to achieve these objectives are already under development. These include the Joint Electronic Library (JEL) and Joint Doctrine Electronic Information System (JDEIS)—repositories of joint doctrine information, Doctrine Networked Education and Training (DOCNET)—on-line multimedia joint doctrine instructional modules, and the Joint Doctrine Interactive Practical Application—a CD–ROM based doctrine war game.

—*War Planning*.—Comprehensive plans that allow for employment of forces across the full spectrum of military operations are critical to support our National Security Strategy and Engagement Objectives. As we prepare our Armed Forces for a challenging future we will continue to refine and improve our planning process to leverage technological advances and achieve new levels of integration and effectiveness by: (1) conducting a quality review of all plans to en-

sure synchronization with strategic documents; (2) integrating all elements of National Power into the DOD deliberate planning process; (3) participating with the Contingency Planning Interagency Working Group (CP IWG) in the production of politico-military plans; (4) conducting thorough reviews of operation plans submitted by international treaty organizations; and (5) incorporating emerging technologies to achieve real-time information flow for collaborative planning.

Intelligence Interoperability

Intelligence interoperability is the linchpin of our efforts to achieve the goal of Information Superiority—a key enabler of the four operational concepts of Joint Vision 2010—and the foundation for providing the commander with dominant battlespace awareness.

To be fully interoperable in the context of Joint Vision 2010, intelligence must be produced and delivered in a fashion that immediately supports command decision making and mission execution. Barriers to interoperability between intelligence and operations systems and environments are being eliminated to ensure we are able to provide a Common Operational Picture—which will tremendously enhance the Joint Task Force commander's ability to exercise command and control.

As interoperability requirements expand, we are aggressively working through a wide-range of opportunities. Today, I can report that we are on the cusp of a significant leap forward in redressing interoperability shortfalls with the fielding of the Global Command and Control System, or GCCS, which will provide integrated imagery and intelligence to the Common Operational Picture.

Intelligence Support for Precision Engagement

Successful employment of modern weapons systems, new operational concepts, and innovative combat techniques—particularly those involving forces that are lighter, faster, more agile, and more lethal—also depends on rapid, precise, accurate, and detailed intelligence. The persistent demand for very-high-resolution intelligence data is driven by a combination of factors: the inventory of increasingly precise weaponry; a mission mix that requires the "surgical" application of force; and the growing use of high-fidelity modeling to support mission planning. In addition, future trends—such as the weaponization of information technologies or the increased probability of combat operations in urban terrain—foreshadow a dramatic growth in requirements for fine-grained, time sensitive intelligence collection and analysis.

This evolving focus on pinpoint accuracy extends beyond precisely striking a target with explosive ordnance. The JTF commander must be able to understand the situation, select an appropriate course of action and the forces to execute it, accurately assess the effects of that action, and re-engage as necessary. Such situations and actions encompass the full range of military operations—from full-scale combat to humanitarian relief missions. Detailed intelligence is needed to expand the options available not only to the operator but also to the policymaker or peacekeeper. Achieving this degree of granularity will require continued investment in, and modernization of, intelligence collection and analysis capabilities. The defense intelligence community is working to reshape its workforce, reform its processes, and refine its capabilities to improve both precision and efficiency. We will need the continued help of the Congress as we shepherd the resources necessary to ensure that intelligence keeps pace with the demands of modernized military capabilities.

Information Operations

Emerging threats and increasing dependence on information systems make Information Operations (IO) an area of intense interest for DOD. Information Operations consist of actions taken to affect adversary information and information systems while defending one's own information and information systems. A significant force multiplier, both offensively and defensively, IO offers great potential across the spectrum of conflict from peace to war. In a noncombat or ambiguous situation, IO includes the actions taken to preserve one's own information and information systems, as well as those taken to influence a target's systems. Focusing on the decision-maker and/or decision making process, IO integrates traditional military activities and capabilities; such as Electronic Warfare (EW), Psychological Operations, Operations Security, Physical Destruction, and others, with the newer mission of Computer Network Defense/Attack (CND/CNA). The emergence of this new realm of conflict brings significant vulnerabilities as well. An adversary using CNA techniques could gain a significant advantage by attacking portions of the U.S. military and/or commercial information infrastructure.

To avert such a scenario, DOD has focused a great deal of attention on Information Assurance (IA): measures aimed at protecting and defending information and

information systems. Effective IA transcends DOD and requires coordination throughout the government as well as a rational approach to integrating commercial sector efforts. The nature of modern information technology makes identification of adversary actors and motives difficult. Joint Task Force—Computer Network Defense was established in 1999 to address this threat. Assigned to SPACECOM, it works in concert with the National Infrastructure Protection Center (NIPC) to ensure the security of vital DOD Information systems.

The role of the DOD and other agencies, as well as the role of the federal government in general in protecting our country's information and information systems while preserving individual rights, needs further study and clarification. We are involved in several senior level venues to shape DOD IO efforts. The DOD IO concept white paper, when completed, will provide a framework for future DOD IO policy and a stimulus for greater interagency coordination.

Global Information Grid

An important aspect of future operations will be the development of a Global Information Grid, or GIG, to provide the network-centric environment required to achieve information superiority. The GIG is the globally interconnected, end-to-end set of information capabilities, associated processes, and personnel to manage and provide information on demand to warfighters, policy makers, and supporting personnel. It will enhance combat power through greatly increased battlespace awareness, improved ability to employ weapons beyond line-of-sight, employment of massed effects instead of massed forces, and reduced decision cycles. It will contribute to the success of non-combat military operations as well.

Though the GIG is not yet a reality, the way ahead is clear. For example, JFCOM has been given the lead and is currently writing the GIG Capstone Requirements Document. This is the first time a single, overarching document will drive all future C^4 requirements and provide the framework for increasing numbers of new capabilities to be "conceived and born joint."

Global Positioning System

To preserve our ability to prosecute military operations with precision at standoff ranges in all weather conditions, we are embarking on a Global Positioning System (GPS) modernization program. This modernization effort will include a new military navigation signal from space that will increase the performance of weapons systems in the presence of enemy jamming. In our role as the stewards of the GPS constellation, these modernized satellites will also include additional civil signals to meet the national goal of enhancing the utility of GPS across commercial, scientific, and aviation communities.

Unified Command Plan

A major part of our transformation effort is our long-range vision of how to organize for the future. Last October, Joint Forces Command was established to focus on joint training, experimentation, interoperability, and doctrine. At the same time, we also established the Computer Network Defense Joint Task Force to help protect our critical defense information systems, as well as the Joint Task Force for Civil Support (JTF–CS) which will become fully operational by April 2000.

JTF–CS, located in Norfolk, Virginia, has a staff of 36 and is led by an Army National Guard Brigadier General. JTF–CS will assume overall responsibility for coordinating DOD's Consequence Management (CM) support efforts to civil authorities for WMD incidents within the U.S., its territories, and possessions. It will also train forces, develop doctrine, and serve as a command and control headquarters for military units deployed in support of consequence management efforts. During routine, day-to-day operations, JTF–CS will act as JFCOM's primary point of contact for all WMD consequence management matters.

This DOD organizational change will provide the best possible military support to our country's WMD consequence management effort. I want to underscore, however, that this action in no way alters our relationship with the Lead Federal Agency (LFA) during a CM operation. JTF–CS will always be in a supporting role to the LFA, and civilian control will always be firmly maintained.

As part of the Unified Command Plan (UCP) review cycle, my staff also worked with the CINCs and Services to study a wide range of options for the future. The results of this review, called UCP 21, provide a flexible, evolutionary path designed to improve jointness and protect our national interests against evolving threats well into the early part of this new century.

Ballistic Missile Proliferation

The global proliferation of technology and the ballistic missile programs underway in many nations mean that we must take steps now to counter emerging threats

to the U.S., our forward deployed forces, and our allies. Future strategic and regional threats are characterized by the increasing potential for an opponent's use of weapons of mass destruction (WMD) across the spectrum of conflict. Counterproliferation (CP) refers to DOD efforts to combat proliferation, including: (1) the application of military power to protect U.S. forces and interests; (2) intelligence collection and analysis; and (3) support to diplomacy, arms control, and export controls. We must be fully prepared to counter the military threats posed by WMD. CP helps shape the international environment by deterring proliferation and use of WMD. Nuclear capabilities serve as a hedge against an uncertain future, a guarantee of security commitments to allies, and a disincentive to those who would contemplate employment of WMD. While the U.S. may not be successful in preventing proliferation all the time and in all places, when proliferation does occur and national interests and commitments are threatened, we must be in a position to respond and prevail during a crisis or on the battlefield.

To prepare now for an uncertain future, our CP strategy focuses on: (1) preventing proliferation from occurring; (2) protecting U.S. forces, interests, and citizens against WMD; and, (3) being able to respond against those who would use WMD against the U.S. or its allies. This strategy is characterized by a set of mutually supporting capabilities: counterforce, active defense, passive defense, and consequence management.

Theater Missile Defense (TMD) and National Missile Defense (NMD) are important components of the active defense capability mentioned above. TMD is designed to protect U.S. and allied forces against ballistic missile threats within theaters. The CINCs require a family of systems for Theater Ballistic Missile Defense (TBMD) consisting of a mix of interoperable air, land, and sea-based capabilities. This architecture is both complementary and flexible, allowing the CINCs to adequately defend assets across the continuum of peacetime operations, through crisis response to a major theater conflict. The Department's priorities for TBMD remain unchanged—lower tier capability (Patriot Advanced Capability-3 and Navy Area Defense System) is still our highest priority, followed by upper tier capability (Theater High Altitude Area Defense System and Navy Theater Wide Defense System). However, the development and deployment of an upper tier capability by fiscal year 2007 is operationally critical to ensure protection against the projected Medium Range Ballistic Missile threat, to provide wide-area coverage, and to enhance theater air and missile defense protection.

Moreover, TMD enhances regional stability. As part of broader efforts, the U.S. is actively engaged in cooperative programs with Japan, NATO, Israel, and Russia. Cooperation with Japan is presently limited to Shared Early Warning (SEW) information on theater ballistic missile launches and the Navy Theater Wide Block II cooperative research effort. NATO and Israeli cooperation includes SEW. Additional cooperative programs include the co-development of the Medium Extended Air Defense System (MEADS) with Germany and Italy, and the ARROW weapons system with Israel. Finally, cooperation with Russia includes a TMD exercise program and discussions on strategic and theater SEW.

The NMD program will continue to develop and maintain the option to deploy an anti-ballistic missile defense to protect all 50 states against limited strategic ballistic missile threats from rogue states. This will also provide some capability against a small accidental or unauthorized launch from a nuclear-capable state. The objectives of the NMD program are threefold: (1) to develop and demonstrate a system capable of protecting against small-scale ballistic missile attacks; (2) to complete system development and, if directed, field an initial capability system by 2005; and (3) to maintain a system development path that allows evolutionary upgrading of system capabilities commensurate with the threat. The NMD program is progressing toward the July 2000 Deployment Readiness Review and a subsequent deployment decision by the President. The decision to deploy will be based on an assessment of the system's technical maturity, status of the threat, operational effectiveness, cost, and international security considerations.

Integrating Interagency Planning

In the ten years since the end of the Cold War, the United States has been engaged in planning and executing a series of Complex Contingency Operations (CCOs). During these operations, it has become increasingly clear that an integrated approach for the application of USG policy and assets must be made to optimize scarce resources and ensure success. Several initiatives are currently being coordinated and developed that will better integrate DOD with other agencies in conducting complex, and small-scale contingencies, as well as Major Theater War (MTW).

The first step in establishing dedicated mechanisms and integrated planning processes needed to ensure rapid, effective, well-structured, multi-agency efforts in response to crises was the publication of Presidential Decision Directive 56 (PDD–56)—Managing Complex Contingency Operations—in 1997.

Since then there have been four PDD–56 training events to link the Interagency with the CINC. The most recent was done in conjunction with EUCOM's "Brave Knight" exercise last spring. This event was exercised at the Deputy Assistant Secretary level, and addressed a WMD crisis in Europe. We have learned many lessons from these exercises, but among the most important may be the need to have senior officials routinely participate.

In November 1999, the President directed the Secretary of Defense to forward to the National Security Council those politico-military issues deemed necessary for interagency review and appropriate action. This will be accomplished by the development of an Interagency Coordination Annex (Annex V) to all CJCS-approved plans. Annex V does not duplicate operations covered in other annexes, appendices, or tabs, but, rather, provides a single source reference for the CINCs to identify Interagency requirements and lays the groundwork for potential coordination with international civilian organizations and private voluntary organizations. These Annex Vs, when approved, will be repackaged into politico-military strategic concepts and forwarded through OSD to the NSC.

These politico-military strategic concepts are the mechanism to facilitate the development of contingency politico-military plans. Spelling out the CINCs' Interagency requirements enables other agencies to conduct detailed advanced planning in concert with DOD. These contingency politico-military plans can be maintained for use in a future crisis. At the onset of a crisis, the PDD–56 process is initiated. The starting point to conduct PDD–56 planning will be these politico-military contingency plans. This advance planning will greatly enhance our ability to rapidly resolve crises as they emerge.

In December 1999, the National Security Advisor established a new standing Contingency Planning Interagency Working Group (CP IWG), chaired by the NSC staff, whose goal is to improve the PDD–56 process and receive these politico-military strategic concepts in order to do advance interagency planning. This CP IWG will include Assistant Secretary level representation from Departments within the Interagency. The CP IWG will meet regularly to:

—Assess potential contingencies and make recommendations for the development of political-military plans to manage them.
—Oversee political-military contingency planning and provide reaction and comment to DOD regarding Interagency involvement contained in CINC plans.
—Review and provide advice and recommendations to senior leaders on possible follow-on efforts.
—Provide policy guidance on the implementation of the interagency training and after-action review components of PDD–56.

Our experiences in Kosovo and elsewhere have demonstrated the necessity to ensure that all concerned government agencies conduct comprehensive planning to encompass the full range of instruments available to decision-makers. We all must move forward with our efforts to achieve increased levels of integrated interagency planning now. To better support other agencies, DOD needs to give greater consideration to political, diplomatic, humanitarian, economic, information, and other nonmilitary activities in defense planning. In addition, the U.S. government must establish dedicated mechanisms and integrated planning processes to ensure rapid, effective, well-structured, multi-agency efforts in response to crises. Finally, we must continue to emphasize that our senior officials routinely participate in rehearsals, gaming, exercises, and simulations, as well as the CP/IWG—which has become a genuine leap forward in the effort to establish a sound system to incorporate crisis and deliberate planning across the interagency.

Joint Officer Management

Arguably, one of the most important pieces of legislation that affected not only the structure of the Department, but also the way we execute our responsibilities and manage our personnel, was the Goldwater-Nichols Defense Reorganization Act of 1986. I am convinced that the many operational successes the military has enjoyed since its passage, including Operations DESERT STORM and ALLIED FORCE, are attributable to the remarkable vision inherent in this Act.

We have had 13 good years of experience in the joint arena under this Act, and we have come a long way to achieving its original intention. It is time to consider evolutionary changes to the joint officer management process to ensure that our warfighting commanders-in-chief have the best men and women possible to meet their daunting responsibilities.

The Goldwater-Nichols Act originally presumed joint operations would require an extensive joint bureaucracy and an associated cadre of joint specialists to sustain it. What we have learned, however, is that our joint warfighting CINCs need officers with fresh experience in their area of functional expertise and a strong grounding in their Service's core competencies. The joint officer management process, as it exists today, is preoccupied with meeting quotas, not matching skill sets to requirements. We have submitted several proposed changes, each of which I believe will strengthen Goldwater-Nichols objectives by changing the existing process to address joint requirements.

For example, we would like to match the joint tour length requirement to the established DOD tour length for a particular location, not the arbitrary 36 months that is established in current law. As it exists today, officers who are posted to joint assignments in remote, but nonetheless critical, locations such as Korea and Southwest Asia do not typically receive joint credit.

Let me assure the Congress that we are not trying to circumvent or weaken what has become a vitally important part of how we defend our Nation's interests. To the contrary, we are working not only to improve jointness, but to champion it, as well. For example, though permitted by internal DOD policy, we are seeking to limit even more the number of waivers for those officers promoted to Flag and General officer rank.

JPME 2010

In 1998, we conducted an extensive review of Joint Professional Military Education (JPME) with a view toward defining requirements and identifying better ways to prepare officers for current and future challenges. The results of this study revealed a need to develop a JPME continuum that would expand the JPME audience to include Active and Reserve components, deepen and broaden JPME content, simplify joint officer management, and make JPME more accessible through distance learning and broader opportunities to receive JPME Phase II at Intermediate and Senior Service Schools.

We intend to work closely with the Congress to enact these important initiatives to improve joint education throughout the force.

Logistics Transformation

While the United States military continues to have the most effective logistics system in the world, this is another area where we are striving to become better. In the past, logistics information systems were traditionally Service and function specific. These "stovepiped" systems are invaluable to the respective Service component commander, but fragmented at the joint task force (JTF) level. Today, CINCs, Components and JTF Commanders do not have an integrated logistics information system that fully supports joint operational requirements; nor is there a repository of accurate, real-time, and seamless logistics information on which such a system can be based.

We are developing a strategy, in conjunction with OSD, the Services, and the appropriate Defense Agencies to: (1) adopt commercial solutions reflecting best industry practices; (2) review and optimize our logistics processes at all levels; and (3) arrive at a cohesive, web-based, network-centric, real-time, integrated logistics information environment by fiscal year 2004.

Our goal is to provide the joint warfighter real-time logistics situational awareness by leveraging technology as we optimize our logistics processes while minimizing disruptions. To achieve this aim, we have recommended several intermediate steps:

—Implement Customer Wait Time as a new logistics metric.
—Establish a time-definite delivery based on a user established required delivery date.
—Continue to integrate Automatic Identification Technology (AIT) and Automated Information Systems (AIS) at all levels to capture accurate and timely information thereby obtaining true joint asset visibility.
—Develop and field a web-based, shared data environment providing seamless, interoperable, real-time logistics information to ensure the joint warfighter has the ability to make timely and confident logistics decisions.

Implementing these measures will significantly enhance modernization initiatives within the logistics community. I am optimistic that we will be making significant progress in this important area in the year ahead.

CONCLUSION

The U.S. armed forces remain fundamentally sound and capable of fulfilling their role in executing our national security strategy. However, the combination of mul-

tiple, competing missions, recruiting and retention shortfalls, aging equipment, and fixed defense budgets has frayed the force. With the support of this Committee and the Congress as a whole, we can continue to apply the right kind of corrective action now and avoid a downward spiral that could take years to overcome. As I have outlined above, we have a clear vision and a plan for achieving that vision. Together with the Congress and the Administration, the Department will transform our military forces to ensure that we meet all threats to America's security in the 21st Century—just as we have for the past two centuries. And as we move forward, we do so with complete confidence in America's sons and daughters in uniform. They represent the heart and soul of our Armed Forces; it is incumbent upon us collectively to ensure that their sacrifices are not in vain.

Senator STEVENS. Thank you very much. We will start the clock, but let me start with just a comment and request. I would ask that you each carry to your wives our expression of gratitude. Bill, Janet, and you, Carolyn, your wives have a role that nobody really understands and appreciates. They travel with you. They are our hostesses in so many ways, and they are the role models for the men and women, particularly the women in the Armed Services. You are blessed with two great wives, and we thank you very much for sharing them with us from time to time.

EUROPEAN DEFENSE CAPABILITIES

I would like to ask you first, Mr. Secretary, about the problems that some of us perceive to be developing in Europe as the European Union creates its own military. Now, I know you went to the Vercunda Conference and we did not—I did not, anyway, but there was discussed there—can you tell us, is that going to lead us to trouble now in terms of bifurcating our support with the NATO forces and the European military?

Secretary COHEN. Mr. Chairman, the answer is, it depends. It depends on how this European Security Defense Identity (ESDI) proceeds. What I said at the conference was that we have been for years banging on the European door saying, you must do more, you are not carrying enough weight here, and that was clearly evidenced during the Kosovo campaign with the deficiencies that were highlighted and illuminated in terms of what we have been talking about for years finally were revealed during the course of that air campaign.

So we have been saying you have to do more. Now they are saying, okay, we are prepared to do more. The question is, how will it be structured?

To the extent that ESDI, the European Security Defense Identity, means it is going to be a component of, or under the umbrella of NATO, and to the extent that NATO determines it is not prepared, does not want to take action, then this European Defense Initiative or capability could take action under those circumstances, calling upon certain assets of NATO in order to conduct the missions, then I think that that is something we are all are very strongly in favor.

The fear that I have at least had and voiced was that there might be a tendency to create a separate bureaucracy, with separate command and control elements, and that that would be in competition with NATO rather than a complement to it.

We had something that all of the NATO countries signed up to last year when we had the NATO summit meeting here in Washington, and that was something called the Defense Capabilities Ini-

tiative, and it essentially means that we have identified those capabilities that we should have. It had to do with what the chairman is talking about, precision guided munitions, having air-to-air refueling, having secure communications, having things that are fully integrated into NATO's capabilities.

What would be of concern is if the Europeans start to develop capabilities which do not measure up into their obligations to NATO, they are separate and apart, not fully integrated, and so then you have the worst of all worlds, where you have a separate bureaucracy with countries who have perhaps increased their defense spending, which is something I want to talk about just for a moment, but it is not fully integrated into NATO's obligations and capabilities. There you would have a separate bureaucracy with less capability and not complementary to NATO itself. That would be the thing we should avoid.

As a matter of fact, I am going to be hosting a meeting in June at the Wye River Plantation, or Estate, with Europeans who want to come over, leading European defense ministers who want to come over and to lay out their vision of ESDI.

So I think, again, it depends. Based on what the British are saying, based upon the strong support of the Germans and the Italians, I think that the concept of ESDI as it is unfolding is something we should strongly support, but there are some who have a different interpretation of what that means and the way in which it should go, and I think we have to be very careful, because otherwise I think you and all the Members of Congress will rightfully look at what is taking place.

Here I am coming before you saying, we need at least $112 billion, and more than that, in order to modernize our forces and make sure that we stay as capable as we are, and we look at the comparable budgets amongst the European nations, and they are going down.

Now, some of that is doing it so they can achieve some efficiencies through their acquisition strategies and so forth. That is true. They cannot achieve the kind of efficiencies necessary in order to measure up to the capabilities required, and that is the danger as we see budgets going down and ours going up, and at some point in time, you are going to say, wait a minute. We are not seeing an equitable sharing of the burden here, and that will have political consequences to the European nations.

So it is something that I talk about, have talked about, will continue to do so, but it is something we need to keep our focus on.

Senator STEVENS. Mr. Secretary, the time is now—we are hearing those comments now as to whether this is so bifurcating the support of the Europeans and our joint efforts over there that they will not be bearing their fair share of the expenses in Kosovo. It is a real question, but I do thank you for your answer. Senator Inouye.

Senator INOUYE. Mr. Secretary, in your presentation you spoke of how thin our troops are stretched out overseas. We know that some of the pilots and specialists are repeatedly called upon to serve overseas. In fact, we take out equipment from potential trouble areas to meet emergency needs elsewhere. Now, as you prepare

to advise the President on the quadrennial review, are you going to suggest that we increase our force structure?

FORCE STRUCTURE INCREASES

Secretary COHEN. I have not recommended an increase in the force structure at this point, Senator Inouye. What we have tried to do and the chairman touched upon this in his opening comments in terms of trying to find ways in which we can reduce the operational tempo of our forces. I will give you one example. In East Timor when that situation unfolded we had a strong pressure coming from our Australian friends saying we need you to take the leadership role, meaning the United States in this effort and join with us in a partnership. The Australians are our great friends. They have been with us in every conflict, but we at that point had to point out that we are stretched, we are in Bosnia, we are in Kosovo, we are in the Gulf, we are throughout the Asia-Pacific region.

We have obligations which are stretching our force, and so we will be supportive, but we cannot commit the kind of forces that were required at that time, so we were able to help organize a number of countries from the region to take the lead in support of the Australians, and so we have tried to resist what the chairman is talking about where we are the first ones people want to call upon because of our capability and sometimes they do it as a last resort, but we have to resist not the temptation but the request of many countries who say you are the only ones who can handle this.

So it is always a tough issue, and if it comes to the point where we find that we can no longer carry out our mission and we continue to see a depletion of our forces because of the operational tempo, then we will have to go back and say we need more. I would point out that we are having difficulty right now achieving our target goals to fulfill the forces that are required under the current force structure so that is another element that we would have to look at, assuming we have higher numbers. What would the cost be and could we achieve those higher numbers under the current planning, but it is something I have not recommended at this time.

START II AND MISSILE DEFENSE

Senator INOUYE. The Russian Duma just approved START II, and I suppose you will be called upon to make your recommendations to the President on the deployment of our national missile defense system. Can you tell us what you are going to recommend?

Secretary COHEN. I think you should ask me that question this summer when I will not be available to testify before you. But let me just give you what I have tried to do today. First of all, I commend the new President for getting the Duma to ratify this. I understand, Senator Cochran, you met recently with some of the Duma members, and I would commend this to all of you whenever you have a chance to travel to Moscow, or visit in Russia, try to arrange meeting your counterparts. It is very important that you talk to them and you talk very straight with them, and I found that every occasion that I have been there I always try to meet with Duma members and to lay out our strategy and what our goals are.

I believe the ratification under the circumstances tying it to no deployment for national missile defense is simply unacceptable. They should ratify START II based on the agreement. And that we will negotiate with them and to see whether or not we can amend the ABM Treaty to take into account a national missile defense system if the President should choose to go forward, and what I have tried to lay out to the Russians is exactly what we contemplate, assuming that we satisfy the four requirements the President has said, number one, is there a threat that would justify a national missile defense system? I believe the threat is real. It is here. I believe it will increase.

Number 2, do we have the technology, we have not resolved that issue just yet. We are close, but I think the tests that are forthcoming will give us the ability to make that determination.

Number 3, what are the costs? I saw in today's paper that the Congressional Budget Office (CBO) has now pegged the cost at some $60 billion. I have no way of knowing whether those numbers are accurate or not or what they have included, whether they have included the 15-year period as opposed to 5-year period, how many satellites they have included, all of that is open to resolution, assuming the cost factor that we satisfied that.

The next question is, what is the impact upon our arms reductions and stability in the world in terms of strategic systems. Those four tests the President is going to apply. After the test which is set for late June, early July there will be about a 30-day period in which I will then have to examine what the results of that test are and then make a recommendation to the President, but it will be separate and distinct from Russia's ratification of START II in my mind, and I would not have the Duma be in a position to tie the two together.

We have to look at what the threat is to our country, we have to look in terms of the countries that are most critical of the national missile defense (NMD) also have participated in the spreading of that technology to some degree, and we have to take that into account as well, but we will look at what our national security interests are, and then see whether this system as contemplated is designed to defeat a threat from a rogue nation, but I cannot tell you that now. I will be in a position this summer to make a recommendation to the President, and I certainly will communicate with all of you prior to any decision being made.

Senator INOUYE. I am encouraged by your statement, sir.

Senator STEVENS. Senator Shelby.

Senator SHELBY. Thank you. Mr. Secretary, just to follow up on what Senator Inouye was talking about and you, too, on national missile defense. We all know basically that today we have no missile defense.

Secretary COHEN. That's right.

Senator SHELBY. And so I appreciate your candor and I appreciate your work in this respect because we are all concerned about the big nations at times, but more so right now, rogue nations, people that you cannot predict, that you cannot reason with at times; is that correct?

Secretary COHEN. That's right.

DURATION OF U.S. BALKAN DEPLOYMENTS

Senator SHELBY. I want to jump over to the Balkans. General Shelton, both of you talked about this. What timeframe, Mr. Secretary, do you place on our presence in the Balkans, our military presence starting with Bosnia and Kosovo? I was just there last week, and you are absolutely right, General, about the morale of our troops, the stability they are bringing in there, but at a cost, how long will we be in Bosnia in your judgment?

BOSNIA/KOSOVO

Secretary COHEN. Senator Shelby, I do not know. I really cannot tell you. I can tell you there has been great progress. You have seen it, I have seen it. The chairman has seen it. We have seen our forces come from 20,000 in number down to roughly 4,300 or so. There has been dramatic reduction in the size of our force. We are hopeful that they can reduce in the next evaluation period, but it is going to take more time.

In Kosovo we have seen a rather significant change on the ground from last year where we were in the middle of waging an air campaign to where we are today. Again, identifying some of the flash points we have seen, but it is going to take some time I think. Anyone who tells you that they have a fixed period in mind in which they can tell you that that is when the job will be complete I think would be misleading you.

Senator SHELBY. Are we about as drawn down, about as far in Bosnia as we can at the moment?

Secretary COHEN. I think as far as the security situation permits and the chairman I think would be in a better position to give you a judgment on that, but our European commander makes an assessment in terms of what is the security environment and then tries to match our forces to that threat, and I think the numbers we have there are adequate. To go below that absent his recommendation would be a mistake, but the chairman should perhaps comment on that.

General SHELTON. Senator Shelby, I think the Secretary is right on the mark. It gets tougher and tougher to reduce as you get down to these lower numbers now. I think the last time I was there, which was about 1 month ago talking to General Adams there in Bosnia, he did not at that time see an ability to come down significantly in the next look, we look at it every 6 months. So I think we will see it get tougher and tougher until such time as the civil implementation piece kicks in and the police start to become a more effective police, and the rule of law is in effect, then those things allow you to reduce without the risk going up to the troops you are leaving behind. So we try to balance the risk with the number of troops, but I think we are reaching kind of a stable point until such time as we can get the civil implementation piece stood completely up.

THEATER WAR CAPABILITIES

Senator SHELBY. Mr. Secretary, it has been the policy of this country that we maintain a military capable of fighting and winning two major theater wars (MTW) almost simultaneously. Given

the drawdown in forces, is this policy still executable? Can we still execute this policy or does it depend upon the intensity of the conflict?

Secretary COHEN. The answer to that is yes, but as the chairman and I have pointed out, with much higher risk on the second MTW than is desirable. We could, in fact, carry out one major theater war capability and have that capability to wage it, and then on the second one the risk goes up, meaning the duration of the conflict and the amount of people, personnel who would be lost as casualties would increase, and so the risk is higher than it has been in the past on the second.

Senator SHELBY. Have you had thoughts about reviewing that policy in any way? I guess you review it at times anyway.

Secretary COHEN. Well, we always review it. We have the quadrennial defense review, the next one will be coming up in the next administration. As you know, I have been supportive of the Hart-Rudman study group and composed of a number of distinguished experts in the field. They have called into question whether we have—that should be our strategy, and I would point out it is not a strategy, it is a capability we are talking about that we feel that we still need to maintain that capability for the foreseeable future because we still have at least two major theater war potentials that we have to address; namely, the gulf region and also in the Korean peninsula.

Senator SHELBY. Thank you, Mr. Chairman.

Senator STEVENS. Senator Hollings.

Senator HOLLINGS. Thank you, Mr. Chairman. Obviously, we need more troops and we need more money to pay those troops to attract them into the military because the opportunities with the booming economy is otherwise, and right to the point, mark me down as a 5 percent value-added tax in the Finance Committee and bring in the $185 billion, and I will gladly get a hearing on it and vote for it to pay for this thing. We are not paying our way. We spent $127.4 billion more last year than we took in. There is no surplus, and even with the wonderful returns we got from income tax on April 15, we still have spent $71 billion more than we took in this year so far. The debt has increased. The public debt to the penny, tap it out on your computer, the Treasury puts it out every day to the penny.

Now, you have got the stretch of nine peacekeeping operations at the moment. There are four additional ones asked for in the emergency supplemental, and in fact there could be one more if we get a peace agreement in the Mideast. I have just come from Israel, and they are talking about some kind of personnel there on the Golan Heights.

So let us get realistic with each other. Kosovo. I am thinking today it was 25 years before Secretary McNamara finally said Vietnam was a mistake. I am wondering how long the Secretary of Defense is going to say that about Kosovo. I understand it is Madeleine's war, do not worry, I am not getting you, but do not give me that stuff, I have just gotten back, and Secretary Albright said, now wait a minute, now we will withdraw when we develop the infrastructure, the schools, the highways, the hospitals are rebuilt. We put in a court system, we have got security, we have got

industry, we have got opportunity. I think about 30 years ago when I met with Martin Agronsky in London, and he had just spent 3 weeks in Northern Ireland, and he said it would take 30 years before they get together, and 30 years later we have still got the British troops in Northern Ireland, and they have had for 30 years the infrastructure, the schools, the opportunities, the industry, the hospitals. They just do not get along.

And you folks are whistling Dixie. That thing is not going to happen. Bosnia was supposed to be 1 year, that is 6 years, and you talk like it is going to happen in your time. It is not going to happen in your time, General Shelton, I can tell you, I have been over there, and incidentally, the violence is 95 percent Albanian on Albanian. They do not get along with each other right now.

So we look now at the emergency supplemental and the chairman of the Armed Services Committee, Secretary Cohen has got an amendment that he wanted me to cosponsor it saying the United Nations, as you all have just testified, the European Union, a tremendous shortfall, they have not put what they put in there for General Reinhart or now General Ortuna. They are way behind. The jails are overflowing, so they make arrests, have to let them go and everything of that kind.

So it's not a pretty picture and there is no use to try to finesse it and kid each other, and Senator Warner says if they do not come forth we are going to cut the money and start withdrawing troops. Now, that is where we are this minute, as you are testifying. So let us have a realistic appraisal of where we are headed there because you are asking for four, perhaps five more peacekeeping. You do not have the money now because you both have testified you are stretched and we ought to quit kidding each other, and let us try to pull out of Bosnia and Kosovo and let the Europeans take it over. That is it right there. We have a peace as you all have described it right now, and there's wonderful progress, so if you have everything settled, are they going to go back at each other?

They are still up in Northern Ireland. Thank gosh we did not send Secretary Albright to Northern Ireland. I mean, we sent our good friend, Senator Mitchell, and he has done a magnificent job, and that is the kind of job that is required. Thank you, Mr. Chairman. What are you going to do about Senator Warner's amendment?

SENATOR WARNER'S AMENDMENT ON KOSOVO

Secretary COHEN. Well, I am going to obviously have to meet with Senator Warner to say that mandating a withdrawal at a fixed time based upon a perception of what the Europeans are doing is probably not the right way to proceed with this. The Europeans, I might point out, as a result of congressional pressure, as a result of what we are doing, they have, in fact, been putting more money into the civilian side. They have been responding not as much as we want yet, but I think it is important to have pressure, but I think anytime you say okay, we are pulling out and we will start withdrawing, that is not the right way to set that in legislative concrete.

I think we can keep the pressure up, we are keeping the pressure up, I would say Secretary Albright is trying to bring about

resolution of these tough issues, and they are not easy. I give her credit. I mean, she is trying her best to deal with very tough issues. You say it is not a pretty picture. It was not a pretty picture last year, it was not a pretty picture to see almost 1 million people pouring over the borders with Milosevic and his troops out there rampaging, and so I think the picture is prettier today than it was 1 year ago. How long will it be? We are not trying to kid you. It is not going to be during our time. It will not be perhaps during the time of our successor, but I think great progress is being made, and we can say we are out, let it all go back to a state of nature. Hatred is a much more intense emotion than certainly respectability and respect for others. We have given them.

We are giving them an opportunity for peace. They can choose to embrace it or they can choose to reject it, but I think our commitment has been that we recognize what the potential is for instability in that region to spill over to affect our NATO allies and us, as a result of it. We can give them an opportunity, we are giving them that. It is costing us, but the option of letting it just spread and saying we are not involved I think is not one that we could accept, either, Senator Hollings.

Senator HOLLINGS. Thank you, Mr. Chairman.

Senator STEVENS. Thank you. Senator Dorgan.

U.S. NATIONAL MISSILE DEFENSE

Senator DORGAN. Mr. Chairman, thank you very much. In response to a previous question I think by Senator Shelby who asked we do not now have a missile defense, do we? You said no we do not. It would also be true to say we have never had a missile defense, is that not the case?

Secretary COHEN. That is correct.

Senator DORGAN. If we build whatever it is we are suggesting, even those on this committee are suggesting we build, it would be true or accurate to say that we will not have a missile defense to defend against any kind of robust attack from a Russia, for example. Would that be the case?

Secretary COHEN. That is correct. Nor was it ever intended we would have that kind of system.

Senator DORGAN. I understand that. But in terms of the response to the question, do we have a missile defense? The answer is no. The answer was no 10 years ago and 20 years ago and the answer will be no with respect to robust threats from a nuclear superpower 10 years from now or 20 years from now.

Secretary COHEN. That is correct.

Senator DORGAN. Let me ask a couple of questions about this because I think one way to respond is to build and another way is through threat reduction, and you are familiar, of course, and this subcommittee certainly is familiar with the Nunn-Lugar program, which has, I think, been extraordinarily effective in threat reduction. As I understand it, we spent about $2.5 billion on the Nunn-Lugar program, and I think the dismantling of bombers, submarines, missiles, warheads in the old Soviet Union and now Russia is somewhere in the neighborhood of $30 to $40 billion. Is it your assessment that the Nunn-Lugar threat reduction program has been fairly effective and a pretty wise use of funds?

Secretary COHEN. It has been very effective. I had occasion to go to northern Russia to see the dismantlement of some of the submarines up there. The typhoon submarine, for those of you who have not seen it is about two football fields in length, and those are in the process under the START agreements of being dismantled and cut up. We have seen the deactivation of some 4,966 warheads as a result of the Nunn-Lugar Cooperative Threat Reduction Act. I could go through and give you all the numbers, but it is very impressive.

Senator DORGAN. The point is I think you have requested $460 million, and that is an important piece that we need to be attentive to because that program you say works. I believe it works, I think it is a pretty remarkable program. Let me ask with respect to the START agreements and the recent Russian action, the Russians have recently ratified the Comprehensive Nuclear Test Ban Treaty, they have ratified START II with some provisos, and we are now engaged with the Russians on the subject of modifying the Anti-Ballistic Missile (ABM) Treaty in order to accommodate the potential national missile defense program that is being discussed.

Today in The New York Times, there are a number of articles, The Washington Times, New York Times that the United Nations, Russia hardens its line on changes to missile treaty. One of the prospects is that we may find in months ahead that we are not able to negotiate agreements to modify the ABM Treaty. What is the administration willing to do and what would your recommendations be with respect to abrogating that treaty or simply saying that NMD program to defend against a limited threat ergo a rogue nation threat is more important than retaining the centerpiece of arms control, how would you proceed in that circumstance?

My guess is if you proceeded by saying the arms control regime really is not as important as the NMD program we want to build that you are going to be asking for a great deal more money because that will reignite an appetite by the Chinese and Russians and others to build offensive weapons. How are you going to reconcile that?

ARMS CONTROL, MISSILE DEFENSE AND DETERRENCE

Secretary COHEN. They are both important. What I think we have to do, and I have tried to do with the Russians, for example, is to point out that over the years that we were very critical of the Soviet Union in sponsoring and supporting terrorism and terrorist groups. When I was in Russia the last time a bomb went off, destroying an apartment building, and so terrorism had come home to Russia itself, and they were justifiably concerned about that.

I have indicated to them that because of the proliferation of missile technology they will not be immune from this threat, that what is taking place, be it in North Korea, in North Korea's own transfer of technology, what is taking place with Iran, trying to acquire long-range missile capability with the help of a number of countries that they will be just as vulnerable to such an attack as we, and therefore they should take that into account in their opposition to this NMD program. I think the President will have to make that determination. Obviously, I cannot make it.

I can make a recommendation based upon the nature of the threat which I think is real, and it is real in this sense, Senator Dorgan. We have a retaliatory capability if anyone should ever be foolhardy enough to launch a missile attack of a limited or expanded nature against the United States, they would be destroyed in the process. That ordinarily should be a sufficient deterrent for the North Koreans, Iran, Iraq or Libya or any other country that would seek to acquire this capability. But what we never want to be subject to is what I would say would be a nuclear blackmail situation where a Saddam Hussein occupies Kuwait or possibly Saudi Arabia or there is some other type of aggressive action, and you then say, well, we are going to put half a million troops in Kuwait and Saudi Arabia to drive Saddam out and he says, wait a minute, if you seek to put troops in this region, you run the risk of me launching an attack upon New York, Washington or some of your major cities. That might force a change in our calculation as to whether or not we are prepared to wage a conventional campaign against such a dictator, and so it could change in fact the way in which we conduct conventional operations.

We do not want to be in that position. We want to be able to say to a Saddam or to an Iran or to a Libya or whomever that you are not going to put us in that position, that we are going to carry out our international responsibilities, protect our national security interests and your possession of 5 or 10 or 20 or whatever the number of missiles is not going to deter us. That I think is the principal benefit of having this capability not against Russia, not against a superpower, but against those nations who might otherwise try to impede us from carrying out the protection of our national security interests.

Senator STEVENS. Senator Cochran.

Senator COCHRAN. Thank you, Mr. Chairman. I have a follow-up on the question about the national missile defense and what your intentions are with respect to recommending going forward this summer.

In the budget request you have included $102 million for national missile defense military construction. Most of this would go toward the construction of the Shemya radar. I assume you feel the testing program has been successful enough up to this point that it justifies the budget request for these military construction dollars.

Do you intend to go forward with the construction of the radar site without regard to the consequences of this last remaining test on the national missile defense system that is scheduled for a couple of months from now?

PREPARING FOR NMD DEPLOYMENT

Secretary COHEN. The answer to that would be no. What I will do is I have included the money in the budget because if I did not include the money in the budget, it would indicate that I do not have confidence in the system, that this is not a real program.

My expectation would be to have the test completed and make a recommendation to the President either to go forward or to not go forward, depending upon what the results of that test would be, to then have the President in a position to see whether we have

been successful with the Russians in agreeing to a modification of the ABM Treaty.

Then if they have indicated that they are not and our allies are adamantly opposed to it, then the President will have to make a determination as to whether he wants to give notice at that point and move forward, and so I have tried to work from the 2005 timeframe back to the present, and that 2005 period has really been dictated by the threat, and so if there is a delay beyond this year as far as a decision being made, that will push that timeframe back, but I wanted to include the money so that it would be real to you and to the other members that this is a serious proposal, this is not simply words. We have money in the budget for it in the event that the four tests are met in the judgment of the President.

Senator COCHRAN. You were right. I did have a chance to visit with some Russian Duma members and the Federation Council members as well on the trip to Moscow with Senators Levin and Dodd accompanying me. One thing became very clear to me during that series of meetings that we had not only with the members of the Duma but also with those who have high positions of responsibility in the government of Russia, and that is that somebody has forgotten to tell them that the cold war is over.

If you look at the language in the Duma ratification legislation where they ratify START II—they did this in the Duma the day before we arrived—the Federation Council took the action of approving the Duma legislation while we were there. But the overtones in the language are fairly ominous, suggesting that if we insist on amending the ABM Treaty, then they will not consider themselves bound by the provisions of START II. And further, if we do not approve the demarcation agreements that have already been negotiated by the administration, if we, the Senate, do not ratify them, then they will withdraw from all arms control agreements that they have entered into with the United States.

Those are threatening suggestions. Those are threats, and it hearkens back to the days of saber rattling and hitting your shoe on the podium and the kind of behavior that we saw from some Russian leaders that have no place now in this supposedly new relationship between our two countries.

We are working to provide funds for building down and destroying weapons systems that have been aimed at us and that are fairly unsafe because of security and other reasons. We have been working together on a number of programs.

I pointed out an exchange program I had helped start 15 years ago that is administered by the Department of Agriculture to bridge gaps and create better understanding in the food production and marketing industries. Over 500 students have come from Russia to the United States under that program to date. It is very successful.

People talked about how well it is going and what this has meant in terms of new trade opportunities and economic progress in Russia. It just seems to me that somebody is not getting the word that this is a new day. They talk about a new Russia, but we need to see it in terms of practice with these agreements on arms control, and mutual security interests.

To me it sounds like we are entering a period of brinksmanship, but I am glad to hear your comments and your suggestion that we cannot accept those provisions, that they are unacceptable to us, that we have to proceed to do what is in our own national security interest. And Russia has to understand that we are not trying to threaten them with these missile defense capabilities, they are not aimed at Russia, they are not designed to defeat a Russian military attack by intercontinental ballistic missiles against us. They are designed to protect ourselves and our citizens against a rogue nation attack, a limited missile attack, a few missiles that might be fired from North Korea or from Iran or some other country.

We are not in the business of escalating tensions between the United States and Russia. That is not our attitude, and we say that but nobody seems to hear it or understand it. I hope maybe that what we are seeing over there is just politics for the moment, and that this was done to assuage some concerns of some of the more militaristic cold warriors who are sorry that the cold war is over. And maybe as time goes on the rhetoric will cool down and there will be mutual trust and understanding, which is what we are hoping for, which is what I hope for, but I am not in favor of knuckling under and throwing up our hands in holy horror over the actions that have been taken by the Russian Duma.

I think we have got to proceed on course. I am glad you've got this money in for construction. I hope we will approve it. I am glad to hear your comments about the success that you expect from the program as it proceeds because national missile defense is something we need to deploy as soon as possible. The 2005 date is important, and I think you can count on us providing the funds and the support to accomplish that objective.

COMMUNICATING WITH RUSSIAN LEADERS

Secretary COHEN. Mr. Chairman, can I just respond quickly? Based upon what you have said, I think it is all the more important that members of this committee, the Armed Services Committee and others continue to have contact with the Russians so that you can at least make very clear to them that these types of bombastic statements or intimidation or attempts to intimidate the United States into a position that is unacceptable are not going to work, and to then lay out where we can have mutual agreement.

Now, there is something of a split in this in terms of what they say and what they do. On the one hand, you have some of this language that has been used which is very aggressive and perhaps a throwback to a different era.

On the other hand, you have Russian soldiers serving side by side with us in Bosnia and Kosovo. You have the new President who is now talking about reviving the PJC, the Permanent Joint Council. It works with NATO in terms of resolving some of the issues, and they have the Cooperative Threat Reduction Act, which they want very much, as do we. So there are levels of cooperation that are distinct from some of the rhetoric that you hear from time to time.

I will tell you, based on my last two appearances at the Wehrkunde conference, the Russians have sent delegates who have used language reminiscent of the cold war, and they have been re-

soundingly rejected by everyone in attendance, all of the European nations, the Ukrainians, the Poles and others soundly rejected, so they have isolated themselves with that kind of rhetoric.

So I think it is important that we meet that and we talk to them and that we deal very straightforward with them and lay out what our security concerns are and how we intend to meet it. We do not have a hidden agenda. This is what we intend to do and then see if we cannot reconcile what their interests are and ours but not yield to any kind of chest thumping or chauvinistic types of displays on the part of any of the members, the Duma members or others.

Senator STEVENS. Mr. Secretary, the majority leaders invited some of us to a meeting with the Russian foreign minister this afternoon. I hope that will be a direct conversation, as you have indicated. Senator Lautenberg.

Senator LAUTENBERG. Thank you, Mr. Chairman.

Secretary COHEN. Who, by the way, is going to get a briefing on the NMD program while he is here in Washington.

Senator STEVENS. Well, I have got time coming.

Senator LAUTENBERG. Do you want to finish this colloquy now?

Senator STEVENS. Thank you. I do not know why we do not go back to President Reagan's concept and share it with them. I do not know why we would not share NMD with them. I would love to see us have a joint session with the Duma to say let us build it together. They have problems from rogue nations just as we do. If you live where the two of us live in Hawaii and Alaska, you would be very interested in this in view of what is going on over there along the Asian coast, particularly in North Korea.

Senator HOLLINGS. Nobody is going to attack Hawaii or Alaska, for God sakes.

Senator STEVENS. Bill, tell him where World War II started, will you, please?

Senator Lautenberg.

Senator LAUTENBERG. Thank you. One of the things I noted, General Shelton, in your comments was the fact that generally recruiting and retention is pretty good. There are a few weak spots. It looks to me, and correct me if I am wrong here, that the Reserve forces are being called on for ever longer periods of service, time away from home, jobs, et cetera, and I worry about a change in attitude about joining the Reserves.

I think the common concept is that you are away for training periods and away for short spurts when necessary in emergency situations. Has the deployment of the Reserves become a different kind of a policy issue in recent years and what do you find attitudinally of people who are asked to join the Reserves? What do we have to do to maintain their morale and retain their service?

NATIONAL GUARD AND RESERVES

Secretary COHEN. Well, I would yield to the Chairman in terms of his perceptions. I will tell you, Senator Lautenberg, what we have tried to do is say that we have a total force. For many years both the Guard and the Reserve felt that they were treated as poor cousins for the active forces, and we changed that.

We have said we have one force, and the Guard and Reserve today are performing missions that otherwise would have been performed by the active forces. The impact I think overall has been quite positive with also addressing the issue of employers. We have had to go to employers and also have laws on the books protecting the jobs of those who are called upon to serve for limited periods of time. We have tried to balance the requirement that we have now for this total force and not overutilize the Reserve, but it has changed during the past several years. I will let the Chairman talk about what the impact has been in terms of whether we are having recruiting problems in the Reserves. I think it has had some marginal impact, but not a fundamental one.

General SHELTON. Senator Lautenberg, first of all, let me say that the Reserves are doing a fantastic job for us, as I am sure you see when you go out to visit with our troops, both the National Guard and the Reserves.

As a matter of fact, in Bosnia today we have the 49th National Guard Division out of Texas that is actually leading that force. General Halverson is in charge and again performing outstandingly.

However, in a lot of cases, as a result of our downsizing, we placed a lot of our capability in the Reserve. For example, if you look at the civil affairs, which is being used heavily today, 24 out of 25 battalions are in the Reserve, and so when you get into long-term requirements for civil affairs, which you have both in Bosnia and Kosovo as well as many other regions of the world, you have to go to the Reserves in order to fulfill it.

We have looked at that. We are bringing more of that structure into the active component right now, but what we are seeing as a result of some heavy use in certain areas are some recruiting and retention challenges that we had not seen before in our Reserve components.

The Chiefs of Staff of the Army and the Air Force, both of whom are affected by this, to a lesser extent the Navy and Marine Corps, are looking at what the implications of this are and what the causative factors are, as to why they are and how they might have to change in order to increase their recruiting and their retention levels in both of those forces.

When I have talked to the Chiefs of the Services, they have expressed some concern, but not an alarming concern at this point, but they are interested in finding out what they have to do in order to try to turn this around. So we are looking at it because it is obviously going to be a challenge in the future if we maintain the same structure we have now.

Senator LAUTENBERG. The issue has been written about in very prominent places, national newspapers, particularly in Texas, I think, where they are saying good-bye to their families and going to be away for a long time, and I thought, well, that is really tough. But I hope we can continue to maintain the excellence that we have in our Reserve forces which I have seen in lots of places, particularly coming out of McGuire where they are carrying material and troops to far away places. As we get further extended, the question that is always raised is can we be the policemen of the world. I was very pleased, Mr. Secretary and General Shelton when

you talked about the necessity for funding additional resources for budget function 150 because to me very often the diplomatic thrust can often thwart having to make a military thrust.

But when we talk about being in distant places for long periods of time, one need only look back at a time when three or four of us here wore uniforms in World War II. We are a very young group considering that distance in time, but the fact is that there are troops still in place where we fought, and I think it has worked out to the benefit of America and the world.

So I think it is an illusion that we cannot be in places for a long time. We are in places, and I think we are going to continue to be, and again seeing the Reserve forces in there gives me some reassurance. However, when you say that they are there and the morale seems to be good, I think you will have to do some analysis to see what the long-term effect will be.

Senator STEVENS. Thank you. Senator Domenici.

Senator DOMENICI. Thank you very much, Mr. Chairman. Senator Hollings, I have so little time, I do not want to get into an argument as to whether we have a surplus or not, if that is all right with you.

Senator STEVENS. This is not the proper forum for that.

Senator DOMENICI. He raised the question. I just wanted to tell everyone who is listening, we have a very big surplus. In fact, we have a big enough surplus to put $171 billion back into Social Security. He is using different numbers.

Senator STEVENS. This is not a budget hearing.

Senator DOMENICI. In any event, I wanted to ask the Secretary three or four questions. I clearly did not come to discuss the surplus.

First, in your statements, Mr. Secretary, you indicate that the highest priority is to take care of the men and women in the service, and then you proceed to the military needs in your second and third paragraph. Among those issues that are obviously very, very difficult for you and the Department is the health programs that we need, not only for our active military but for those who are retired and who lay claim to the proposition that they are not being given what they had been promised.

I note that both of you, including the chief, indicate this is a serious problem, the health situation. Are you preparing a precise recommendation to address this, and if so, when will that be ready?

MILITARY RETIREES HEALTH CARE

Secretary COHEN. Well, Senator Domenici, the Chairman and I are trying to work our way through this right now to have a proposal to this Congress in terms of what needs to be done. We have looked at for retirees, for example, of having a pharmacy benefit and we have tried to factor that out in terms of what the cost would be over a 5-year period. I believe it is—we have looked at what the cost would be for fiscal year 2001 and then we have tried to factor that out over the FYDP as well. It is fairly expensive.

We are also examining proposals that would see whether or not the Federal Employee Health Benefit Plan should be made available to retirees. That is a very big cost factor involved. We hope

to be able to get something to you during the course of the next several months as we factor and analyze what the cost would be.

Senator DOMENICI. Mr. Chairman, I asked the question because it is obvious that Senators are anxious to do something with reference to the military health care system. We have proposals around, but we have not heard from the Defense Department yet. I think it's imperative that you give us your proposals quickly because I do not know how long it will be before somebody offers a plan. It is going to be very difficult not to vote for a health plan reform, so I did not raise the question just because it is one of the issues. It is one of the most important ones in terms of what we are going to use our money for this year and in the next 5 or 6 years.

MAINTAINING U.S. NUCLEAR DETERRENT

My second question has to do with the nuclear deterrent of the United States. The Defense Department, through three services, is in charge of the nuclear weapons after they leave the jurisdiction of the Department of Energy at the manufacturing centers and national laboratories.

I have some grave concern, and I just lay it on you today because I do not quite have the answer. It seems to me that the Defense Department makes a big strong case for things needed for defense, but nobody is making the strong case for what is needed for the nuclear deterrent that is our nuclear weapons program, something in your vital interests. Take for example the allocation in the United States House for the Energy Subcommittee, which is a misnomer. It is energy, but it is about half defense, and about half of that is for nuclear weapons and stockpile stewardship and programs with Russia to get rid of plutonium and highly enriched uranium. These are pretty big ticket items.

If you look at what the House Energy Subcommittee on Appropriations plans to spend, it was as if this was not part of the defense program of the country. The rest of defense is going up, yet they are dramatically cutting the programs which have to do with maintenance of our stockpile.

Now, frankly, the Department of Energy is supposed to be in charge of this. They have a general named Gioconda who is the Energy liaison with your Department.

Now, Mr. Secretary, I would ask if you would, after this session, go back and take a look as to who has oversight in your Department. It used to be Dr. Hamre, and I do not know who it is now. I want to let them know that I think we are in a very serious bind. We have found that our production complexes are not in order. After the Senate vote on the test ban treaty, DOE went back and looked at five or six communities wherein the nuclear weapons pieces are manufactured, called the production complex.

Everybody should know we do not make new bombs, we have not made any new bombs for a long time. Zero. We are setting about a new strategy to maintain what we have through science-based stockpile stewardship. This is a very complicated, and very scientific approach to maintenance, and with it comes a lot of needs.

Yet, we do not see anything from the Defense Department that says maybe we ought to back some increases for our stockpile stew-

ardship program. It is as if it is sort of an orphan in the Department of Energy. But I tell you, this is a very important program. It is our so-called nuclear deterrent capacity. I for one want to tell you that is why I came today, because I do not get a chance to say to the defense establishment—it is always DOE—that we need some very strong support from you in analyzing the defense needs of the DOE especially as it pertains to manufacturing new pits. We are way behind schedule again and I am trying to find out why.

Do you know one of the principal components to a nuclear weapon is a pit? And as of this moment Pakistan can manufacture pits and the United States of America cannot. None. We do not have any that we have manufactured in recent times. We are supposed to have the first one ready in 2001, and then 10 more as we continue to manufacture.

It looks like the Department of Energy has put the money someplace else and we are not going to get any pit production. I have to ask defense-minded Senators to be concerned about this because it is just not an Energy Department issue. It is a defense issue of high magnitude. If you will look at that and tell me who I might meet within the Department of Defense, so I would like to ask them if they know that we are not going to do the pits on time. Can you tell me who that would be?

Secretary COHEN. Yes. Two people you would want to talk to would be Jack Gansler and Rudy de Leon, the new Deputy Secretary of Defense, the two cochair the Nuclear Weapons Council.

Senator STEVENS. Senator Durbin.

Senator DURBIN. Thank you very much, Mr. Chairman. Secretary Cohen, General Shelton and to all who have gathered with you today, civilian and active military component, our gratitude for your service to our country.

Mr. Secretary, I will just make a note, and I can follow up with you a little later. I am waiting on a decision by the Army War Decorations Board in a case that I wrote to you about several years ago concerning a Sergeant Smith, and I would like to follow up with you afterwards and see if we might be able to expedite that for some personal and family reasons related to his family.

I would like to spend my time questioning on this national missile defense system because if the Congressional Budget Office estimates are accurate or nearly accurate, we have seen a dramatic increase in the estimated cost of this system. At the same time, we at best have mixed results from the tests which have occurred.

We have had testimony as recently as a few weeks ago from the Union of Concerned Scientists about the countermeasure question. It is their position that if any country can develop a long-range missile capacity, they can easily develop countermeasure techniques that would defeat some of the premises of our national missile defense system.

I know as I read your testimony and listen to it that you are both in a very delicate and difficult position. You have to allocate scarce dollars for our national defense in a way that makes sense.

I read the Secretary's comments about Kosovo and what will happen if we do not meet our congressional responsibility to provide you the resources you need. What a dramatic impact that will have on plans that you have made to defend our Nation, and I read

also General Shelton's testimony where he said, and I couldn't agree more, that our highest priority is our people and what we need to do to retain them and recruit them, investments that have to be made.

I guess my first question to both of you is, you have to make hard choices based on limited resources. If we know this national missile defense system estimated cost is now growing at such a dramatic pace that it is going to call into question other national defense priorities, is cost a factor that has to be taken into consideration about the viability of this system?

COST OF NATIONAL MISSILE DEFENSE

Secretary COHEN. Senator Durbin, as a matter of fact, that is one of the four factors the President will have to take into account. Is there a threat? You will have to make a determination on your own as to whether you think there is a viable threat out there. I happen to believe that given the spread of technology that if it is not here today that it will be here tomorrow. Then you have to decide in your own mind whether or not we have a deterrent capability that will discourage anyone from ever launching such an attack. But second, as to whether the technology is there, that is the purpose of having the test we have had to date and the one we will have this June or early July. And so we will make an assessment.

The third factor is cost. And now the one that appeared in today's news as far as CBO is concerned, they have included some 250 missiles, two sites and SBRS-High. Under the Pentagon's estimate we only factored in 100 missiles for the first in one site and no satellite, so to the extent that you add the second site, you add SBRS-High that is going to obviously increase the cost.

You will then have to make a determination as to whether or not this is a cost worth bearing. You could look at it and say, well, what happens if you had an attack upon a city of the United States; what would be the cost involved there? And that is a debate that you will be involved with as well as other members of this committee. We spend a good deal of money for F–22s, Joint Strike Fighters, F–18 EF, Commanche, Crusader, et cetera, because we believe it is in our national security interest to do so. I personally believe that there is a threat that needs to be addressed, but the cost obviously will be a factor that we will have to take into account, and you as well.

Senator DURBIN. Well, let me ask you about the testing element here. Do you believe that with three tests under your belt that you are prepared to answer that one question as to whether the testing justifies the technological feasibility of a national missile defense system to the point that we should go forward?

TESTING A MISSILE DEFENSE SYSTEM

Secretary COHEN. Under the program as it is structured, if there are two successful tests, as far as the interceptor is concerned, that that would be sufficient for me to make a recommendation to the President to go forward. I have tried to follow this very carefully, and I believe the so-called failure of last test was not one of science, but one of mechanics. And we will see whether or not that can be in fact corrected. But if we have two successful interceptor

tests, that would put me in a position of making a recommendation to the President as to whether I am satisfied that not only do we have the 5 tests, there will be a total of 12 or 13 before there is any deployment of a system as such. But I think that I would be in a position to make a recommendation to the President based upon the next test, yes.

Senator DURBIN. Thank you.

Senator STEVENS. Following up on what Senator Domenici said, and Senator Cochran, I am disturbed slightly about the information that came to us concerning the Russians still manufacturing warheads and manufacturing nuclear ICBMs. And we are trying through the Stewardship Stockpile Program to maintain ones that are getting very old, and I am very worried about this hiatus that has developed in the Department of Energy as to whether or not that is jeopardizing our national security.

I really believe that if that is not straightened out, I am going to demand a hearing and really a hearing in public, to tell the public how bad off we really are vis-a-vis the nuclear weapons of the world, and how much we have been delayed in trying to perfect the systems that will maintain the Stewardship Program as it must be maintained. I will just tell you, I think that is one of the worst things I have heard of in recent years.

Let me ask you about this, General Shelton. The mobility requirement studies have been delayed and I am sure you know that Senator Inouye and I have been talking to everybody about C–17s. We support the acquisition of 60 additional aircraft under the multiyear procurement authority that Congress passed last year. We continue to ask, however, about rewinging the C–5 and postponing the C–17. Will you give us your judgment what should we do with regard to the C–17 and C–5?

General SHELTON. Mr. Chairman, we are in the process right now of taking a look at the long-term cost of the C–5 and doing an analysis of alternatives in terms of whether or not we should continue to pour money into an element of the C–5 fleet, the C–5 Alpha, the older version of the C–5, or whether or not it would be more cost-effective over the long term to start converting, phasing them out and replacing them with C–17s. That is an ongoing study right now. There is not an easy answer to it, but we think——

Senator STEVENS. Should we buy the new ones?

General SHELTON. We have some tremendous challenges with the C–5 Alpha right now. When we complete this analysis of alternatives, we will be in a position, I think, to recommend to the Secretary, and to be able to tell you, whether or not we think it would be best to make a decision to stop pouring money into the C–5 Alpha and come to you and say, we need to increase the production on the C–17s or buy more, or whether or not we should go ahead and fix the C–5 Alphas right now. The intuition says that probably C–17s would be the right answer, but I would defer on making a recommendation until we finish the analysis.

Senator STEVENS. Senator Lautenberg pointed out the four of us were World War II types and we remember some of those commitments that were made to people back there who made a career out of the military and are now retirees. And Senator Domenici has al-

ready mentioned the problem of the defense medical benefits. We already have legislation, Senator, that has been introduced now to greatly expand that medical benefit.

Currently the program costs us about $11 billion. The bill that was introduced as I understand it costs out to $9 billion more. We do not have guidance yet from the Department as to what you want us to do. Now, all of us are committed to doing something, but the question is what should we do now? The budget has a very small item for TRICARE, roughly $100 million. That is like dotting the i of TRICARE; it is not enough. Now we all know that, but are you going to give us a recommendation? I think we should. I do not want this to turn into a partisan battle here, who is going to put up the most money, for particularly the retiree benefits, but we have got to do something this year. I hope you agree. What do you want us to do?

EXPANDING MILITARY HEALTH BENEFITS

Secretary COHEN. I want you to wait just a little bit longer until the Chairman and I work this out. Mr. Chairman, you are right, the money in the budget we include was really to try to reduce some of the cost for TRICARE prime on the copayments TRICARE remote, to eliminate those copayments, and that is what the money was in this budget for, to try to reduce some of the burdens that are currently in the current system.

But the Chairman and I are looking at the pharmacy benefit and that is something that we think we can recommend fairly quickly. But we are still trying to work out what the price tag is going to be if we go to alternatives that we have yet to work out. We are looking at the possibility of using medical treatment facilities, looking at the Veterans Administration (VA) as one aspect of it. That is something we just have not worked our way through, but I would say in the next few weeks we should have some kind of recommendation coming to you.

Senator STEVENS. We will have to mark up sometime next month, I think. I hope we will have a recommendation by then. I am sure that Chairman Young faces the same problem we do over here on what to do. We want to do what is right, but we will have to take money out of a lot of other places to get $9 billion. We have about a $4 billion increase in the overall budget, and that will not even start funding that one, and the other deferred maintenance and other things. We will now go back. Senator Inouye, you have another question?

Senator, can we agree to cut this down to about 3 minutes each?

IMPORTANCE OF PACIFIC ASIAN THEATER

Senator INOUYE. Mr. Secretary, in your testimony and in our questioning, East Timor was mentioned once, the Korean Peninsula was mentioned twice, once by my chairman and in your response. The rest of the time we spent on Bosnia, Kosovo, the European security. Is the Defense Department less concerned about the Pacific-Asian theater than Europe?

Secretary COHEN. Not at all, Senator Inouye. As a matter of fact, I spend a good deal of my time traveling to the Asian-Pacific region. Most recently having gone, not only to Hong Kong, Vietnam,

Japan, and South Korea, but I do this quite frequently. It is because I believe that the Asian-Pacific region is crucial to our national security interest.

Indonesia. We have not talked about Indonesia today. That remains a great challenge to the security of all of Asia, not just Southeast Asian countries, but all of the countries throughout the Asian-Pacific region. A country of 210 million people, and should there be instability that really takes root and starts to spread in Indonesia, that could flood not only the geography but also the economies of all the other countries in the region, and so our interest there is of paramount importance.

Singapore, we have not talked about Singapore, and as you know, they are building a pier that will accommodate our aircraft carriers, and they want them to come.

You also know that we have a visiting forces agreement that was ratified by the Philippine Senate. And so we are actively engaged with the Philippines again, and not to mention Thailand and beyond. So no, the Asian-Pacific region is very important.

We have not even talked, only incidentally, about Australia, which also is crucial to our security interest throughout the Asia-Pacific region. I think that we have to put additional focus upon it. The economy appears to be coming back through that region, which is good news, but the security interest—and we have not talked about Taiwan, either, in terms of China and what China's relationship is going to be in the future.

CHINA-TAIWAN

Senator INOUYE. We are interested in that.

Secretary COHEN. We all should be interested in that. I will tell you one of the reasons I made the trip to the Asia-Pacific region last time was to send a message. Senator Hollings and I made this trip, I think in 1996, the last time we went, and there was also great controversy in terms of China versus Taiwan at that time.

What I have said to all of the Chinese that I come into contact with who visit or whom I visit in the region, when they come here to visit with me—and I had a meeting just last week with the equivalent of the Chief of Naval Operations (CNO) of the Navy—was that we do recognize the One China policy; we also have our obligation under the Taiwan Relations Act, that we expect that there will be reconciliation through peaceful means, and that is the only way that can come about, that they should not seek in any way to take a military action or threaten Taiwan, taking military action. I have advocated that the Taiwanese reduce their rhetoric about independence and a movement toward independence which we do not support, and that everybody back away from this abyss that started to develop. Hopefully that calming influence of the elections and what has been the words that have been emanating from the new president-elect in Taiwan will help, will cause everybody to back away from the rhetoric we have seen in the past, and not in any way encourage the Chinese to think they can take military action. So it is very important. I think it would have grave consequences to all concerned, should China ever seek to achieve reconciliation with Taiwan through the use of force—economic, dip-

lomatic, and potentially even military. That is the message we have sent, and hopefully that will be persuasive.

Senator STEVENS. Senator Hollings.

Senator HOLLINGS. Well, I like the Secretary's answer. That was a question I had. Let us be careful about grave consequences. I think we learned something in Korea and Vietnam, and I do not think we are ready to take on a billion three hundred million with nuclear power. And that is enough said. Thank you, Mr. Chairman.

Senator STEVENS. Senator Cochran.

SHIP CONSTRUCTION

Senator COCHRAN. Mr. Chairman, I mentioned in my opening statement my concern that stretching the construction schedule for ships is dangerously imperiling our ability to maintain an industrial base and to do the things that are necessary to maintain the goal of a 300-ship Navy, and also meet the commitments we have already made in appropriations bills that this committee has recommended and the Congress has approved and the President signed, one of which authorized an incremental basis for providing construction funds for an LHD–8. We had $45 million in the 1999 bill, $375 million in last year's bill. In February, the Navy suggested that you release the entire $400 million to support this ship construction program. To my knowledge you have not done that yet. Why not?

BASE REALIGNMENT AND CLOSURE (BRAC) SAVINGS AND LHD–8

Secretary COHEN. Senator Cochran, let me try to answer two questions that you raised during your opening statement. First, on the BRAC, we included the funding for two more rounds. You asked whether it is realistic or not. I would hope that this Congress would act on that in order to achieve the savings, so that the money saved in future years would help pay for ships like LHD–8.

I believe you had the Secretary of the Navy testify before the committee. He pointed out we have roughly, we are funding eight ships a year. We need to fund 8.6 ships per year in order to sustain that 300-ship Navy. That is not going to come about unless we have either an increase in the top line or a savings from base closures that will in fact be able to be invested, either in personnel or shipbuilding.

With respect to LHD–8, my understanding is that last year you included some $380 million toward the LHD–8, and to accelerate the ship to fiscal year 2001 you wanted us to put money in that. The Navy, I am told, indicated that it would have to come up with $1.2 billion, that they were unable to do that. What we are doing now is now going back and looking at that $400 million you had mentioned to see what kind of long lead that we could invest in in working with the Navy to make sure that the LHD–8 comes on line by fiscal year 2005.

Senator COCHRAN. The DDG–51 program is also misleading in terms of the advertising used, that you got $60 billion in procurement money; therefore we have met our goal. Well that was the goal in fiscal year 1998, and what we are seeing now, is stretching the construction schedules out in the out-years so that instead of

building, for example, six ships over 2 years, you are now planning to build seven ships over 4 years. This is going to put the shipyards in a very difficult position, and I know you are experienced personally with these issues, and you have to be sympathetic with that problem. What are you going to do about it?

INCREASING PROCUREMENT SPENDING

Secretary COHEN. Well, I am sympathetic to it. When I took over this position, the procurement levels were at $43 billion. And now, 3½ years later, they are at $60 billion. And they are scheduled to climb to $70 billion under our projections. In my judgment, that is still not going to be enough, Senator Cochran, and so we have got to find ways in which we can either increase the top line to accommodate our shipbuilding needs, because it will not achieve our goals, or we are going to have to have the savings that I talked about from more closure and more savings. But there is no easy way around this.

That is one of the reasons I say that the BRAC process, tough as it is, will produce the kind of savings that we need to invest in our shipbuilding and our other programs. But I do not have a good answer for you, other than we need to do more on the shipbuilding account if we are going to maintain that 300-ship Navy.

Senator COCHRAN. Thank you, Mr. Chairman.

Senator STEVENS. Senator Domenici.

Senator DOMENICI. Mr. Chairman, might I first comment on your observations regarding nuclear weapons and the Soviet Union. As a matter of fact, Mr. Chairman, they have a completely different nuclear weapon than we do, which requires that they produce them regularly because after about 10 years they are ineffective. So the Russians produce a very simplistic nuclear weapon compared to ours. Ours is much more complicated. We try to preserve ours and make their utility spread over a number of decades. Right now our effort in the United States is to scientifically analyze everything about a nuclear weapon and do replacements and repairs so we preserve it. The Russians replace theirs every decade or so. They get rid of them and they build new ones. So they have manufacturing going on to this day to build new nuclear weapons to take the place of their old ones. We do it a different way, and that is exactly what frightens me. Our way is very scientific, and if people do not diligently stay on top of it, our deterrent capability could be weakened. Also, this process is our only way of knowing that our weapons are viable and functioning; we do not test anymore.

AIR BORNE LASER

My last question has to do with another phase of missile defense, that is, the ABL, the air borne laser. The air borne laser is the only missile defense system contemplated that achieves what we call boost-phase intercept, and the testing has been going along very, very successfully. It looks like it is moving to enter the weapons inventory of the United States in the not-too-distant future.

I am very concerned because this year, when we had some very important tests to complete, their appropriations level has been decreased by $92 million. I do not think we are going to end up doing that. We have not done it the last two times you have cut it but

I just want to know why it is continuously reduced so much when it has been praised by so many as being an essential scientific breakthrough for us.

Secretary COHEN. Well, this is a recommendation that the Air Force made. The Air Force made a determination, looking at its capabilities and the demands that the Air Force had on other parts of the budget, that they could afford to not fund that $92 million account, that it would be delayed several years as a result of that.

I know that it is a question of affordability for the Air Force. They made the judgment and we supported that. I am also aware that you have had testimony from General Kadish that by putting funding in, you could in fact put that on a more accelerated deployment schedule, and that is something the committee will have to decide.

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

Senator STEVENS. Mr. Secretary, General, we are pleased to have you with us. I was just talking to our chief of staff, Mr. Cortese, about the level of our procurement funding. You mentioned it, Mr. Secretary, it is very low. When you consider the amount of money we are putting into quality of life, retirement benefits and pay for our volunteer service.

One of the things I have been thinking about, and so I thought I would just think out loud, and see what your reaction is. Why do we not have a recruitment program for peacekeepers for a shorter period of time and bring them in to handle the problems such as Bosnia and other places, once, an interim peace has been established?

Yesterday we were told during the period of the whole cold war, we deployed forces away from their permanent assignment. Many were permanently assigned in Europe, but only 10 times. Since the Wall has come down, it is almost 40 times that we have deployed personnel away from their permanent duty assignment, and often for 3, 4 and 5 years, such as we have seen in the Persian Gulf, Bosnia, Kosovo, and so many places now. But it does seem that part of the strain that is being put upon the war fighters is that they are being made into peacekeepers. And I wonder, have you given any thought, Mr. Secretary and Mr. Chairman, to a concept of shorter-term, voluntary enlistment to be a peacekeeper? Is that a viable concept?

DEDICATED PEACEKEEPERS FORCES

Secretary COHEN. Mr. Chairman, let me just give you some off the top of my head reactions to that proposal. The Hart-Rudman study group, in fact, recently made a recommendation, phase two of a three-phase study, and one of the recommendations included something along these lines, that perhaps we ought to segment—I would hesitate to use the word "balkanize"—our forces in conjunction with this, but to segment the capabilities so that you would have specialized forces for different facets of a military operation.

The problem I have with this concept is, and I will go back, when I was serving on the other side of this table, in creating the Special Forces Command, you may recall what the reaction was at that time. It was strongly opposed by the Pentagon at that time, that

we should set up a Special Forces Command and create a SOLIC—a Special Operations Low Intensity Civilian department as such, with leadership in the Pentagon.

I believed at that time that that was essential and we have seen the validity of that concept prove itself out. I would hesitate, the Chairman is in a much better position to comment on this, but we expect our forces to have a full mission capability. They can go all the way from humanitarian types of missions, of unloading C–17s and delivering supplies, to people who are either starving to death or flood victims, all the way up to peacekeeping, to waging war against Milosevic and Saddam Hussein. And I think it would be very difficult to say, we want you and we are going to train you, but only for a peacekeeping mission, which by the way can escalate very quickly to a full wartime mission if they come under attack. So the notion that you could just train people to be a peacekeeper, I think, is quite different than saying you are going to have a capability of responding as a military man or woman on the front lines when the contingency evolves. But I would defer to the Chairman to give you a much more professional judgment on that.

General SHELTON. Mr. Chairman, I would second what Secretary Cohen said. I am very wary of proposals that would advocate specializing our force. I think that we have demonstrated with the force that we have today, that we have the flexibility to use that force in a full spectrum from peacekeeping to war fighting. And I guess the best example I could give you of why I think that is important, we were going into Haiti in 1994 and we thought we would face 7,000 armed personnel plus the remaining police force that was there. We were invading basically by air and by sea.

That all changed in a matter of hours, and 8 hours later, that same force that had war paint on is suddenly going in as a peacekeeping force. And they did a magnificent job because of the quality of force we have got today and being able to have that kind of flexibility—young men and women that could understand what the differences were and could go in and do great as a peacekeeper. But even as they did their peacekeeping job, if you recall, we had a contact up in the Cape Haitien area in which our young marines on patrol were taken under fire. And when the results were over, we had 10 Haitian military that were dead, and we had zero marines that were wounded. And so it had changed instantaneously.

I think that is the thing that makes us a pre-eminent war fighting power today, we have that kind of flexibility, that kind of force. I think that if we have got the group that the Secretary referred to, the National Security Study Group (NSSG) also talked about potentially a constabulary force. And that is very similar I think to what you are talking about as a type of force that would be trained on the lower end of the spectrum, and would only deal with constabulary-type duties. We have got a couple of historical examples, I think, that showed we ought not to mix that with our war fighting forces or with our armed forces.

If we look back in the fifties when the Army had basically become somewhat of a constabulary army and then suddenly got called on to go into Korea, we found that we were not very well prepared to do that. We had Task Force Smith that responded, and we all know the results that that bore out.

Of course, we also had an occupation army that was doing constabulary type duty both in Germany as well as in Japan, and we found out that we did not have the time with that type of force to train them and keep them prepared for war fighting. So while the idea has merit, I think, and it is something that should be examined, I would not—I do not think that it should be part of our active force, and I do not say that out of parochialism or out of resistance to change. I think that we look at the emotional and physical requirements for combat and a force that can very quickly find themselves confronted with that, we need to keep these two separated.

Senator STEVENS. Well, gentlemen, I spent the last week during the recess reading Michael Pillsbury's book on China. I think you ought to send it to everyone, by the way, Mr. Secretary. It is an Armed Forces Institute book, but everyone in the Congress ought to have an opportunity to read it.

But clearly at the level of the procurement budget of $60 billion, we cannot meet the needs for modernization and the development of new technology in the period ahead without some sort of traumatic change. Now maybe it is going to have to be the draft. I do not know what it is going to be, but clearly I think, everywhere we have gone—and Senator Inouye, Senator Hollings, Senator Cochran and I and Senator Domenici have travelled extensively, as you have—we have been urged to keep America strong. I have not heard anyone, even the Russians and the Chinese, say that they want a weak America. Yet, we are on the course of becoming less and less strong, let us put it that way, in the years ahead, unless we modernize.

Ten years from now, I do not see someone sitting in this seat, these seats that we have asking why we did not do something differently, because the money is not there on a sustained basis to meet the challenges of the future unless we get some new military doctrine or we get a new bank, somehow print new money somewhere.

The budget chairman is laughing, but I am serious. I did not know that the Rudman group had made similar recommendations. I will look into that, but I think we have got to find some way to bring about an increased flow of money into procurement. We now have retirement, we have medical benefits, we have all of the retiree problems. We have a majority of our people are married. When we served, the only person that was married was the colonel and above.

When you look at this change today, if you push it out into the future and the cost of keeping up a family that has five or six kids and both of them are in the service, is staggering by the time you get out to their retirement. I will tell you I worry about not being innovative as far as the forces concerned. I worry about not being innovative about what we are going to replace with new technology, and one of my worst worries is what is going to happen to the Joint Strike Fighter during our own watch, to find the money for that.

PROCUREMENT FUNDING

But I would urge you to help us, and let us think out loud for the public to hear it, rather than behind closed doors. I do not think the public knows how little the procurement budget is, really, in terms of historical terms. It is very low. Yet it is being asked to do a tremendous amount. President Reagan wanted 600 ships. What have we got now, General, 270 ships?

General SHELTON. We are on the way down to 315 ships, roughly, right now.

Senator STEVENS. And at the rate of replacement, it would take 40 years to maintain them. We have to find some way to build more ships; we know we have to build more planes. And we have to find some way to meet these obligations abroad. I have talked too long, Mr. Secretary, you can have the last word.

PRESERVING U.S. MILITARY EXCELLENCE

Secretary COHEN. Mr. Chairman, I have tried to communicate the nature of this problem wherever I go. Most of us went through that period following the end of the cold war when we were all looking for quote, "peace dividend." There is no longer a peace dividend; it is over. And what we saw is that we were living off the Reagan buildup.

When Ronald Reagan came in, we all remember what the state of affairs was in the military, what the morale was. And Ronald Reagan came in and said we need more, and we provided it. And much of what we are using today, be it in Kosovo or Bosnia or off the various coasts, is a result of that buildup. Well, that buildup is over, and we have built down. We have cut the size of our force by a third; we have cut procurement back 3 years ago, to the point that it was two-thirds below that at the height of the cold war. And that is what I mentioned when I took over this job, we were at $43 billion. We are now at $60 billion; we need to go to $70 billion and higher. But I think it is incumbent upon me and you and all the other Members of the committee and the Members of Congress to remind the American people of exactly what is at stake.

Now you were very kind in talking about General Shelton's wife and mine. Janet and I have been out trying to talk about reconnecting America to its military. The phrase basically is to remind people of the crown jewel that we have in our military, how good we are, the talent that we have in our military, what they are doing day in and day out. And the American public tends to see it in times of crisis. You and I and all of us see it every day, and we go out and see the kind of sacrifices being made by these young men and women and those who have made a career in the military, and we have come to take it for granted and we cannot continue to do so. We have to give them a quality of life in the way of compensation, we have to have their retirement benefits, the health care benefits, the housing, and we need to give them the best technology available.

So the $60 billion is not going to be enough. We are modernizing. You mentioned, what are we doing? Well, we are doing more in terms of Joint Strike Fighter, F–22, all of the systems, the new destroyer, the new aircraft carrier, those designs have come into

being. In the years 2008 to 2015, we do not have the money to pay for them. That is why I come back to the point, well, can we make any savings?

Hopefully my successor will enjoy, if I cannot, the benefit of saying we have another round or two of base closures that will save us $20 billion over the course of the period between fiscal years 2008 and 2015. That will save us $3 billion annually, and we are looking at $5.5 billion in savings from the four rounds we have had before. So we need to have savings in terms of how we are doing business and the cost of doing business, but we need to focus the American people in terms of what we need to protect our national security interest. So we have had our peace dividend, it is over, and now we have got to pay.

So when people say, can we afford these three new systems? The answer is yes. We are a rich country, and we need to spend more for our national security and we ought to make that very clear each and every time that we go out. We ought to go out and thank the uniformed personnel that we have, saying, thank you for what you are doing. You are making sacrifices that the American people need to be reminded about, and not only say it in time of going to war against Milosevic or Saddam Hussein, but rather day in and day out. We need you; we thank you. Not enough people are saying this, so every time you see somebody in an airport, go over and thank them. But thank them, and then say, and here, by the way, is what we are going to give you to carry out your mission, the best technology that is available, and it is going to cost money, and we need to pay it.

Senator STEVENS. Thank you very much. I said that was the last word, but we do have an elder Senator here.

Senator HOLLINGS. No. Senator Domenici and I sponsored that 5 percent increase at the very beginning of the Reagan term. You remember that, Pete. But in all respect, what you are hearing is the distinguished Secretary say, we do not have enough money, and yet the Chairman of the Budget says that we have got a surplus.

Senator STEVENS. Here we go.

ADDITIONAL COMMITTEE QUESTIONS

There will be some additional questions that will be submitted for your response in the record.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED TO HON. WILLIAM S. COHEN

QUESTIONS SUBMITTED BY SENATOR THAD COCHRAN

AIRBORNE LASER (ABL)

The Air Force, for affordability reasons, recommended removing $258 million from ABL over the fiscal year 2002–05 period. But OSD increased that amount to about $900 million from fiscal year 2001–05.

Question. ABL is the only Major Defense Acquisition Program that is on schedule, on budget, and meeting or exceeding its technical requirements. Why did OSD increase the cut to ABL from $258 million to $900 million?

Answer. In this year's budget development process, the Air Force and OSD identified a number of tradeoffs to balance the Air Force's portfolio of programs against priorities and available resources. Despite the cuts, the ABL program was and re-

mains on track technically. The Department's reasons for submitting a budget that cut ABL funding were financial.

Question. Given the progression of the North Korean threat, do you think it is important to have the first ABL aircraft available in fiscal year 2003 as the first capability able to deal with North Korean missiles of any range?

Answer. The first ABL aircraft will be the Program Definition and Risk Reduction aircraft. It will have roughly half the laser power of an operational aircraft and will not have a mature combat system. Alone, it could not sustain a combat air patrol because it would need to land periodically. The Department does not assess that the contingency capability gained from a near-term deployment of this lone testbed aircraft would be sufficient to alter its investment priorities.

STRATEGIC WARHEAD LEVELS

Presidents Clinton and Yeltsin agreed in 1997 on a START III goal of 2,000–2,500 warheads. Senior Defense Department and military officials have stated their belief that U.S. security requires force levels no lower than 2,000 warheads.

Question. Do you forsee any circumstances in which the Defense Department would agree to go below 2,000 warheads in a START III agreement? If so, what are those circumstances?

Answer. The Department of Defense has completed a comprehensive review of the START III agreement with respect to our ability to maintain our policy of strategic deterrence, as outlined in the President's decision directive issued in the fall of 1997, at lower levels of warheads. We have concluded that START III negotiations should proceed on the basis of the 2,000–2,500 accountable warheads as agreed by Presidents Clinton and Yeltsin at Helsinki in 1997.

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

FULL-TIME SUPPORT

Secretary Cohen, you and General Shelton mentioned that in spite of an increasingly-demanding security environment, the active force has been so drastically reduced, resulting in greater dependence upon our Reserve Components. As the co-chair of the Senate Guard Caucus, I am very proud of the tremendous work of our Army and Air National Guard as they respond to a variety of missions throughout the world. General Shelton stated that the effective integration and utilization of these men and women will continue to be key elements of Joint Personnel Readiness and are critical to the success of the Total Force. However, you will not achieve these objectives unless you adequately resource the Guard to meet these increasing demands. Year after year, the Army Guard's requirements far outweigh the resources provided to it by the Department of Defense. Accordingly, the National Guard's number one legislative priority remains full-time support.

Question. What are the Department's plans to assist the Guard in meeting these requirements?

Answer. Adequate full-time support for all of the Reserve components is absolutely critical, especially in these times of increased OPTEMPO. I will look to the Service Secretaries to effectively balance their Reserve components' full-time resources to handle these increased responsibilities. You are correct in your statement that integration and effective use of the Reserve components is critical to the Total Force. That is why I directed the Service Chiefs to remove all barriers to integration, and included the Reserve component Chiefs in our OSD-level deliberations on DOD-wide resourcing issues. I can assure you of my commitment to Total Force integration, and providing the necessary resources for our fighting forces.

PLAN COLOMBIA

Secretary Cohen, I applaud the many sacrifices made by members of the military in the war against drugs and strongly support efforts to increase efficiencies in counter-drug operations. However, I am concerned by the military's statement that its priority is to increase operations in Columbia, Peru, and Bolivia, the "source zone." We need not look far to see the devastating results of "mission creep." Operations in Bosnia and Kosovo have expanded far beyond initial estimates, and I fear the same form of expansion in South America. We must ensure that counter-drug operations are addressed with an appropriate, not excessive, level of military support.

Question. Does the Department of Defense support a cap on U.S. military involvement for Plan Colombia?

Answer. As a matter of policy, the Department of Defense does not support troop caps due to the impact that such restrictions can have on military operations. However, in the case of Plan Colombia, where the objectives are quite clear and of limited scope, the Department can accept a troop cap on U.S. military personnel provided that the language is properly structured and developed in coordination with the Commander in Chief of U.S. Southern Command.

QUESTIONS SUBMITTED BY SENATOR RICHARD C. SHELBY

TRICARE

Question. Secretary Cohen, I have been advised of a TRICARE payment policy which, on the surface, appears awkward and antiquated. According to TRICARE, a professional service rendered a beneficiary by one class of physicians (MD) is often compensated at a higher level than if the same identical service were administered by another class of physicians (DPM, OD, etc.). In the civilian world, I am told that most private third party carriers, as well as Medicare, have adopted an "equal pay for equal work" policy.

This is a budget year in which we will see long-needed reforms in military health care. What is the justification for this TRICARE payment plan?

Answer. Prior to the CHAMPUS Maximum Allowable Charge (CMAC) methodology, CHAMPUS set pricing based on the allowable charges for an area, generally a state, at the 80th percentile. CHAMPUS has always had at least two professional provider classes, physician class (MD, DO) and non-physician class. Separate area allowable charges were established for each class. The reasoning used for establishing two separate classes and hence two payment amounts was twofold. First, each payment amount was based on the allowable charges of the provider group. Normally, the allowable charges of the physician class were higher than those of the non-physician class; otherwise, the non-physician class was limited to the payment amount of the physician class. This meant the physician normally charged more for the same service than the non-physician charged. To combine the charges of the non-physician class with those of the physician class would have resulted in a lower payment level to the physicians and a higher payment level for the non-physicians. The other reason for not combining the two provider classes was based on paying more to the providers (physicians) who had more training and a broader knowledge base than the providers (non-physicians) who had fewer years of formal training and a smaller knowledge base.

When CHAMPUS implemented the CMAC methodology, some of the old allowable charge reimbursement process remained, this being the establishment of allowable charges based now on national allowable charges instead of state allowable charges. The separate classes remained under CMAC. As physician pricing under the CMAC system was gradually brought in line with the Medicare Fee Scheduled amount, the differences in pricing between the two classes of providers disappeared for many of the care procedures. A few procedures still have pricing higher for the physician class versus the non-physician class. When it was found that Medicare does not make a pricing distinction for physician and certain non-physician providers (podiatrists, oral surgeons/dentists, psychologists, therapists including speech, physical, occupational, and optometrists), the Department decided to adjust the pricing for these providers equal to the physician payment amount.

Question. Why is there no "equal pay for equal work?"

Answer. We are currently in the process of updating our policy to ensure consistency with Medicare, which will address the issue of equal pay for equal work. Providers other than physicians will be raised to the physician payment level when like services are provided. We are hopeful that the change can be initiated by the end of this year (Calendar Year 2000).

QUESTIONS SUBMITTED BY SENATOR ROBERT C. BYRD

DEFENSE TACTICAL AIRCRAFT AND CARRIER PROCUREMENT

Mr. Secretary, in your opening statement, you emphasize several priorities, as you called for transforming our nation's defense for the post-Cold War era, including modernization of weapons and support and investing modernization wisely.

Just two weeks ago, Congress approved, over my objections, a fiscal year 2001 Budget Resolution that increases overall spending for defense to $307 billion, an increase of $9 billion over the $298 billion that CBO tells us is the amount necessary

to maintain this year's level of Defense spending, including an adjustment for inflation.

At the same time, this budget resolution cuts $19 billion in budget authority from non-defense discretionary programs to a level of $290 billion. That's below the amount CBO estimates is necessary to maintain domestic programs at a current services level. Where are these cuts going to come from? Police officers? Community crime prevention? Coast Guard drug interdictions? Less children in Head Start? Fewer teachers in schools? Less for science education? Cuts at the National Institutes of Health?

Mr. Secretary, this Congressional Budget is a throwback to voo-doo economics. It cuts very real needs at home and proposes risky, financially imprudent tax cuts.

Question. Critics say we are building duplicate air force and naval aircraft wings at unprecedented cost against cold war enemies that don't exist.

We have 3 major fighter aircraft procurement programs—the Air Force's F–22, the Navy's F/A–18E/F, and the Joint Strike Fighter. When are we going to make the hard decisions on these fighter procurement programs, Mr. Secretary?

Answer. These three aircraft in the tactical aircraft modernization plan bring various individual characteristics to the battle, and they complement each other. In the grand scheme, the capability of our armed forces to execute our military strategy depends upon the capabilities that each of these aircraft will bring to the battle. The Defense Resources Board (DRB) is required to review each weapons system on its own merit and as part of an existing force structure to ensure the capability brought to the table by the individual system merits the resources being devoted to its procurement or modernization. Specifically, the DRB is chartered to review the overall defense program with a view toward balancing resources available against the needs of the Services; the Commanders-in-Chief; and the Department as a whole. Annually, the DRB reviews the long-term tactical aviation modernization requirements, and they have validated the current approach to proceed with the F–22, the Joint Strike Fighter, and the F/A–18E/F. The plan is sound because it addresses the long-term core needs of the Services and accomplishes the following three basic objectives: (1) sustains platform modernization through new aircraft development and procurement that supports long-term force structure goals and protects U.S. qualitative advantages; (2) improves the accurate guided weapons carried by increasing standoff-range, enhancing all-weather capability, and reducing costs; and (3) develops a dominant capability to exploit off-board, all-source intelligence information.

Question. The CBO has suggested the option of buying 219 F–15s to allow modernization, while cutting F–22 production from the current plans of 339 to 120 fighters at a savings of $10 billion. Is this a hard decision you can support?

Answer. No, I cannot support the CBO's proposed approach. Such an approach would leave our warfighters at a distinct disadvantage, and that is unacceptable. The F–22 has been designed to replace the F–15 aircraft in the Air Superiority role to counter emerging threats worldwide. By design, the F–22 will dominate the future air combat arena—flying over 50 percent more sorties, with 40 percent fewer military maintenance personnel, and using 50 percent less airlift than the F–15. The F–22 is designed to penetrate enemy airspace and achieve first look-shoot-kill capability through stealth, supercruise, and integrated avionics. The F–22 is the first weapon system designed from the outset with its principal focus on exploiting the ongoing information revolution while simultaneously denying an enemy the ability to do the same. While integrated avionics allow for dominant battlespace awareness, stealth denies crucial information to the enemy. Supercruise increases weapon performance, while reducing the enemy's ability to make effective use of the small amount of information they can gather.

SUBMARINE FORCE STRUCTURE

Question. The CBO has suggested we consider keeping Los Angeles class submarines in service until the end of their 30-year life and slowing procurement of the new Virginia class. This would save $13 billion over 10 years. Is this a hard decision you could support?

Answer. The option of refueling Los Angeles class submarines in lieu of building new Virginia class submarines is being considered. A funding wedge is included in the Presidents fiscal year 2001 budget to support such an action.

The President's fiscal year 2001 budget supports the potential decision to increase attack submarine force levels. Refueling the additional three Los Angeles class submarines, scheduled for early inactivation outside of the Future Years Defense Program (FYDP), will only address today's SSN force in the short-term.

For the longer-term, all refueled Los Angeles class submarines will reach end of life by 2018. As a result, this option will not support an increased force level in the longer-term.

The current low production rate was established, in part, to sustain the submarine industrial base's capability. Any reduction in the planned procurement rate would likely endanger portions of this critical industrial base, place at risk industry's ability to increase the production rate when necessary, and would result in increased unit costs. Any near term savings in delaying Virginia class procurement would be offset by these added risks and increased unit costs.

Refueling additional Los Angeles class submarines is not a suitable substitute for building Virginia class submarines other than as a short-term force level increase.

AFFORDABILITY

According to news reports, the Center for Strategic and Budgetary Assessments, a Washington think tank, has indicated that the defense program may be short as much as $50 billion a year. Another independent group, the Center for Strategic and International Studies, claims that the underfunding could be as high as $100 billion a year.

Question. Given probable constraints on defense spending in future years, can we afford a tactical aircraft modernization program as currently projected?

Answer. This is a question that has been repeatedly asked, and the Department has been very consistent in its response. The Department believes that the three aircraft (F/A–18E/F, F–22, and Joint Strike Fighter (JSF)) in the tactical aircraft (TACAIR) modernization plan are affordable so long as they are properly phased and scoped. The fiscal requirements for the F/A–18E/F, F–22, and JSF programs do not exceed historical spending norms for total aviation modernization (though TACAIR will take a majority of the resources over the next decade or so). The Quadrennial Defense Review (QDR) determined that all three aircraft were important to meet warfighting needs with a prudent level of risk, and also will sustain needed technology development and the defense industrial base. The QDR adjusted the procurement quantities for each aircraft in order to balance warfighting risk against the need to use scarce modernization resources prudently, and support acquisition stability by reducing overall costs to a level we can afford.

CAPABILITY REQUIRED

Question. Mr. Cohen, in view of the demise of the Soviet Union, and the changed international security environment, what capabilities are required in U.S. tactical aircraft? Does the current modernization program build in (an) excessive and expensive capability that is unnecessary in the post-Cold War environment?

Answer. No. Potential future adversaries are projected to field significant numbers of improved surface-to-air missile systems that could restrict the rapid application of air power against key ground targets at the outset of a conflict. As shown during the 1999 operations against Serbian air defenses, even older air defense systems, adroitly employed, can limit the application of air power.

Aviation systems and weaponry currently being offered for sale include fighter aircraft, air-to-air missiles, and air defense systems. Properly employed, these advanced systems could pose a difficult challenge to U.S. forces in combat. The further proliferation of such weapon systems could drive up U.S. losses in a future conflict, making continued improvements in the nation's air forces imperative.

The overall numbers of U.S. tactical aircraft reflect both possible wartime needs and the force levels appropriate to support peacetime forward deployments at an acceptable operational tempo. With the existing basing arrangements and current forward presence levels, force levels are not excessive to meet operational needs. In fact, the services continue to adapt their force operations to mitigate personnel operational tempo pressures. The Air Force Expeditionary Air Force concept is an example of such initiatives to reduce operational tempo pressures within existing force structure.

FORCE STRUCTURE

The Secretary of Defense, Les Aspin, announced in September 1993 that the Administration projected a base force of twenty Air Force fighter/attack wings (13 active, 7 reserve), eleven Navy carrier air wings, and four Marine Corps air wings. The Quadrennial Defense Review released by the current Defense Secretary William Cohen in May 1997, recommended no major changes in this force structure, although the twenty Air Force tactical wings would comprise twelve active and eight reserve wings. A reduction in the number of air wings would lead to a corresponding reduction in the number of aircraft to be procured.

Question. Looking ahead, how many wings of tactical aircraft does the United States need in the post-Cold War era? Will the United States still need thirty-five air wings in 2010, 2020, the time period for which the new aircraft will be operational?

Answer. The Quadrennial Defense Review (QDR) struck a balance between retaining sufficient force structure to meet the full range of contemporary requirements while also investing in a future force through a focused modernization plan. The forces provided in the QDR were designed to ensure our superiority "throughout the 1997–2015 period and beyond".

The Quadrennial Defense Review reduced total planned procurement of the Air Force's F–22 fighter from 438 to 339 aircraft, consistent with its much greater capability compared to the current F–15, as well as overall affordability concerns and force structure decisions. Navy and Marine Corps tactical aviation force structure were not adjusted in the QDR, although the planned quantity of Navy F/A–18E/Fs was reduced significantly in favor of an increased number of the newer Joint Strike Fighter (JSF) aircraft. Further, the planned total quantities of Navy F/A–18E/F and Navy/Marine JSF aircraft were reduced to reflect improved efficiency in utilization of the supporting aircraft inventory. Similarly, the planned inventory of Air Force JSFs was reduced to reflect corresponding inventory efficiencies. Thus, the QDR program provided a net reduction to the previous stated program plans of 677 fighter/attack aircraft: 99 F–22s, 452 F/A–18E/Fs, and 126 JSFs.

Recent operations, including the 1999 conflict in Kosovo, show that the tactical air forces continue to be in high demand to meet current operational needs. Consistent with this experience, the Department maintains the QDR program as the basis for future tactical air force structure and modernization.

UNMANNED AERIAL VEHICLES (UAV)

Unmanned Aerial Vehicles (UAV) that can perform many surveillance and other functions of manned aircraft are being developed and produced by the United States.

Question. How does the role of UAVs fit into the Administration's overall strategy for the procurement of tactical aircraft?

Answer. While Unmanned Aerial Vehicles (UAVs) have been around for quite a while, Operation ALLIED FORCE—the conflict over Kosovo in 1999—allowed for the most extensive use of UAVs in support of combat operations. The experience validated our need for these types of systems, and has broadened our understanding of how we might incorporate UAVs into future combat. Based on our lessons learned, UAVs are likely to be used in expanded applications beyond their traditional reconnaissance and surveillance roles, including combat strike functions. However, we need to proceed carefully and deliberately as we expand the roles of UAVs, ensuring that the new missions are both militarily effective and cost efficient.

To this end, several activities are being accomplished. The JROC-sponsored UAV Special Study Group is currently updating the 1997 CINC-generated UAV mission/payload prioritization list. This list will provide a firm requirements base for future UAV roles. Additionally, there are a number of Science & Technology efforts and experiments/exercises underway to further develop and understand advanced UAV technologies, payloads/sensors, and concept of operations that will contribute to the evolution of UAVs. Both the AF and the Navy, in conjunction with Defense Advanced Research Projects Agency (DARPA), are exploring Unmanned Combat Aerial Vehicle (UCAV) concepts.

As these activities come to fruition, we will be able to model military effectiveness and cost, and we can make judgments on the most probable UAV roles. The modeling will be the basis for adjustments to the Department's overall procurement plans (i.e., increase the quantity of specific types of UAVs, reduce the number of manned surveillance aircraft or manned tactical aircraft, etc.) It would be premature to make any adjustments without the requirements-based perspective and a greater understanding the technology. It is essential that we complete the ongoing activities and the modeling first.

OTHER THREATS

Secretary Cohen, some have raised concerns about other threats to the United States, such as inadequate border security, suitcase bombs, bombs smuggled into the United States by ship, and other weapons of mass destruction, such as biological and chemical warfare and other sabotage.

Question. What are your thoughts about this, Mr. Secretary? Are we putting too many eggs into the conventional weapons basket, and ignoring other threats at our own peril? Do you have any views on that matter?

Answer. Just as the USG cannot focus on one area of the world, it cannot focus on a single type U.S. forces must be able to respond to the broad spectrum of threats anywhere in the world.

In the case of terrorism, no single department or agency possesses all the capabilities needed to combat the problem. Cooperation within the USG is essential. By supporting both the Department of State and the Department of Justice or acting unilaterally as directed by the National Command Authorities, the DOD is required to be ready to combat terrorism throughout the globe. Our forces and their capabilities are not specific to one region or another. The rigorous budget and acquisition processes in place ensure that our military forces are prepared to operate internationally in a variety of environments.

An emerging and significant threat is represented by the proliferation of WMD, including improvised biological, chemical, and nuclear devices that exploit technologies that once were the sole preserve of world and regional powers. The potential to attack large population centers and wreak havoc on an unprecedented scale has devolved from nation states to groups and even individuals.

Given this threat to the United States and U.S. citizens at both home and abroad, the Department in cooperation with the Department of Justice, Federal Emergency Management Agency, and other departments and agencies has taken steps to prevent and deter terrorism and the use of WMD. Additionally, we work to ensure that the USG can assist victims of WMD terrorism if necessary. As in counterterrorism, the Department is prepared to assist the lead Federal agencies for consequence management as necessary.

THREATS AGAINST AGRICULTURE

Secretary Cohen, with regard to chemical and biological weapons threats to the United States, I am concerned about biological weapons that could be targeted against U.S. agriculture the largest agricultural market in the world.

Attacks on U.S. agriculture would offer huge financial rewards to terrorist through international future markets, or manipulations that would be—for the terrorists risk free.

I am advised that Iraq had large stocks of biological weapons that cause severe disease in humans and animals; and that these agents had been made into weapons. Genetic engineering technologies allow creation of new pathogens with enhanced toxicity that may cause a biological weapons surprise to agriculture.

Question. I am concerned that as we concentrate on funding for new weapons systems, we may be blinded to other, perhaps greater, threats of sabotage and short change other necessary initiatives to protect our national security. Do you have any comment on that Mr. Secretary?

Answer: The Department recognizes the need to address unconventional as well as conventional threats, and is applying resources to both. While we need to develop new weapons systems to ensure that our war fighters are equipped with the best available technology, we also recognize the need to address domestic unconventional threats. The Department does this in an interagency context, where Defense acts in a support role. The Department, in cooperation with the Department of Justice, the Federal Emergency Management Agency, and other departments and agencies, performs a significant role to prevent, deter, and mitigate terrorist events.

As you know, in May 1998 President Clinton signed Presidential Decision Directive 62, which is serving to fully incorporate all Federal Agencies in a deliberate planning and coordination process for domestic preparedness and within the structure of the National Security Council (NSC). The NSC has chartered nine subcommittees to address functional aspects of domestic preparedness with the general objectives to assess preparedness status and to recommend appropriate federal responses to emergent problem areas. The subgroup for Protection of Food and Agriculture deals solely with food and agriculture protection issues and is chaired by the Department of Agriculture. DOD is a member of this subgroup and will continue to support its activities.

In addition to operational support for domestic preparedness, the Department also provides research and development resources to the interagency Technical Support Working Group (TSWG). Through the Department's Combating Terrorism Technology Support Program and funding provided by other agencies, the TSWG rapidly develops technologies and equipment to meet the high-priority needs of the combating terrorism community, and addresses joint international operational requirements through cooperative R&D with major allies. The Department of Agriculture (USDA) is the newest member of the TSWG, where solutions are being sought with USDA scientists on promising biological agent detection technologies for agriculture and food processing.

RUSSIAN BIOLOGICAL WEAPONS PROGRAM

I am advised that there is a continuing threat from undisclosed Russian biological weapons programs. This involves proliferation of biological weapons technologies to foreign countries, enhanced by trained personnel, expertise and materials from the former Soviet program. I am advised that one area of the Soviet program (BIOPEPARAT) had 10,000 scientists working on agricultural biological weapons mostly targeting U.S. agriculture. Our own Department of Agriculture Agricultural Research Service has only 2,000 scientists for all research programs nationwide.

I am concerned that U.S. agriculture is uniquely vulnerable to biological weapons attacks because of its size. (U.S. Agriculture is 13.1 percent of Gross Domestic Product and 16.9 percent of employment.) These could take the form of highly infectious biological weapons diseases and pests, particularly foreign diseases that do not now occur in the U.S. This could adversely affect U.S. agricultural exports ($140 billion annually) which are the largest positive contribution to the U.S. balance of trade.

Protecting U.S. agriculture equates to protecting one of the major infrastructures of the U.S. economy.

Question. Mr. Secretary, at the same time, we are planning to spend hundreds of billions of dollars on new weapons systems, we are woefully underfunding efforts to counter biological weapons threats to agriculture and the food-supply system. As a senior member of the administration's Cabinet concerned with national security, what is your response to my concerns?

It seems to me that little is being done to protect agriculture and the food supply despite some recent increases in the budgets for intelligence, law enforcement, the medical community, and the armed forces in this area.

It also seems to me that policymakers have inadvertently overlooked weapons targeting animal and plant agriculture in the urgent thrust to establish a national security program in an unfamiliar area.

Question. What are your thoughts on this matter? What more can be done?

Answer: The Department recognizes the need to address unconventional as well as conventional threats, and is applying resources to both. While we need to develop new weapons systems to ensure that our war fighters are equipped with the best available technology, we also recognize the need to address domestic unconventional threats. The Department does this in an interagency context, where Defense acts in a support role. The Department, in cooperation with the Department of Justice, the Federal Emergency Management Agency, and other departments and agencies, performs a significant role to prevent, deter, and mitigate terrorist events.

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FISCAL YEAR 2000 KOSOVO SUPPLEMENTAL

Mr. Secretary, Republican leadership made the recent unfortunate decision to kill the fiscal year 2000 emergency supplemental. I believe that risks undermining our troops and commanders in the field. At the same time, we need confidence in Congress that the United States has an exit strategy. We learned from Somalia that standard doctrine cannot be ignored even in peacekeeping missions. When commanders need overwhelming force, we need to provide it and it has to be timely. The alternative is we leave room open for mistakes and horrible images of our troops being dragged through the streets.

Question. Mr. Secretary, you have stated that failure to pass a timely supplemental will cut back on training, morale, capabilities, and readiness. What have your commanders said will be the impact on mission safety and pacification efforts for a prudent exit strategy?

Answer. Without supplemental funding to offset contingency operation costs, the Department of Defense has no choice but to take extremely disruptive actions that will have serious readiness consequences. Since the estimated cost of contingency operations has not changed, the reduction in funds will require that contingency operations costs be absorbed within the Service's operating and military personnel accounts. Absorbing these costs, especially this late in the fiscal year, will dictate that core programs be canceled or deferred. To preserve near-term readiness, the most likely actions would include the deferral of depot maintenance, implementing supply constraints, deferring civilian hires/change of stations, reduction of home station training, and deferring equipment reconstitution of units recently rotated from contingency operations. The bottom line is that without full supplemental funding approval, fourth quarter activities that will damage the readiness, military capabilities, and troop morale of our armed forces will result.

KOSOVO

I am very concerned about the level of U.S. participation in the Kosovo peacekeeping operation, and the anticipated duration of the U.S. military deployment in that operation.

Question. How many military personnel are currently assigned to the KFOR operation in Kosovo, and how many of those are U.S. personnel?

Answer. As of 27 April 2000, there were approximately 39,900 military personnel (NATO/non-NATO) deployed with the KFOR mission in Kosovo itself. Of this total, the U.S. force contribution is approximately 5,500, or 13.8 percent of the force structure. If we look at total KFOR manning, which includes personnel not only in Kosovo but also in FYROM, Albania, and Greece, the U.S. force contribution is approximately 6,200, or 13.4 percent of a total force of approximately 46,100 (NATO/non-NATO).

Question. Which country has the single largest contingent of military personnel stationed in Kosovo?

(If the answer is not the United States, then a follow up question: How does the number of U.S. personnel compare to the number of troops from other individual nations in Kosovo—is the U.S. the second or third largest contingent?)

Answer. In Kosovo itself, the U.S. contribution is the largest at approximately 5,500 (valid as of 27 April 2000). If we consider total KFOR manning (which includes Kosovo, FYROM, Greece, and Albania), then the Italian force contribution of approximately 6,500 is the largest national element, with the U.S. contribution second at approximately 6,200. This is due to the large Italian contingent of approximately 1,000 personnel assigned to KFOR in Albania (the Italian contribution to KFOR in Kosovo itself is approximately 5,100, second to the U.S. force of 5,500). All force contributions are valid as of 27 April 2000.

Question. Congress authorized the air strikes against Yugoslavia last year, but Congress has not authorized U.S. participation in the Kosovo peacekeeping operation. Given the amount of tax dollars that the Administration is requesting for this operation, and the dangerous situation that U.S. service men and women are facing in Kosovo, do you not think that a full discussion in Congress on the future of this mission would be prudent?

Answer. I welcome appropriate congressional discussion of the mission in Kosovo; however I oppose any legislation that would create uncertainty about U.S. intentions in Kosovo, or would take the decision making authority on the deployment of U.S. troops out of the hands of Congress and the President.

Question. What types of peacekeeping activities are U.S. troops in Kosovo typically involved in?

Answer. It is the continuing mission of KFOR to maintain a secure environment throughout Kosovo. Within means and capabilities, KFOR will also provide support to the Special Representative to the Secretary General of the United Nations (SRSG) and to the United Nations Mission in Kosovo (UNMIK). The United States continues to command Multinational Brigade East (MNB–E), one of the five sectors of responsibility. To accomplish their assigned mission, KFOR units carry out a number of necessary military tasks. For example, U.S. forces conduct daily patrols, man traffic control checkpoints, and provide security details at selected sites of significance within their assigned sector. In addition, KFOR units continue to support the U.N. International Police (UNIP) in all five regions as they work to establish law and order in the province.

Question. Would you describe the bulk of these activities as military maneuvers or as law enforcement activities?

Answer. The activities that our forces are currently involved with on a regular basis would best be characterized as typical military tasks for a peacekeeping force. When KFOR first entered Kosovo, they were filling an administrative and public security vacuum created primarily by the departure of the Serb military and police units. In addition to their key military tasks, our forces initially assumed a number of additional responsibilities. For example, until the various international organizations (IOs) and NGOs were ready to assume their responsibilities, KFOR was tasked (within means and capabilities) to provide initial public security operations and initial basic civil administrative functions, as well as other essential non-military functions. They were also tasked with providing initial humanitarian assistance to internally displaced persons (IDPs), returning refugees, and other inhabitants of Kosovo. Over time, these initial responsibilities have largely shifted back to their primary organizations of responsibility.

Question. When do you anticipate that U.S. military forces will be able to hand over their police and law enforcement duties to a civilian police force?

Answer. As of 27 April 2000, the United Nations International Police (UNIP) had 3,159 civilian police deployed in all five regions of the province. As this force has grown, it has assumed increasing responsibility for the tasks of ensuring public security and law enforcement. An effective judicial system is also necessary to ensure a fully functioning legal framework.

COLOMBIA

Secretary Cohen, Assistant Secretary of Defense Brian Sheridan testified before the Senate Armed Services Committee earlier this month during a hearing on the Administration's counter-narcotics proposal for Columbia and neighboring countries. In response to a question from me, Mr. Sheridan said that the Administration would not seek force caps for the operation, but could work within a force cap.

Question. Do you agree with that statement?

Answer. Yes, the Department could work within a force cap while providing counter-drug support to Colombia. However, as a matter of policy, the Department of Defense does not support troop caps due to the impact that such restrictions can have on military operations. Nevertheless, in the case of Plan Colombia, where the objectives are quite clear and of limited scope, the Department can accept a troop cap on U.S. military personnel provided that the language is properly structured and developed in coordination with the Commander in Chief of U.S. Southern Command.

Question. The figures supplied by Mr. Sheridan and others testifying at that hearing included an average U.S. military presence in Colombia of 209 personnel, ranging from a low of 92 to a high of 309 over the past year. Would you please provide for this committee by the end of the week specific recommendations on a troop cap for Colombia counter-drug operations, including numbers for both military personnel and civilian contractors working with the military?

Answer. General Wilhelm, the Commander in Chief of U.S. Southern Command, has looked closely at the troop cap issue and has determined that a limit of 500 personnel would provide sufficient operational capability and flexibility to facilitate Department counter-drug support to Colombia. The Department would require legislation that provides exceptions in the case of noncombatant evacuations, search and rescue operations, ship's company associated with U.S. Naval vessel port visits, equipment salvage and recovery, as well as exclusions for Department personnel involved in conferences, meetings and investigations. Additionally, the Department would want to exclude military personnel permanently assigned to the U.S. Embassy in Colombia as well as members of units participating in relief efforts in response to natural disasters or other humanitarian assistance. A rigorous assessment of the number of civilian contractors has not been completed. Historically to date, the maximum number of Department civilian contractors in Colombia has been in the range of 40 to 50 personnel. However, this figure does not include additional DOD contractors that will be needed to implement Plan Colombia, nor does it include contractors presently in Colombia supporting the requirements of the Department of State and other departments and agencies.

QUESTIONS SUBMITTED BY SENATOR TOM HARKIN

SECRECY

Secretary Cohen, the nuclear weapons portion of the Iowa Army Ammunition Plant has been closed for 25 years, but the Army is not allowed even to acknowledge that nuclear weapons were ever there. I would like the Army to join with the Energy Department in encouraging former workers to come forward, to discuss any exposures that occurred at the plant, and to receive care for any medical problems that have resulted. But the Pentagon's secrecy sends the opposite message.

Question. What is the harm in admitting that nuclear weapons once were in a facility that has closed for twenty-five years?

I recently hosted Energy Secretary Richardson at a town meeting near the plant to talk about the nuclear weapons work that occurred there. When the Energy Department is publicly dealing with the nuclear legacy, is it consistent for the Defense Department not to admit such a legacy exists? How should I explain to Iowans why one federal agency will talk about it but another federal agency won't?

The Defense Department has released a list of place where nuclear weapons were deployed that named Alaska, Cuba, Guam, Hawaii, Johnston Islands, Midway, Puerto Rico, United Kingdom, and West Germany. A Department Official later said that Iceland was not on the list. Why will the Department refer to nuclear weapons in Alaska or Puerto Rico or German, but not in Iowa?

Answer. This is a complex issue with a history going back over 40 years. Its complexity is driven by evolving: classification policy, physical security posture for nuclear weapons, and public safety, which are all protected by an umbrella public affairs policy regarding comment on nuclear weapons, i.e., the Neither Confirm Nor Deny (NCND) policy. In response to public affairs questions about the general or specific location of nuclear weapons, the response—NCND—will be given even when such location is thought to be known or obvious. The purpose of the policy is to deny militarily useful information to potential or actual enemies, to enhance the effectiveness of nuclear deterrence, and to contribute to the security of nuclear weapons, especially against the threats of sabotage and terrorism. This policy applies to U.S. weapons deployed within the United States and its territories or to locations beyond our territorial boarders.

In the case you cite in your question, if the Army spokesperson were to have responded—other than NCND—to questions regarding the presence of weapons at the Iowa Ammunition Plant, for consistency, the Army would also have an obligation to answer questions about any of their facilities. The same obligation would apply to the U.S. Navy, U.S. Air Force, Marine Corps, or any other Department spokesperson. We cannot answer questions about the location of nuclear weapons selectively. There is, however, an exception to the NCND policy.

It is U.S. policy to confirm to the general public the presence or absence of nuclear weapons or radioactive nuclear components, when necessary, in the interest of public safety or to reduce or prevent widespread public alarm. For example, in the unlikely event of an accident involving a nuclear weapon, we make an exception to NCND policy. Notification of public authorities is also required if the public is, or may be, in danger of radiation exposure or other danger posed by a weapon or its components.

The policy has a long history. It does not apply uniquely to this Department. It was established by President Eisenhower in 1959.

> "It is the policy of the U.S. Government to neither confirm nor deny the presence or absence of nuclear weapons at any general or specific location. It is also U.S. policy not to comment on request for information regarding the movement of nuclear weapons, the capability to store weapons at U.S. or foreign locations, or planning for any of these activities."

In 1991, the National Security Council directed a review of the NCND policy with regard to ships following the announcement by President Bush that the U.S. Navy would remove certain tactical nuclear weapons from some naval vessels. In 1992, the interagency community agreed to a slight modification to the policy with regard to naval vessels and aircraft.

> "We will not discuss the presence or absence of nuclear weapons aboard specific ships, submarines, or aircraft. However, it is now U.S. practice not to deploy nuclear weapons aboard surface ships, attack submarines, and naval aircraft."

The deployment of U.S. weapons beyond our territorial borders also adds complexity of harmonizing classification and NCND policies. The United States must

honor joint security agreements and consider the wishes of other nations to have served as host to U.S. weapons in the past, or continue to do so today.

While I share your concerns, we cannot, however, conduct a comprehensive review of NCND policy taking into account only some weapon locations, or former locations, without affecting the security policies of current and former basing nations around the world. For example, when a non-government organization published a false conclusion reached from a redacted version of a classified report, our comment was that their conclusion was in error with regard to missing information. We do not confirm nor deny the presence of weapons in any country, with the exceptions of the United Kingdom and Germany.

We have, nonetheless, begun informally to explore the prospects of harmonizing the NCND policy and classification policy regarding the deployment and movement of U.S. nuclear weapons with allies who serve as hosts to U.S. nuclear weapons, or have done so in the past. Developing a single exception to deal with Iowa would instantly raise other exceptions, causing even more questions about the NCND policy, which could have international implications.

TRAILERS

Question. A recent report by the General Accounting Office found that 6,550 trailers were purchased over the last five years for over $50 million and are sitting in storage because they are unsafe. After several rounds of tests and modifications, I understand that the Army has proposed a fix to the trailers and the High Mobility Multipurpose Wheeled Vehicle (HMMWVs) that pull them, but that it has yet to be tested. What went wrong—why has this program been such a mess?

Answer. A market survey was conducted prior to contracting, the results of that survey concluded that a commercial industry capability and capacity existed to meet the High Mobility Trailer requirements. Based upon the market survey results, a Non-Developmental Item strategy, coupled with a performance specification and a First Article Test to ensure compliance, seemed at the time to be a reasonable procurement strategy. In hindsight, the Army and our contractors underestimated the challenge of fielding a light trailer capable of strenuous off-road speeds to be pulled by a vehicle that was never supposed to pull a trailer. To save time and money, we procured a slightly modified commercially off-the-shelf trailer without the benefit of any research and development (R&D) effort. Perhaps, we should have done things differently. I would like to state for the record, that in all cases, the many program decisions that affected this program over the years were made in the best interests of the Army and soldiers and were based upon the best available information.

Question. An earlier letter from Mr. Hoeper stated that all Army units "are currently about 30 percent short of the authorized inventory" due to trailer problems, and stated that the Army needs at least 18,412 trailers. But now I am told that future procurements will abandon this flawed trailer and choose a new design. When do you expect to complete testing of the fix and complete modifications of the existing trailers and trucks? When do you expect to be ready to purchase additional trailers?

Answer. The Army expects to complete all testing by the end of the first quarter, fiscal year 2001 and complete all modifications to the trailers and HMMWVs by the end of the fourth quarter, fiscal year 2002. The initiation of any new trailer program will be contingent upon the need to buy additional trailers weighted against the needs of other modernization programs and the amount of funding available to effect these purchases.

Question. A letter from Mr. Paul Hoeper of the Army gave me a "conservative cost estimate" of $22 million to fix the problems with what started as a $51 million contract. The plan is to modify only one truck per trailer. But the letter states that the Army is evaluating modifying all the trucks in units with trailers, which comes to almost 20,000 trucks. How much extra would that cost?

Answer. The cost for the retrofit program entails the application of 3 modifications, 2 to the trailer and 1 to the High Mobility Multipurpose Wheeled Vehicle (HMMWV), prime mover. The modification kits are as follows: Drawbar Modification Kit, Brake System Actuator Kit, and HMMWV Cross Member Kit/HMMWV Bumper Modification Kit. The conservative cost estimate provided by Mr. Hoeper was, in fact, the worst case or most expensive option of modifying all the trucks in a unit with trailers. For the record, the total estimated cost of modifying only one truck per trailer is $6.1 million.

Question. I also understand that there is no money to fix or purchase trailers in this year's budget or in the Future Years Plan. Is that correct? If so, how do you plan to fund the repairs of old trailers and the purchase of new ones?

Answer. The Army has current and prior years, unobligated dollars in the program to effect the fixes. In addition, the Army plans to use its below threshold reprogramming authority to add additional dollars to the program. The funding for the purchase of additional trailers will be presented to the Congress in future budget submissions as part of the annual appropriation request.

Question. The first letter from Mr. Hoeper stated that some of the program personnel have received merit increases or promotions recently. Can you tell me which personnel received merit pay raises or promotions, what their role in the trailer program was, and what promotions or merit raises did they receive?

Answer. As Mr. Hoeper stated some individuals associated with the program have received pay increases or promotions. The promotions and pay increases were deserved. The many program decisions that affected this program over the years were made in the best interests of the Army and soldiers and were based upon the best available information. These decisions were not made in a vacuum but with the approval of the appropriate Army and the Office of the Secretary of Defense officials at all levels. All our employees are held accountable for their actions, however, the many people involved in this effort made decisions with the best possible intentions so that no individual deserves to be held responsible for the program shortcomings. No employees need to be singled out. Our focus has been fixing the trailer not fixing any blame.

TROOPS ON WELFARE

I know that many of my colleagues join me in finding it outrageous that some of our troops need welfare to get by, and even more outrageous that some of our troops are excluded from welfare they need. You recently released a statement that it "is wrong" that military members in on-base housing can qualify for food stamps while those off base who receive a housing allowance cannot. And you said you "will work vigorously" to exclude the cash housing allowance from consideration.

Question. Will you pay for the additional food stamps from Defense Department funds, or do you expect the Agriculture Department to pay for them?

Answer. Not counting the value of housing for those members residing off-base in determining food stamp eligibility is a fairer way of addressing the current inequities created by the governing food stamp law. I fully recognize that this would result in an increase in the number of people eligible for the benefit, but prefer that over pursuing a course that would result in taking away a tangible benefit some people are currently receiving. The Department has begun discussions with the Department of Agriculture, but the answer to this issue is very complex since any change in law regarding food stamp eligibility determination affects a much larger population, nationwide, than those Service members receiving food stamps. Counting the value of housing creates inequity between military and civilian populations. I am committed, however, to working this issue and would be glad to report back to the Committee as we determine how we will accomplish this, and how any proposal would be funded.

Question. Will you support measures to increase the pay of the lowest income military members, whether they live on or off base, so they no longer need food stamps?

Answer. I will always support paying our people more. As I have stated in the past, we, as a nation, can never pay our people enough for the sacrifices they make, but we can pay them more than they are currently receiving. However, simply paying our most junior people more money to address food stamp participation results in a compression of the pay table. This compression could have the inadvertent result of removing the incentive for promotion if there is not a significant monetary recognition in future promotions. Thus, we need to be examining the overall adequacy of pay for all our people, and we are doing that. The 9th Quadrennial Review of Military Compensation is looking at pay issues at all levels on the enlisted pay table to assess the adequacy of pay in providing the right standard of living as well as the ability to attract and retain the quality force we currently enjoy.

Last year, I'm sure you recall, Congress passed a provision to provide WIC payments to troops overseas. That provision specifically included on-base housing (not just housing allowances) in qualifying for the payments.

Question. Will you support excluding on-base housing and cash housing allowances from income in troops overseas qualifying for WIC, as you do for food stamps here?

Answer. Philosophically, I support not counting the value of housing in determining WIC eligibility. The programs we provide for our people ought to be fair and equitable, and not counting the value of housing errs on the side of the human, not

the program. Most states do not count the value of housing, and making this change would provide a more equitable benefit for our Service members.

Question. I understand that troops overseas are not yet receiving any WIC support, and that overseas service is not expected to begin until mid-2001, almost two years after the provision passed. What is your plan for implementing this provision, and when exactly do you expect it will be implemented? Could you please provide me with a detailed timeline for implementation that shows why it will take so long for the Congressional directive to be implemented?

Answer. The Assistant Secretary of Defense (Health Affairs)/TRICARE Management Activity (TMA) recently assumed responsibility for implementing the Women, Infants, and Children (WIC) program for military personnel stationed overseas. Official designation of this responsibility was made April 13, 2000. Since then, the WIC Overseas Program Manager has formed an Integrated Program Team (IPT) that will oversee the development of the program and monitor its implementation. Three meetings have been held, and the next meeting is scheduled for July 13, 2000. Meetings will continue as frequently as necessary.

Because of the complex nature of this project, the IPT is composed of members representing many diverse disciplines and organizational components: DOD TRICARE Management Activity; Assistant Secretary of Defense (Force Management Policy); Under Secretary of Defense (Comptroller); Service Assistant Secretaries (Manpower and Reserve Affairs); Service Surgeons General; Lead Agents in TRICARE Europe, Pacific, and Latin America; Defense Commissary Agency; Navy Exchange Command; and Defense Financing and Accounting Service. Additionally, several civilians familiar with domestic WIC programs are providing the team with expert consultation.

Among the issues requiring refinement and coordination are the following: determining parameters for WIC eligibility, both in terms of income and nutritional need; deciding on a range of supplemental food packages and arranging for these products to be available in overseas commissaries; developing an accounting system to handle the WIC vouchers that will be used to "purchase" the supplemental food; developing and providing training for medical, commissary, accounting, and family center staffs on their roles in the program; and developing and providing the required educational materials for WIC beneficiaries. Clearly, this is a complex program with many moving parts, all of which require careful development and coordination as implementation plans are put into place. While having WIC operational overseas as soon as possible is certainly a high priority, it will take time to do this program right. Hasty execution of a poorly planned program will only cause more delays in the long run and frustrate our beneficiaries even further.

Funding for the program has been, and continues to be, a major concern. To date, only $1 million has been programmed for start-up activities. We estimate that start-up costs will approach $5 million, with annual maintenance of the program to be approximately $12 million to $16 million. Clearly, the magnitude, scope, and sophistication of WIC overseas will be directly related to the funds appropriated for it.

A detailed timeline for WIC implementation overseas is being developed; however, a rough timeline contains the following milestones: July 15, 2000—identification of pilot sites—two in Europe, two in the western Pacific, and one in Latin America; October 31, 2000—completion of focus group interviews; December 15, 2000—completion of training for commissary and NEXMART staffs at pilot sites; January 2001—begin WIC services at pilot sites; July 2001—full implementation of WIC overseas.

QUESTIONS SUBMITTED TO GEN. HENRY H. SHELTON

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

HEALTHCARE

Question. General Shelton, the credibility of our work at maintaining morale and meeting recruiting and retention objectives is tested by our ability to care for our veterans. While we debate who promised what to whom and what to do about it, our veterans who paved the way for the prosperity we enjoy today are asking for help. 1,000 World War II and Korean veterans are dying every day and they cannot wait years for your program improvements. I am still waiting to hear solutions from the Department of Defense. General Shelton, in your testimony you recognize the compelling need to provide more comprehensive health-care coverage for military retirees and their family members. In addition, you say that where specific TRICARE coverage is not available, you must offer them other benefits and that your intent

is to reduce out-of-pocket expenses. What are your specific plans to expand these benefits and reduce expenses for military retirees?

Answer. Simply stated, I would ask that Congress pass legislation that addresses the health care needs of all beneficiaries who have served 20 years or more in the Armed Forces.

Today, our retirees over the age of 65 pay on the average $4,500 a year per family out of their own pockets. This cost varies depending on the medical condition of the individual, the number and types of medications he or she happens to be taking, and the type of Medicare supplemental insurance carried. The Joint Chief's plan expands TRICARE Senior Prime for this population from six to 15 sites, with the intent to expand to all TRICARE Regions. Where TRICARE Senior Prime is not available, we propose funding a robust pharmacy benefit and a Medigap-like policy. These initiatives would go a long way in honoring the promise made.

For retirees under the age of 65, we propose that they make a binding decision on a regular basis to commit to either enroll in TRICARE Prime or remain in TRICARE Standard. For those choosing TRICARE Standard, use of the medical treatment facility would be authorized only for pharmacy and catastrophic illness. Where TRICARE Prime is not available, we propose offering a benefit similar to TRICARE Remote.

Question. General Shelton, most of the military retirees and veterans I hear from complain that the rules are being changed in the middle of the game. They were promised free health care for life, and the military broke its promise. I share your concerns over increased access and better care for military beneficiaries, however, we must maintain the quality of care as we increase access. In your statement, you refer to the implementation of "business practice improvements" to address the health needs of military beneficiaries. Having seen some of the metrics that aim to increase productivity and access, I am concerned that these "business practice improvements: will mortgage the future stability of military health-care. For example, the Army and Air Force will force each doctor to see 25 patients per day. This metric seems overly optimistic and will force physicians to see approximately three patients per hour. This severely reduced the doctor's time for training and administrative requirements, and, more important, it eliminates critical time for building the doctor-patient relationship. If not careful, you may so overburden health-care providers that you exacerbate rather than solve problems with the Defense Health Program. How will the military increase access while maintaining the quality of health care?

Answer. Our commitment to high-quality health care for all military members, including retirees, remains firm. I share your sensitivity to overburdening our health care system and preserving the quality of the provider-patient relationship. As validated by survey after survey, Service members and their families are generally pleased with the care they receive from doctors, nurses, and other health care providers. However, they are frustrated by the administrative aspects of TRICARE. It is these aspects of the program that our business practice improvement initiatives are targeting.

Analysis of industry-wide healthcare standards has shown that we have an opportunity to further optimize the use of our military treatment facilities by increasing access to more beneficiaries. This means each military treatment facility (MTF) commander must carefully evaluate and, where under-utilization exists, implement policies that encourage providers to increase the number of patients they see in a day without sacrificing the quality our surveys are reflecting. Doing so will open MTF access to more beneficiaries where they truly want to be seen, enhances the readiness posture of our patient providers, and optimizes our medical resource. It is a "win-win" for everybody.

PLAN COLOMBIA

Question. General Shelton, you mention several infrastructure deficiencies at the Forward Operating Locations. Are funds for these infrastructure requirements provided in Plan Colombia?

Answer. Yes, we have planned for the necessary infrastructure requirements. The forward operating locations (FOLs) at Manta, Curacao, and Aruba provide austere support to our counterdrug effort. We are already operating from those locations, but some prudent infrastructure improvements will be necessary before full operations can commence. This work totals $116.5 million.

Manta is the most critical FOL, and the airfield deficiencies there prevent us from meeting our strategic milestones. For those reasons, we asked for $38.6 million for Manta airfield improvements in the fiscal year 2000 Emergency Supplemental. The remaining funds required for Manta, as well as funds for Aruba and Curacao, were

included in DOD's fiscal year 2001 counterdrug Budget request. Recent congressional action in the House and Senate has brought all these funds forward to fiscal year 2000.

Infrastructure improvements at the FOLs are critical to our support of Plan Colombia. I am confident that we have correctly identified the requirements and included them in our budget requests.

JOINT TRAINING AT FORT LEONARD WOOD

Question. General Shelton, on my recent visit to Fort Leonard Wood I was impressed by the prevalence of multi-service training. I think our taxpayers would be pleased to know that all the services have come together to lower the total costs of training engineers, military police, and truck drivers. However, I was disappointed by the lack of investment into these facilities. I understand the Army and Marines teach employment of non-lethal weapons, a subject that appears to be very relevant to today's Joint Force, but I would like to know what provisions are being made to support this training and the increased requirements placed on it. I think non-lethal weapons will help provide the array of versatile, affordable assets needed, particularly as you deploy for Peace Operations. Will you and the service chiefs come together to support improving these facilities—not just for the growing demand in such areas as non-lethal individual weapons, but for engineers and truck drivers as well?

Answer. I can assure you we are all working to provide the best training, training facilities, and technology for our Armed Forces. The Army and Marine Corps are collaborating in many training venues to enhance their readiness while insuring their forces are interoperable. Both Services are working together on Military Operations in Urban Terrain training, advanced distributive and distance learning, and common/linked military skills training. Active and Reserve Component forces commonly use multi-Service use training facilities. The Services have conducted interoperability training at Fort Leonard Wood and other installations for several years. Fort Leonard Wood is currently executing $617,000 for various improvement projects supporting multi-Service use classrooms, restrooms, weather shelters, road paving, covered eating areas, and observation towers. Additionally, a $350,000 Marine Corps project is scheduled for execution this year for a non-lethal weapons training facility. Fort Leonard Wood's Interservice Training Review Organization has also addressed seven additional projects in the installation's master plan that will support joint training facilities for our engineers and truck drivers.

QUESTIONS SUBMITTED TO LT. GEN. RONALD T. KADISH

QUESTIONS SUBMITTED BY SENATOR THAD COCHRAN

NMD RADAR CONSTRUCTION

Lieutenant General Kadish testified to this committee a few weeks ago that construction on the X-Band National Missile Defense radar at Shemya must begin next year if the NMD system is to be deployed by 2005. He also testified that the results of the ongoing flight test program would have little effect on the construction activities that will take place next year. You have requested $102 million for NMD military construction, most of which will go toward the Shemya radar.

Question. Given the challenges of building this facility in the Alaskan climate, do you believe it is prudent to move ahead with construction of the NMD radar next year, even if there are setbacks in the NMD flight test program?

Answer. Yes, we believe it's not only prudent but essential. The potential that the threat will mature sooner rather than later means that we must make every attempt to minimize the time it will take to deploy the NMD system. Because the NMD radar is difficult to build in the face of typical Alaskan weather, it could well become the pacing element. We therefore must make its construction a priority. We are confident that any problems we may uncover with the flight tests will be solvable, and that the deployment will not be delayed by them very much if at all. But if we permit the construction of the radar to be delayed until we have substantially demonstrated the rest of the system, we could delay the deployment significantly. That would needlessly risk a period during which we are undefended against a ballistic missile threat from the rogue nations.

Question. General Kadish also testified that he was unsure what portion of the radar construction—if any would constitute a violation of the ABM Treaty.

At what point in the construction of the Shemya radar would the U.S. be in violation of the ABM Treaty?

Answer. The Administration is reviewing this issue now and we are awaiting the results of that review.

Question. If you do not know, when will you be able to tell us whether this military construction for which you've requested $102 million will put us in violation of our arms control commitments?

Answer. The Administration is reviewing this issue now and we are awaiting the results of that review.

OPTIONS FOR A SECOND NMD SITE

The Director of BMDO has testified that the "Extended" Capability 1 National Missile Defense System (the Phase I system) does not meet the full operational requirements for NMD, but that Capability 3, with two ground-based interceptor sites, X-band radars in various locations, and SBIRS High and Low would meet the user's requirements.

Question. Are you convinced that a second ground-based interceptor site would be more effective than a sea-based interceptor complement to the first ground-based site?

Answer. Yes, in the near term at least. A second interceptor site could be deployed and effective well before any sea based components usable for a National Missile Defense could be deployed. Owing to constraints such as the ABM treaty, budgets, and competing theater defense requirements, no sea-based components usable for National Missile Defense have been designed, developed, or demonstrated, and they are therefore considerably further from maturity than their corresponding NMD land-based components. Therefore, the initial opportunity to meet full User requirements for National Missile Defense is afforded via the deployment of ground based components.

In the longer term, there appear to be a number of important roles for sea based assets, including intercepts during the boost phase or early ascent phases of the missile flight. We plan to work with the Navy to implement such capabilities as soon as feasible, assuming the removal of constraints in the ABM treaty against the development of sea based National Missile Defense components.

Question. With respect to protecting our NATO allies, which would be preferable: a ground-based site in Europe or a sea-based component to NMD?

Answer. The answer depends on the range of the missiles against which the defense must be effective, on where the assets are that need to be protected, and on competing missions for the naval vessels. Against long range missiles (i.e., ICBMs), the same arguments used above (answer 3) imply that the only available answer in the near term is via a ground based site in Europe with the same types of components used for the American National Missile Defense system. Against shorter-range theater systems, both ground-based and sea based area defense systems, such as Navy Theater Wide, could be effective. For sea based defense, the ships would have to be able to take up positions in the proper locations to make defense of particular NATO assets effective. Also, the defending ships would have to be committed to the defense of these NATO assets in lieu of other naval priorities.

All in all, we believe that a ground-based site in Europe provides the best solution for the nearer term, and could be augmented by naval assets, as they become available.

CBO ESTIMATE ON NMD

The Congressional Budget Office recently released a cost estimate on NMD. I understand that the CBO used different assumptions than the Department of Defense, scored not only the Department of Defense plan, but also what the CBO thought should be included as part of the plan, and despite several requests from the Ballistic Missile Defense Organization, CBO failed to share the draft report for comment with BMDO.

Question. Does the CBO's methodology for this report concern you?

Answer. The CBO estimated a program with content not yet directed by DOD including an additional interceptor site, more interceptors, higher operating costs, and additional flight tests. Whereas CBO estimates appear largely accurate for the costs, estimates, and assumptions they represent, they include costs for advanced architectures that would not be incurred unless required by threat advances.

QUESTIONS SUBMITTED BY SENATOR TOM HARKIN

MISSILE DEFENSE AND ARMS CONTROL

A few months ago, the cost of the missile defense system was generally given as $12.7 billion. A few weeks ago, the Pentagon estimated that the cost of the initial system including 100 interceptors would be $30.2 billion. Lieutenant General Kadish told us that is only a rough estimate. And now the CBO estimates that the full 250 interceptor system, with some needed satellites, comes to roughly $60 billion. If we added sea-based or space-based interceptors for a layered defense system, as some of my colleagues would like, the cost would be much higher.

Question. Now most experts don't even think ballistic missiles are the likely delivery system if anyone did want to attack us with a nuclear weapon. So how much money should we be willing to spend for a defense against an unlikely threat? At what point do we say enough, it's not worth it?

Answer. We believe National Missile Defense is not only "worth it" but essential. Admittedly, National Missile Defense is not the only defense capability the nation must undertake, but it is one of the most important and pressing. Ballistic missile threats to American populations are uniquely valuable to rogue nations, in several ways. First, ballistic missiles owned by a rogue nation could become an important tool for coercion when it wants to constrain American responses to aggression elsewhere in the world. Effective National Missile Defense would permit America to ignore such coercion. Second, ballistic missiles owned by a rogue nation are a way of implementing an immediate attack, within a half hour of a decision, before calmer minds can prevail. Effective National Missile Defense would preclude any American deaths and damage if such a decision were made. Third, we believe that the very presence of an effective American National Missile Defense system would support counterproliferation and limit the threat. An American National Missile Defense would likely persuade rogue nations not to buy ballistic missile systems that they would have to assume would be ineffective. These benefits of a National Missile Defense are therefore well worth the investment.

Question. Governmental and outside panels of experts have suggested that any nation that could launch ballistic missiles could include effective countermeasures. This prediction seems to be supported by official suggestions that Russian countermeasures could defeat the planned U.S. missile defense system, and concerns that Russia would likely sell its countermeasure technology to others. Yet planned tests of the defense system before deployment seem to include only very limited countermeasures. Will you support more realistic tests of the system's ability to defeat all likely countermeasures before the system is deployed? Who determined what countermeasures are included in the planned tests?

Answer. We are preparing for the defense system to be fully effective against the number and types of ballistic missiles, with or without countermeasures, that a rogue nation could realistically deploy. Even if the Russians share some of their countermeasure technology, we can still expect National Missile Defense systems to perform effectively against those threats when deployed by a rogue nation. Our test program has already included representative countermeasures, and it will continue to do so. The scope of this testing is classified.

The conclusion that National Missile Defense will be effective against a missile attack with countermeasures applies to rogue states, but it does not apply to Russia. What makes the Russian threat able to defeat the National Missile Defense system is not the presence of their countermeasures; rather it is the relatively large number of missiles and warheads the Russians could bring to bear. While a National Missile Defense system could preclude damage from a small number of missiles, the results of an attack to the United States by even a hundred missiles would be devastating. We know that, and so do the Russians. This truth preserves the viability of deterrence while permitting us to defend against rogue states. It also preserves the viability of offensive arms control: under any arms control regime even being considered in the START environment, the Russian inventory would be many times what is sufficient to ensure deterrence.

SUBCOMMITTEE RECESS

Senator STEVENS. Thank you all very much. The subcommittee will stand in recess.

[Whereupon, at 12:20 p.m., Wednesday, April 26, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2001

WEDNESDAY, MAY 3, 2000

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 9:40 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Domenici, Inouye, and Dorgan.

NONDEPARTMENTAL WITNESSES

OPENING STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. Good morning. I apologize for being late in starting. Maybe some of you got caught in the same traffic jam I was in. It was 20 minutes before we moved.

I say good morning to my good friend from Hawaii here.

There will be 37 witnesses today who have indicated they wanted to testify or submit statements to our committee. In order to get this large number finished on time—we start on the floor at 1 p.m.—I want to ask that you limit your oral testimony to not more than 5 minutes. All of your statements that you present will be printed in the record subject to the question of how large they are, but we will negotiate that with you if we think they are too long. We do appreciate your interest, and I want you to know we do review these items that you present. We are going to do our best to see to it that we get a chance to ask some questions. So if you think you are going to be provoking questions, leave a little bit of your 5 minutes for you to answer our questions.

Senator Inouye, do you have any opening comments?

STATEMENT OF SENATOR DANIEL K. INOUYE

Senator INOUYE. Mr. Chairman, I just wanted to underscore your assurance that we do read and review these statements.

Senator STEVENS. Thank you very much.

We will follow the list of witnesses that has been prepared by our staff. The first witness is Master Chief Joe Barnes, Legislative Director for the Fleet Reserve Association. Good morning.

STATEMENT OF JOE BARNES, MASTER CHIEF, USN (RETIRED), DIRECTOR, LEGISLATIVE PROGRAMS, FLEET RESERVE ASSOCIATION

Master Chief BARNES. Good morning, Mr. Chairman, Senator Inouye. Thank you for the opportunity to present the Fleet Reserve

Association's views on the fiscal year 2001 Defense appropriations, especially as they related to personnel issues.

My name is Joe Barnes. I am Director of Legislative Programs for the Fleet Reserve Association (FRA), and Co-Chair of the Military Coalition's Personnel Committee. FRA and the Military Coalition thank this distinguished subcommittee for its leadership and strong support for the generous pay and benefits improvements enacted last year. These enhancements are important steps. However, more needs to be done.

The administration's fiscal year 2001 budget request is inadequate and falls short of addressing essential personnel readiness requirements. I will briefly summarize several key personnel issues. The Association's top legislative priority is improving health care for active duty, Reserve and retired personnel, with special emphasis in Medicare-eligible retirees.

The TRICARE Senior Prime demonstrations should be expanded nationwide and made permanent. The pharmacy benefits should also be expanded to include all Medicare eligibles. And more of these beneficiaries should be afforded the option of participating in the Federal Employees Health Benefit Plan. Health care will also be addressed in more detail by another witness on behalf of the entire Military Coalition.

These concerns and others are directly related to the continuing recruiting, retention and overall readiness challenges. Additional active duty and Reserve personnel are required to sustain current deployments and long-term commitments. Without relief, there will be additional strains on service members and their families, thus exacerbating retention problems.

Pay comparability remains a top priority, and both FRA and the Military Coalition appreciate the incremental progress on this issue through 2006. However, at the end of this period, the gap between military and civilian pay will still be over 8 percent. Despite improvements, pay table revisions have generated frustration within the mid-career enlisted ranks. These personnel sense that they were misled into believing their expectations would be addressed, and now view their service as being undervalued compared to other pay grades with regard to the pay table reform set to be implemented on 1 July 2000.

The Military Coalition and seven enlisted organizations have endorsed FRA's study on pay reform for mid-career enlisted grades. Legislation addressing this issue was recently introduced in the House of Representatives.

Housing allowance improvements are a budget priority for the Department of Defense (DOD), and we applaud this initiative. Reducing out-of-pocket expenses is long overdue, and eliminating the 15 percent out-of-pocket costs over 3 years will ease financial pressures on service members and their families.

Authorization of the Military Thrift Savings Plan (TSP) last year was a positive step toward improved financial planning, and also essential to the reducts retirement choice. However, there is concern that the TSP may be in jeopardy, and we urge the subcommittee to help find a way to overcome budget challenges on this program.

Finally, DOD is reneging on funding its fair share of the Survivor Benefit Plan, and the Association and Coalition ask for your support for reform of that program. Witnesses regularly state that people are the Defense Department's most important asset. However, the defense budget does not include sufficient funding to back up these claims.

Again, Mr. Chairman, Senator Inouye, thank you for the opportunity to present the Fleet Reserve Association and Military Coalition views, and I stand ready to answer any questions you may have.

[The statement follows:]

PREPARED STATEMENT OF MASTER CHIEF JOSEPH BARNES

INTRODUCTION

Mr. Chairman and Members of this distinguished Subcommittee. On behalf of the 153,000 members of the Fleet Reserve Association (FRA), all active, reserve, or retired career enlisted uniformed personnel of the Navy, Marine Corps, and Coast Guard, their families and survivors; I extend greetings and appreciation for the opportunity to present the Association's views on the fiscal year 2001 National Defense budget request. Additionally, the Association salutes you, Mr. Chairman, and your colleagues for a job well done over the years. This is one of the Congressional panels the military community can depend on to do its utmost to secure the best of quality of life programs for the men and women who serve in the Nation's Armed Forces.

THE BUDGET REQUEST

With the exception of improvements in housing allowance and modest health care enhancements for active duty personnel, FRA is extremely disappointed in the Administration's fiscal year 2001 budget request for National Defense programs. Although there is minimal growth in the proposed budget, it falls short of addressing the needs of the military services; their people, infrastructure, weapons and modernization programs, spare parts, training dollars, and—in short—overall readiness.

The Association does not have the staff or resources to offer expertise in matters of bullets and hardware, or how much money is required to modernize and adequately equip the forces, but it does understand the people issues and quality of life programs necessary to keep the forces manned and at the ready. For example, from 1996 to 1999, FRA's advised this distinguished Subcommittee of warning signs including a serious shortfall in unformed personnel necessary to meet the extraordinary high operation tempos; the need for funds to offer sea pay to junior enlisted sailors; that military personnel reaching mid-career years were thinking of leaving the Services because of Redux, the military's 1986 retirement program; and that and that the Montgomery GI Bill needs "pumping-up" to make it a more valuable recruiting and retention tool.

Thanks in large part to your strong support, the most generous pay and benefit improvements in nearly 20 years have been enacted. Redux is now a choice and no longer a mandatory system for non-disabled retirees. Military end strengths are stabilized and even DOD's threat to further "downsize" the Army National Guard has been overcome by current events. The Navy is now working to enhance sea pay which is strongly endorsed by FRA along with extending the benefit to junior enlisted crew members.

FRA also is seeking equitable pay reform for NCOs and Petty Officers, an initiative strongly endorsed by The Military Coalition (TMC) the National Military Veterans' Alliance, and seven major enlisted associations (Air Force Sergeants Association, Enlisted Association of the National Guard of the U.S., Naval Enlisted Reserve Association, Non Commissioned Officers Association, The Retired Enlisted Association, USCG Chief Petty Officers Association, and USCG Enlisted Association). Additional comments on this issue are included later in this statement.

PRIORITY PERSONNEL PROGRAMS

(Health care enhancements noted below top FRA's priority list for fiscal year 2001. Later today, The Military Coalition (TMC) will present its priority health care goals in greater detail for the Subcommittee's consideration which are fully endorsed by FRA.)

Health Care.—FRA seeks the Subcommittee's support for restoring equity to Medicare-eligible military beneficiaries, improving Tricare, and the redesign of the military's pharmacy program.

Tricare Senior Prime is one part of a comprehensive health care delivery system for Medicare eligible military beneficiaries and their dependents who reside near military treatment facilities (MTFs). Input from several demonstration sites indicates that the program works, and beneficiaries appreciate returning to the military healthcare system. It should be expanded to all MTFs facilities nationwide and made permanent.

Tricare does not provide a uniform health care benefit for all military beneficiaries. In addition, Tricare Prime and Standard options must be strengthened to make them more viable. Other problems and recommended improvements include expanding Tricare Prime Remote to family members which is addressed in the budget and ensuring adequate reporting and quality control.

FRA believes the current pharmacy program design ignores the government's commitment to provide lifetime health care for military retirees. As retirees age, this aspect of health becomes increasingly important. Medicare eligible retirees (apart from those detailed above and those having Medigap coverage) are currently paying the full cost of prescription drugs. The Fiscal Year 2000 National Defense Authorization Act authorizes a pharmacy redesign with a report on plans to accomplish this due to Congress by 15 April 2000. The enrollment fee requirement will eliminate many potential participants which will skew demonstration results making the program appear more costly than it is. These health care concerns are discussed in greater detail in the Coalition's statement.

As Co-chair of TMC's Personnel, Compensation and Commissary Committee, I will briefly summarize recommendations on key military personnel programs that are also endorsed by TMC.

Personnel Strengths and OPTEMPO.—FRA urges funding for the restoration of end strength levels commensurate with the demanding operations tempo and formidable long-term commitments. Retention and readiness are adversely impacted by the stress of maintaining current operations and the quality of life for service members and their families suffer accordingly.

Pay Raise Comparability.—FRA is most grateful to Congress for reversing the practice of capping military pay adjustments below the Employment Cost Index (ECI). The comparability plus adjustments through 2006 send a much needed acknowledgment to service members that their service is of great value to our Nation. However, given the recruiting, retention and readiness crisis, further acceleration of projected pay raises are recommended.

Basic Allowance for Housing (BAH).—FRA is grateful for the additional funds appropriated last year to reduce service members' out of pocket housing expenses. However, the Association is concerned that BAH is funded at barely 81 percent of the standard requiring members to cover the remainder. FRA strongly supports the Administration's budget request proposal to increase BAH funding to limit out of pocket expenses to 15 percent of national median costs in fiscal year 2001, with a goal of also eliminating this expense over several years.

Recruiting.—FRA is concerned that a number of high school districts in the United States deny access to military recruiters. FRA notes a situation in Portland, Oregon where access by recruiters is denied. FRA Branch 55 officials and representatives of other veterans' groups appeared before the district's school board seeking repeal of the policy only to be informed that the state's governor supports the school board policy. The Association endorses legislation recently introduced (S. 2397) by Sen. Tim Hutchinson addressing this issue.

Thrift Savings Plan (TSP).—A glaring omission from the Administration budget is funding to offset the cost of implementing the TSP which was authorized last year. The program was touted by DOD and Congress to service personnel along with other pay and benefit improvements. Hopefully this is not another empty promise.

Survivor Benefit Plan and Uniformed Services Former Spouses Protection Act.—Your support is solicited for amending the Uniformed Services Survivor Benefit Program (SBP) and the Uniformed Services Former Spouses Protection Act (FSPA). The Association is aware that this distinguished Subcommittee has control of the former's funding, but no oversight of the latter program but, Mr. Chairman, the FRA membership knows that you and your colleagues are most concerned with military personnel programs and work diligently to make each as equitable as possible for all hands. Currently, DOD is reneging on funding its fair share of the SBP program, and the FSPA is weighted heavily against our service members. Just recently, a Navy retiree found that the Defense Finance and Accounting Service (DFAS) had overpaid his ex-spouse $43,000. However, the DOD Claims Appeals Board ruled that

the government isn't liable—the law does not require DFAS to "police the former spouse's entitlements."

Mr. Chairman and Members of the Subcommittee, please note that FRA earlier provided under separate cover a report of its survey on the effect the FSPA has had on respondents. Copies are available on request.

Further, Mr. Chairman, a member of the FRA staff provides a monthly briefing on legislative issues to groups of mid-career, senior active duty and reserve personnel. It is apparent that the military fails to inform its members of either the SBP or FSPA programs and how they may affect career personnel. They are stunned to learn that the Federal government isn't paying its fair share of the SBP program, and that they can lose some, most, or all of their retired pay and veterans compensation payments to a former spouse because of state court interpretations of FSPA. The men and women in our uniformed services need your help in "fixing" both programs.

The Association also directs the Subcommittee's attention to the positions on other issues addressed in the full Coalition statement including the importance of pay comparability and pay reform for mid-career enlisted personnel. (Note FRA is not criticizing deserved pay increases or pay reform for either commissioned officers, warrant officers or junior enlisted members. It simply asks that Congress be as generous to the Nation's NCOs and Petty Officers.)

Pay Reform for Mid-Career Enlisted Personnel.—The following has been extracted from FRA's study on Pay Reform for Mid-Career Non-Commissioned (NCOs) and Petty Officers (POs) of the U.S. Armed Forces. Copies have been distributed to members of the House and Senate Defense Appropriations Subcommittees, both Armed Services Committees and key defense and military officials.

ENTER: THE ALL VOLUNTEER FORCE

"Before the draft ended, a senior Master Sergeant earned seven times the pay of a private."—Charles Moskos, Military Sociologist, Northwestern University

Prior to the advent of the AVF, the basic pay of a 16-year veteran Chief Petty Officer (CPO) in the Navy or Coast Guard, or a Gunnery Sergeant (GYSGT) in the Marine Corps, was more than four (4) times that of a recruit seaman or private. In less than one year the basic pay of the two senior enlisted grades dropped nearly 50 percent of its original value.

Other enlisted pay grades suffered similar decreases in value when the AVF was inaugurated. Congress, acting on the recommendations of the Gates Commission (1970), chose to raise the pay of the Armed Forces' most junior members while ignoring the worth of experienced and qualified senior enlisted personnel. It wasn't until essential POs/NCOs began an exodus from military ranks in the mid-1970s that Congress became concerned.

THE LEAN YEARS: 1973–1998

"When you get to be an E–5, E–6, or E–7, the gap between military and civilian pay starts to widen"—Hon. John Hamre, Deputy Secretary of Defense, 1998

In the years subsequent to the birth of the AVF and prior to the late 1970s, DOD and Congress were suspect of holding the line in favor of leaner basic pay increases for two reasons, high inflation and adequate retention rates. As long as there were sufficient numbers of POs/NCOs to man the necessary billets, there was no logic in increasing basic pay.

With the exception of 1980 and 1981, the three decades following the birth of the AVF were not kind to military personnel. After 1981 and through the 1990s, military pay raises fell behind comparable civilian pay increases.

Further erosion in basic pay primarily affecting POs/NCOs occurred in 1977 when Congress, at the urging of DOD, terminated payments for as much as 60 days of unused leave at the end of each enlistment served. The new statute (Public Law 94–361) restricted enlisted personnel to 60 days over a member's career. In addition, the payments would be limited to basic pay only and would no longer include payments for basic allowances for quarters (BAQ) and subsistence (BAS).

Public Law 94–361, the 1977 Appropriation Authorization Act, authorized the President of the United States to reallocate compensation increases among basic pay, BAQ and BAS by redirecting increases normally allocated to basic pay. In turn, the Act had the effect of reducing retired and retainer pay, drill pay, certain bonuses and separation payments—all determined by the amount of basic pay received by an affected member.

The USPA of 1981 was the culmination of a decade of effort to have Congress address the devaluation of PO/NCO basic pay created by the AVF. The issue gradually caught the attention of the Senate which agreed that a "targeted" pay hike for POs

and NCOs was necessary to correct the problem. The Senate Armed Services Personnel Subcommittee found further justification for pursuing a larger increase in basic pay for POs/NCOs when the Navy's CNO testified that he could not get his ships to sea for the lack of qualified petty officers. Concurrently, the Army's Chief of Staff complained that he did not have sufficient numbers of sergeants to man the service's combat arms.

The Chairman of the House Defense Appropriations Subcommittee at that time, also realized a need for an increase in basic pay for POs/NCOs and introduced his own pay bill, eventually adopted by the full House. On November 1, 1981, the senior enlisted grades realized a 17 percent hike in pay as opposed to an average increase of 14.3 percent for other pay grades.

The authorization for an additional 2.7 percent for senior enlisted grades, increased the CPO/GYSGT rate of pay by a mere 10 cents for each dollar paid to seamen and privates. Further comparison of the November 1981 enlisted pay hike with that of the previous decade proves there was a most definitive decline in the monetary value of the Nation's senior enlisted personnel. Whereas there was a 225 percent hike in monthly basic pay ($83 to $269) for the most junior enlisted pay grade, the CPO/GYSGT, for example, realized less than a 74 percent monthly increase, $360 to $627.

For the 1990s, Congress continued to limit increases in pay because of "budget constraints" and "the extraordinary pressure to reduce defense spending." Both reasons were justifiable, but the suspicion that there was a third reason—downsizing the military forces—was extraordinarily strong. By keeping pay increases at lower percentage rates, pay could and would act as a counter-incentive to the retention of service members.

PAY REFORM: JULY 2000

It's safe to say that today's Petty Officers and NCOs were elated when reading that both uniformed and civilian Pentagon leaders were discussing the possibility of targeting pay raises to POs/NCOs and mid-level officers. "Bigger raises for NCOs among ideas," headlined one news item. Another read, "And NCOs and mid-career officers are at the heart of a plan now working its way through the Joint Chiefs in Washington." Then it was the Chiefs of Staff and Congress promising pay reform in the Fiscal Year 2000 National Defense Authorization Act (Fiscal Year 2000 NDAA). The reform, in addition to the 4.8 percent increase on January 1, 2000, would "provide enhanced pay raises for mid-career officers and non-commissioned officers."

The pay reform, as perceived by mid-career POs/NCOs never materialized. According to a news item, the money earmarked for enlisted pay increases was used to fix the REDUX retirement program. Early elation soon turned to disappointment when proposed increases were published in military-oriented newspapers.

Even the Army, Navy, Air Force and Marine Corps Times discovered that "unhappiness is spreading so quickly that the defense officials who drew up the plan are preparing an October (1999) campaign to explain how the rates were determined."

More disillusionment occurred when the latest offer of larger enlistment bonuses and benefits were authorized for new accessions. Certain non-service candidates can receive $12,000 for enlisting and as much as $20,000 for choosing a critical skill. Another $50,000 in scholarships may be added depending on the recruit's chosen occupational skill and length of commitment. For the majority of POs/NCOs, mid-career as well as seniors, no re-enlistment bonuses are in the offering unless they have the critical skills needed by their respective military service. Even the critical skilled PO/NCO cannot receive a bonus once he or she attains 14 years of service.

Other frustrations have added to the dissatisfaction expressed above and in the 1998–99 General Accounting Office survey among enlisted grades. Of the top ten concerns, enlisted personnel named basic pay and re-enlistment bonuses as numbers 4 and 6. (Basic pay was no. 1 with Army enlisted personnel.)

FRA and others over the years have recognized the disparity in the basic pay of POs/NCOs. FRA has addressed the issue with and before the appropriate House and Senate committees for some years. A November 23, 1998 Army Times editorial opinion stated that raising the NCO pay "is key.' It called attention to the fact that "even some of the most junior commissioned officers are paid more than the senior non-commissioned officers who train them and teach them the lay of the land."

Charles Moskos, a sociology professor specializing in military personnel issues, and John Hamre, Deputy Secretary of Defense are among the more prominent advocates for increasing PO/NCO pay. In an appearance before the House Armed Services Military Personnel Subcommittee, November 4, 1999 Moskos suggested pay scales may need major modification to restore the pre-1972 ratio of pay for non-com-

missioned officers. He reiterated his earlier charge that sergeants (and petty officers) are underpaid. "Eventually," he said, "someone has to come to the realization that we've overpaid recruits and underpaid sergeants."

"We have a retention problem," he warned. "And part of this, I think, is attributable to the way the pay scales have been arranged, with the advent of the all-volunteer force. For example, an E–8—a senior master sergeant in Army terminology—used to make seven times the compensation of a private. Today that same E–8 makes three times the compensation of a private."

Hamre was more direct than Moskos. "Our NCOs are significantly underpaid—(W)hen you get to be an E–5, E–6, or E–7 the gap between military and civilian pay starts to widen."

COMPARISON OF ENLISTED VS OFFICERS PAY RATES

It was not the intent of this study to compare officer pay scales with those in the PO/NCO ranks. But when service officials were queried as to why the pay reform targeted mostly commissioned officer pay grades of 0–4, 0–5, and 0–6, and not POs/NCOs, one source responded as follows: the largest increases occurred where the pay table was most deficient; officers only receive four or five promotions while enlisted expect six or seven; enlisted are being promoted through more pay tables faster than officers; enlisted on the average can expect promotion every three to five years, a lieutenant can spend two tours in that pay grade; and members should not look at one cell at a time; the idea is to reward promotion, not longevity.

Three of the responses involve comparisons with enlisted personnel where no such absolute exists. It appears there always has been a definitive line between the officers' pay table and that of enlisted. Each was established for a different purpose. In addition to providing a pay and allowance system "intended to be both equitable to military personnel as well as to be responsive to the needs of the United States in terms of attracting and retaining the numbers and types of personnel needed;" the officer pay table was developed to recognize a grade distinction for both active duty and retired pay. Enlisted pay has the goal of providing "additional incentives to encourage enlisted personnel and potential enlistees to undertake career enlisted service."

Other sources attributed the higher "targeted" pay increases to mid-grade officers as "a correction to past table distortions"; that the pay table reform for July 2000 was to "emphasize performance rather than longevity." However, a review of DOD's history of military compensation reflects that the same theory was used in developing pay tables 41 years ago. The Pay Act of 1958 "changed the longevity configuration by precluding increases beyond the length-of-service point in each pay grade at which individuals are normally promoted, so as to maintain a closer relationship between performance and higher pay."

Pay increases under the fiscal year 2000 reform provision offer minimal raises for most mid-grade Petty Officers and NCOs (a maximum of 3.5 percent but at only one E–5 pay cell) in comparison with what will be provided mid-grade officers (as high as 5.5 percent for 10 mid-level officer pay cells). (See Chart A below.) Whereas, only 7 of 33 mid-career PO/NCO pay grades will be in receipt of increases above 2 percent, 15 of the 33 mid-career officer pay cells will realize increases above 4 percent. (Note: POs/NCOs in pay grade E–4 will receive pay increases of 2.5 percent for most year increments with two early year increases above 4 percent. However, E–4 is the most junior of PO/NCO pay grades and is not considered a mid-career grade.)

Others have noted the pay reform was weighted heavily toward certain officer pay cells. The Washington Times, Oct. 6, 1999, noted it "gave additional targeted salary increases of up to 5.5 percent for mid-career officers. The 150 highest-ranking generals and admirals would get even higher pay raises, increasing their salaries to as much as $125,000 a year from the current top pay of $110,700."

CHART A.—MID-GRADE PAY REFORM INCREASES

Pay Grade	Years of Service										
	2	3	4	6	8	10	12	14	16	18	20
Officers:											
0–6	.....	.....	.....	([1])	4.9	5.5	5.5	5.4	1.8	1.8	4.6
0–5	.....	.....	1.3	5.5	5.5	5.5	5.5	5.5	4.3	1.3	1.1
0–4	.....	.....	1.5	5.5	5.5	5.5	4.8	3.5	2.3	0.5	0.5
POs/NCOs:											
E–7	1.2	1.3	1.4	1.6	1.8	1.9	2.0	0.5	0.7	0.9	2.5

CHART A.—MID-GRADE PAY REFORM INCREASES—Continued

Pay Grade	Years of Service										
	2	3	4	6	8	10	12	14	16	18	20
E–6	1.4	1.7	1.5	1.9	2.2	2.3	0.6	0.9	0.1	0.3	0.4
E–5	3.1	3.1	3.5	1.4	1.7	1.8	2.1	0.2	0.2	0.2	0.2

[1] Denotes increase in the amount of 2 percent or less.

USING PRE-AVF PAY TABLES

There are those who suggest that comparing pre-AVF pay tables with today's mid-grade (or senior) enlisted pay tables is inappropriate justification for reform of certain enlisted pay cells and that a comparison should begin after the AVF came into being. FRA disagrees. The major damage was done at the beginning of the AVF and not subsequent thereto.

Congress was sold on the AVF and the recommendation to increase junior enlisted pay so prospective enlistees would have a greater incentive to sign on the dotted line. Junior enlisted pay cells were nearly doubled while the upper enlisted pay cells remained at their January 1, 1971 rates. The most junior commissioned officer pay grade; however, was only increased by 10 percent. The effect was nearly a 50 percent devaluation of the pay of more senior enlisted personnel but only a marginal loss in ratio of pay for officers in pay grades 0–4 and above. (See Graph A.)

The recommendation that this paper should not go back to 1971 to justify pay reform for POs/NCOs flies in the face of the July 2000 pay reform that revisits the Uniformed Services Pay Act of 1958 to justify targeting certain officer grades for higher increases in pay.

CONCLUSION

Again, Mr. Chairman and distinguished members of the Subcommittee, FRA thanks you for the opportunity to present its views on important personnel issues. The Association also appreciates your strong support and leadership in the enactment last year of the most generous pay and benefit package in nearly 20 years.

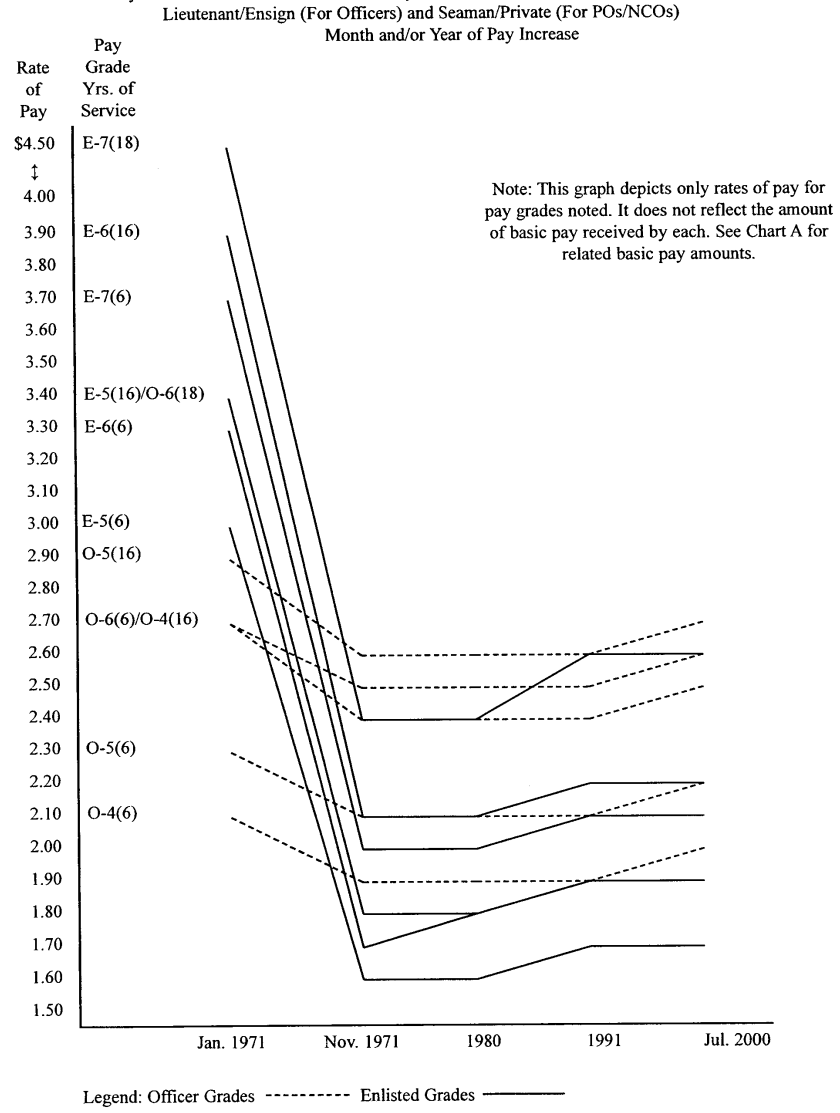
As indicated above, however, the reform of the military pay tables missed the mark with regard to mid-career POs and NCOs and is the subject of growing concern within the enlisted ranks. With a strong economy and low unemployment, retaining key mid-career POs and NCOs must be a priority.

These personnel are integral to training both enlisted and officers and to providing advanced training. They are essential for providing face-to-face leadership, to monitor, to guide, and to mentor. They are well better educated and highly trained, and when there are insufficient or no commissioned officers available, they are called upon to assume command positions.

The Association salutes your untiring commitment to the men and women serving our Nation in uniform and stands ready to be of assistance to you and members of this distinguished Subcommittee.

GRAPH A

Rate of Pay for Certain Officer and PO/NCO Pay Grades for Each $1.00 in Basic Pay Received by a Lieutenant/Ensign (For Officers) and Seaman/Private (For POs/NCOs)
Month and/or Year of Pay Increase



Senator STEVENS. Senator, do you have any questions?

Senator INOUYE. No, Mr. Chairman.

Senator STEVENS. We still are working as hard as we can on the pay structure and allowances, too. I do think we have to take into account the allowances as being part of the total compensation package. We are working with the Armed Services Committee for those adjustments. I hope you are conveying your views to them, too.

Master Chief BARNES. Yes, we are, Mr. Chairman. Thank you.

Senator STEVENS. Thank you very much, Chief.

Next is Dr. David Johnson, Executive Director, Federation of Behavioral, Psychological and Cognitive Sciences. Good morning.

STATEMENT OF DAVID JOHNSON, PH.D., EXECUTIVE DIRECTOR, FEDERATION OF BEHAVIORAL, PSYCHOLOGICAL AND COGNITIVE SCIENCES

Dr. JOHNSON. Good morning, Mr. Chairman, Senator Inouye. I am testifying today on the request for behavioral and social science research in the Army, Navy and Air Force. But let me first say a word about the overall defense research budget.

In adjusted terms, the buying power of that budget has decreased about 25 percent in the last 10 years. The Congress showed its discomfort with a research budget that is too low to support medium- and long-term security by providing an increase above the President's request in fiscal year 2000. Your increase was in line with the Defense Science Board recommendation that $8 billion was needed to fund 6.1, 6.2 and 6.3 research.

We are recommending a budget of $8.4 billion for fiscal year 2001, an amount that maintains the buying power of the budget you put in place last year. It represents a 3-percent increase over current funding and a 12-percent increase over the request.

While the overall research budget declined steadily during the nineties, the behavioral and social science research budget declined precipitously. The Army Research Institute budget, for example, declined 70 percent in buying power. At the same time, the services have encountered growing difficulty meeting recruitment quotas and maintaining officers. The human-centered research addresses many military relevant questions. But among the most important questions it addresses is how to properly prepare personnel to do their jobs.

As you know, the current difficulty in recruitment has meant that enlistees are being accepted with less than a high school education. At the same time, the technological sophistication of modern defense grows every day, requiring equal growth in the skill and proficiency of personnel. Given these opposing realities, cutting research whose purpose is to improve human performance makes little sense.

It has been argued that the military should cut costs by purchasing commercial products originally developed for civilian uses and adapting them to fit military needs. That is hard enough to do with respect to specialized hardware; it is impossible in human performance. Industry has invested little research in improving human performance. Many of the selection and training tools used in the private sector had their origin in research supported by the military. This means the military must generate its own science in this area or have nothing to draw on to assure that its personnel will be able to perform their jobs.

But the budget request does not reflect the growing need for good, basic, and applied research and powerful applications. In particular, the Air Force has made drastic cuts in the past 2 years in its own behavioral research laboratories. Last year, despite congressional efforts to maintain funding, the Air Force essentially gutted the Brooks Air Force Base testing and training laboratory.

That was followed by sizable personnel cuts at Wright Patterson Air Force Base, which specializes in human/machine interface research.

These, and the simulation research facility in Mesa, Arizona, are what remain of an Air Force behavioral research laboratory system that once contained as many as 17 laboratories, each focused on a specialized set of research problems. If the military continues to divest itself of these scientists who do human-focused research, the asset they represent will be destroyed. The scientists possess such military-specific research skills and knowledge that acquiring replacements, once it is recognized what capabilities have been lost, will be all but impossible.

We think it is important to the safety of the country that human-centered research capabilities in the Army, Navy and Air Force not be lost, and we ask you to do all you can to preserve and rebuild those capabilities.

[The statement follows:]

PREPARED STATEMENT OF DAVID JOHNSON, PH.D.

Mr. Chairman, members of the Subcommittee, my name is David Johnson. I am testifying today on behalf of the Federation of Behavioral, Psychological and Cognitive Sciences and the Human Factors and Ergonomics Society. The Federation is a coalition of 19 scientific societies containing most of the scientists who carry out defense-related behavioral research. Among those societies, the Human Factors and Ergonomics Society has the highest concentration of scientists whose major research focus is the enhancement of national defense. My comments will be directed at the President's request for behavioral research in the Army, Navy, and Air Force.

THE OVERALL RESEARCH BUDGET IS FALLING. AND THE BEHAVIORAL RESEARCH BUDGET IS FALLING FASTER

Let me set the fiscal year 2001 request in context. Science has made our security forces first in the world. Normally when we think of science and the military, we think of science applied to technology, and that is not an incorrect perception because the bulk of military research is directed at improvements and innovations in the technology of defense. Of the $37.8 billion requested for Research, Development, Testing, and Evaluation, about $153 million is being requested for research to improve human resource utilization. That works out to about four dollars of every thousand dollars spent on military research being devoted to the selection, training, placement, evaluation, safety, and interfacing with technology of the 1.37 million people who are the armed forces of the United States.

Despite the importance of research to the strength of our defense, support for military research has been dwindling. Between 1989 and 1999 the military RDT&E budget lost about 25 percent of its buying power in terms of constant dollars. The behavioral research budget has followed the same downward slope, but at a much steeper angle. Between 1989 and 1999, for example, the buying power of the behavioral research budget of the Army shrank by 70 percent. I pick the Army to show the shocking decline in support because the Army is the most personnel-intensive of the armed services. That is, the Army has the largest personnel complement, about 478,000, of any of the services.

Both Overall Research Losses and Behavioral Research Losses Are Weakening Preparedness. The Situation Needs to Be Turned Around.

This reality leads me to emphasize two points: The overall research budget has shrunk too much to guarantee both medium and long-term military preparedness. And the behavioral and social science research budget has shrunk to a point where it would be more accurate to say that it guarantees unpreparedness than to say that it endangers preparedness.

Scientists are not the only ones sounding the alarm about this situation. As you know, sufficient concern has grown in Congress that a group of House and Senate legislators has formed a military research caucus in order to try to bring funding back to a prudent level. Likewise, a group of scientific society, university, and industry representatives has formed the Coalition for National Security Research to work for a research budget that is sufficient to secure medium and long-term national se-

curity. In concert with the other organizations in that membership, we are asking this Subcommittee to recommend a funding level of $8.4 billion for the combined 6.1, 6.2, and 6.3 research budget. That amount is based on the recommendation of the Defense Science Board. It represents a three percent increase over the amount appropriated for fiscal year 2000 and a 12 percent increase over the amount requested for 2001 by the President.

The Behavioral Research Budget

Let me turn more specifically to the behavioral and social science budgets for the Army, Navy and Air Force. It is most often the case that we come before you to ask your support for the basic research or 6.1 budget. Most of that budget is spent for research carried out in universities by the scientists who are the members of our organizations. We certainly do ask for that support again this year. Fortunately, those budgets are not slated for cuts beyond those inflicted by inflation. They are essentially frozen. Our deep concern this year is for the applied research and advanced development, or 6.2 and 6.3, budgets. This is research that is normally carried out in the defense research laboratories. It is the follow-on research to 6.1. It is the research that produces the products that are the purpose of military support of behavioral and social science research. And we are particularly alarmed by the pattern of cuts that has been coming from the Air Force, the one branch of the armed services that was meant from the beginning to be a science-based defense service.

Air Force 6.2 and 6.3 Cuts Are of Particular Concern

For the past two years, we have looked to the Congress to save this research from being eliminated entirely. We are, indeed, grateful for the attention you have shown this problem. Two years ago, you restored funding for the laboratory at Brooks Air Force Base which the Air Force attempted to close despite your efforts. Brooks has been the center for Air Force research on recruiting, testing and training and has been responsible to all the armed services under Project Reliance for research on personnel testing instruments. This year, you provided $5 million to maintain at least a vestige of the research that had been carried out at Brooks.

The Losses at Brooks Air Force Base Were Devastating

Nevertheless, the cuts at Brooks have decimated the ranks of its scientists greatly weakening the ability of the Air Force to meet its own and defense-wide needs in recruiting, testing and training. The cuts at Brooks are particularly striking in light of the well known difficulty the services are experiencing now in recruiting sufficient numbers of personnel with high enough educational levels to perform the tasks required of those in military service. It can be assumed that as more service men and women are recruited from the pool of candidates with less than a high school education performance ratings on the Armed Services Vocational Aptitude Battery (ASVAB), the entrance examination for all the military services, will go down substantially. There is, therefore, a serious current need for research to determine the compensatory factors that are predictors of high performance in lieu of adequate scores on the ASVAB. The very real risk that is faced from not doing this research is that the services may make their recruitment quotas but not be able to fulfill their missions. Numbers alone do not constitute a strong military as has been proven over and over through millennia of armed conflict.

Now the Same Thing Is Beginning to Happen at Wright Patterson

The losses at Brooks have been extremely unfortunate. Now a similar threat is being made to the behavioral research programs at Wright Patterson Air Force Base. Wright Patterson has been the site of research aimed at achieving effective human-machine interfaces. Brooks, Wright Patterson, and Mesa, Arizona are the three sites where Air Force applied and advanced behavioral research still takes place. The Mesa facility carries out research to improve simulators and methods for judging the likely performance of aviators from the kind of training they receive in simulators. Already Wright Patterson has experienced reductions in force with the familiar result that many whose jobs are not immediately threatened have also been leaving the Wright Patterson laboratories. The research capability of Wright Patterson is quickly being weakened by the cuts. The situation must be turned around now if the Air Force is to maintain its capabilities in human-machine interface applications.

It Is Not a Problem That Private Industry Will Be Able to Help Solve

As military research money has grown more scarce, the proposition that the Defense Department can sustain the research losses simply by buying off-the-shelf products from civilian-sector industries. We thinks there are severe limitations to

that approach even for technology acquisition, but there is no way that the military can make up its losses in human resources research by looking to the civilian sector. The research the military needs in this area is simply not done outside the military. In the human resources area, the military has built up over decades a pool of researchers who know and respond to military needs. In fact, far from looking to the private sector for this research, much of what the private sector uses in terms of human resource applications was produced through military funding. If the military loses its capabilities in these areas of research, they will be lost altogether.

Restoration of Air Force Behavioral Research Dollars Is a Necessity

That is why we are asking you to act decisively to keep this research alive. We believe that Congress should undertake over a number of years to rebuild the human resources research capabilities of the Army, the Navy and the Air Force. But during the coming fiscal year, we urge you in the strongest possible terms to restore funding for the 6.2 and 6.3 behavioral research budgets of the Air Force Research Laboratory. The President's request for Air Force behavioral research is $91.689 million. The current funding level is $114.333 million. At the least, we believe that funding for the Manpower, Personnel, and Training program and the Crew Technology program should be restored. The request for those two programs is $91.689 million. We recommend additional spending of $7.809 million which would freeze the funding level for these programs at their current level of $99.498 million. Our preference would be to see a restoration of the entire Air Force behavioral research budget to its current $114.333 million. We support the President's request for the Army Research Institute ($21.974 million) and the request for the Office of Naval Research ($39.264 million). I thank you for the opportunity to present our views and would be happy to answer any questions you might have.

Senator STEVENS. Has this been affected at all by base closures?

Dr. JOHNSON. The Brooks may have been. Because it was just unfortunate that that lab happened to be at a base that was part of the desired closings. But there were really alternatives; there was another base nearby where some of that work was done. So it is not completely base closures.

Senator STEVENS. This is not a question, but just a suggestion. You have been here before, I know, and others on the same subject. I cannot recall a time when basic research people gave us some examples of the positive results of such research. We do continue it year after year, but I do not think we have had any kind of show-and-tell, if you will, of some of the progress that has been made by this research and some of the benefits that have been derived by the people in the armed services. I think we have to see that or hear about it in order to continue the funding at the level that you are suggesting, which is higher each year than what the President has asked.

Dr. JOHNSON. I would be happy to.

Senator STEVENS. We have raised it each year. And I think we have raised it because we have hopes that what you are doing will improve the lifestyle of the people and protect them in terms of the assignments that are given to them. But I am not really seeing much in terms of that kind of an approach, and I would urge you to do it next year.

Dr. JOHNSON. I have those examples, and I will be happy to send you a list now. And I will make sure that it is in next year's presentation.

[The information follows:]

FEDERATION OF BEHAVIORAL, PSYCHOLOGICAL AND COGNITIVE SCIENCES,
Washington, DC, June 21, 2000.

Senator TED STEVENS,
Senator DANIEL K. INOUYE,
Senate Appropriations Committee, Subcommittee on Defense, United States Senate, Washington, D.C. 20510.

DEAR SENATORS STEVENS AND INOUYE: When I testified before you on May 3, you suggested that it would be good to have examples of improvements that have been made in military operations as a result of behavioral and social science research. I said that I would provide you with examples. Here is a selection. One thing to know is that the behavioral and social research supported by the services covers a range that is not immediately apparent from the terms "behavioral" and "social." In what follows, I will try to give a sense of that range.

How do we know what unproven recruits can do?

And how effectively can we develop their capabilities?

The role of testing and training research

Perhaps the longest running line of behavioral research supported by the military has been in the area of testing. It began in World War I with the creation of the Army Alpha test, the first test of aptitude. In World War I, there was a rapid calling up and mobilization of troops. The Army needed a way to determine what these enlistees could do so good choices could be made about the tasks each enlistee would be assigned. Research on testing continued after the war. That research permitted development of the theoretical base for aptitude testing that underlies not just today's service-wide aptitude test, the Armed Services Vocational Aptitude Battery (ASVAB) but also such civilian tests as the Scholastic Achievement Tests (SAT) and the Graduate Record Examination (GRE).

What happens when quotas cannot be met and minimal education levels for new recruits must be lowered?

Research to adapt measurement instruments to new realities

That research continues today in at least two forms. As use of technology by the military increases and changes, the skill requirements of new personnel change. There is a constant need to adjust the ASVAB to take account of new military needs. This line of research is applied rather than basic, and is somewhat routine in that there are standard ways of testing potential new items for the battery and determining whether they yield desired information. Workaday as this work is, it is still important. Consider that, in order to meet quotas, some services will be admitting enlistees with less than a high school education. Not much useful information is going to come from finding that recruits without a high school degree do poorly on the ASVAB. What needs to be known is the true potential of each recruit. Through careful testing, the ASVAB can be adjusted to yield information that will be useful in making sound decisions about training and placement of these individuals.

Faster, better, cheaper

Research is bringing unprecedented precision to training

There is a second line of research in testing that is more basic. It has to do with using tests not just as measures of the current state of a person's skills but as dynamic diagnostic instruments.

Training is necessary for new personnel. It is also expensive. And there is pressure to accomplish it in the least possible amount of time. Dynamic diagnostic testing helps. The research is computer-based. It is aimed at creating tests that change to fit the test taker. The answer a person gives on one item determines what question will be asked next. As test items accumulate, the computer program begins to profile in detailed ways the person's general and specific strengths and weaknesses. The results of the diagnostic test then go to the trainer who tailors training to the person, putting more time in areas where the person is weak and less time where the person is strong.

Some of the training can also be done by computer with the computer giving the person more experience in weak areas, but also monitoring the person's progress and adjusting training to assure that each required skill is practiced to a predetermined criterion before moving on to a skill whose mastery is dependent on having mastered the prior skill. This tool is known as artificially intelligent tutoring. The teaching it offers is finely adapted to each student's state of knowledge. In addition to the efficiency that artificially intelligent tutoring brings to military training a

very powerful mathematics tutor has also been developed as a spin-off of the military research.

The result of this mating of diagnostic testing with precise training is that new personnel can be better trained in less time, and, thus, at less cost.

Taking advantage of what personnel didn't learn in school

Skill Domains and Dimensions of Performance

Another way military research is responding to the changing demographics of new recruits is by expanding understanding of the nature of skill and exploring the multi-dimensionality of performance.

Knowledge of facts and processes is only one aspect of being an effective member of the military. There are important aspects of skill that are not trained in academic settings and yet have a great deal to do with quality of performance. Spatial ability is one such skill. There are individuals, for example, who are capable of keeping track of their direction even if they are moving through caves hundreds of feet underground without visual cues to distinguish north, south, east and west. Such individuals might lack a college degree or a high school diploma, but their ability to keep a heading regardless of the presence of directional aids is golden. For pilots, shipboard navigators, tank operators, and leaders of reconnaissance teams natural navigational skill gives an edge in performance that training without natural ability is unlikely to match. Researchers are learning how to identify such important native abilities in new recruits so that those skills can be sharpened through disciplined practice and then put to good use.

Relatedly, researchers are reconceptualizing the nature of performance by looking more closely at the components of performance in specific tasks. How much of successful aircraft maintenance, for example, is troubleshooting strategy, how much knowledge of the aircraft, how much work speed? Comparison of repair team accuracy from one base to another, for example, shows considerable variation. Researchers are working at understanding the dimensions of performance and the impact of performance along each dimension on the quality of overall performance. The goal is to identify the special skills of individuals and the dimensions of high quality, task-specific performance so that task teams may be deliberately selected and trained for maximum performance. One outcome of this research could be that in the future we will be more prone to use our sophisticated and expensive attack helicopters because we will be confident that they will be properly and efficiently maintained and expertly flown.

No more Vincennes incidents

The virtues of embedded training

The Navy has invested heavily in yet another approach to testing and training. It is called embedded training. The idea is that when sailors are at sea, opportunities for extremely realistic training and practice present themselves and should be taken advantage of. So the Navy has been funding research aimed at building training routines into the equipment sailors would use in combat. As the products of this research are coming on line, it is becoming possible for those on a ship or a fleet of ships to engage in war games as they cruise to their destination. Various scenarios can be programmed, and the sailors can be faced with solving a variety of problems they would encounter in combat. The programs can monitor how well a crew performed and arrange the next simulation to allow personnel to work on areas where weaknesses were revealed. Through embedded training, personnel are able to sharpen skills using the very equipment they would be using in battle. The increased experience will lead to better battle performance and improved rejection rates for false indicators of attack.

Can a soldier become a formidable warrior without being in a war?

The role of simulation in making novices into experts

Embedded training is a special case of the use of simulation for training. More familiar to most people than embedded training are the cockpit simulators used for training aircraft crews and the tank simulators used for training tank crews. A great many basic behavioral research questions had to be answered in order to build effective simulators of any kind. Here is a small sample: How "real" does a simulation have to be before it is real enough to elicit the desired physical, cognitive, and emotional responses from trainees? Alternatively, how unfaithful to reality (and therefore less expensive) can a simulation be before it ceases to be effective as a training tool? Does learning transfer from a simulated to an actual environment? Does learning in one domain affect learning and skill use in other domains? How similar are cognitive processes in the training environment to cognitive processes in

the environment of skill use? What constitutes sufficient learning in a training or other simulation environment? Do skills acquired in artificial settings transfer and persist in the environment of use? What cognitive changes take place as a novice advances to the performance level of an expert?

Some of these questions and others have been only partially answered to date. While simulators have been developed and are in use, research continues to improve these learning environments and to point the way toward simpler, less expensive learning tools for introductory-level training.

Simulation research has taken on special urgency. Countries in which our air bases are located are becoming increasingly wary of permitting extensive training flight hours in their airspace. The loss of life that occurred when one of several planes on a training flight in Europe severed the cable of a loaded ski-lift is just the most prominent of grievances now being used to curtail flight hours. A good alternative is needed immediately if the readiness of pilots and their crews is not to degrade. Simulators are most likely that alternative. But as more hours begin to be logged in simulators and fewer in actual flight, we have to intensify research aimed at understanding and minimizing readiness-relevant differences between simulator and in-flight training. We must see that simulators are as good at turning novices into experts as are hours spent piloting actual aircraft.

Question. How good can an aircraft technician who hasn't touched a plane really be?

Answer. Pretty darned good!

Virtual reality is hands-on training with nothing to get one's hands on

Yet another variation on simulated environments for training is virtual reality. One advantage of this approach to training is that a computer, software, and some peripherals like virtual reality goggles and sensorized gloves can give trainees "hands-on" experience without having to provide anything the trainee actually has to touch. The cost for such setups is a fraction of simulators. Their cost stands at a point between full-scale simulators and low fidelity non-mechanical mockups used for the most rudimentary initial training. The virtual reality equipment can be brought to the trainees rather than the other way around. And as with simulators, instructors have a means for close monitoring of a trainee's progress in skill acquisition. Through virtual reality, a technician can gain unlimited hands-on experience without causing a minute of down time for the plane or tank or other piece of equipment on which he or she is being trained.

How can a soldier hear, see and fight the enemy without leaving his tent?

Virtual reality is changing how personnel function on the battlefield

As skill in building virtual reality environments grows, it is becoming possible to take an awesome next step by removing fighters from the field of battle. In virtual reality environments for training, personnel learn to manipulate tools, machinery, and even vehicles that exist only in cyberspace. But by mating advances in nanotechnology with advances in virtual reality, a new generation of remotely controlled hardware is being enabled: planes whose pilots are not in the plane, "eyes" that can perform scouting missions while the soldier remains in his tent, and "ears" with wings that can fly to listening posts and relay sensitive information to personnel who are miles away. The nature of ground warfare was transformed by the advent of the tank. The nature of warfare itself is on the verge of being transformed by virtual reality.

How can instruction continue when reduction in force eliminated the instructor?

Remote instruction: making the most of a tough situation

The large reductions in force experienced by the military in recent years presented a surprising problem. There are no longer enough trainers to make them available at every site where they are needed. The solution has been for the military to become a leader in the use of remote instruction. There were both basic and practical research questions in the push to develop remote instructional capabilities. One of the basic questions had to do with communication. If the instructor is a thousand miles away and is instructing groups in five localities at the same time, what is the impact on the quality of instruction and the efficacy of the training? On the nuts-and-bolts side, the question of how a trainee asks a questions had to be solved. The result of addressing both basic and applied research questions in designing a remote instruction system is that the military is among the most advanced of institutions in employing this information-age mode of teaching and learning.

One aspect of its superiority in this area is that the military has become a leader as well in development of curriculum architecture standards. The idea here is that, by adhering to software standards for curriculum development, the best of materials

can be easily placed in any curriculum. There is no need to start from scratch when a new curriculum is needed. The best of existing materials may be pasted into the new course software at the points they are needed. This is a powerful innovation in that it eliminates the need to invent an inferior wheel when a superior one has already been invented.

So, from the mating of a rudimentary aptitude test and a rapid training regime more than three-fourths of a century ago, there has developed a series of testing and training options that permits highly concentrated, highly targeted training to be accomplished to a high level of mastery in a short amount of time without the necessity of the trainer and the trainee being in the same State or country, let alone the same room. And much of what has been learned in developing the capability to accomplish these feats is now being adapted to the battlefield with the expected result that future battlefields will be decisively controlled by fewer troops who will be situated far more securely than are today's soldiers.

Tools are only as good as the people who use them

Benefits from human factors research

A second large area of military behavioral/social research is called human factors research. Human factors research is most often associated with the interfacing of humans and machines. This research has been applied to a host of military challenges. Here are a few examples.

What good is information when you can't understand it?

Human factors and advances in cockpit instrumentation

The technical capability to provide pilots with information about the environments through which they are flying, including the state of the aircraft, far outstrips human capability to process information. During the Vietnam War, many pilots were distracted enough by the information being fed to them by their instruments that they turned them off or ignored them in order to concentrate on what was happening around them. There has long been a strong need for engineers and behavioral scientists to work together to design cockpit instrumentation that delivers the right information in the right amounts in the right ways at the right point in the field of vision (or touch or hearing) at the right times. Knowing what is "right" in each of these instances has involved some very basic research on human visual, auditory, and tactile perception.

A variety of important findings have emerged from this basic research: Humans have difficulty quickly adjusting attention from foreground to background objects, suggesting that heads-up displays meant to minimize distraction have the capability, instead, to exacerbate it; symbols chosen to convey information about such things as altitude, rate of ascent or descent, and proximity and identity of other craft can be highly confusing indicating that choices about the manner in which particular kinds of information will be conveyed need to be thoroughly tested before they are deployed in order to minimize human error, increase efficiency, and facilitate success in the mission; as pilot flight hours mount, hearing difficulties in frequencies related to the tonal ranges of aircraft engines begin to appear, and warning sounds need to be pitched at frequencies other than those to which pilots become deaf so that the chance that they will hear the warnings is maximized; it is possible to automate many parts of flight, but because automation decreases a pilot's opportunity to use certain skills, the ability of the pilot to judge when an emergency situation is developing, and the ability of the person to take control from the automated systems deteriorates, suggesting that careful, research-based decisions need to be made about what to automate and how to train pilots in the face of increasing automation.

Knowledge is power

Using behavioral research to strengthen communication

How well people communicate with each other is as important to the success of a military mission as how machines communicate information to people. Often electronic devices are the mediators of human communication. All branches of the military have supported research on improving communication. Among the practical questions this research ultimately addresses are, How can deaths and injuries from friendly fire be prevented? When does strict adherence to chain of command endanger soldiers or non-combatants? How can meaningful communication be maintained under conditions of severe stress? There are many other basic and applied questions in communication that military behavioral/social research addresses, but I only want to give you a flavor for the important work that is done.

Can casualties from friendly fire be stopped?

The role of behavioral research and technical innovation

On reducing casualties from friendly fire, a host of factors must be understood and manipulated including identifiability of a target, decision making under stress, cognitive load, and field communications. Electronic and visual means of making positive identification without giving the same information to the enemy must be tested for efficacy. Even when positive identification is possible to make, battlefield conditions, including the number of parameters that must be monitored simultaneously and the immediate perceived threat to the crew or individual making the decision to fire or refrain from firing, must be characterized and measured. Through research, the obstacles to sound decision making can be better controlled. And as with pilots who were overwhelmed with so much information that it became meaningless, limits on the ability of those in a crew to communicate with each other and with others who might have critical information must be understood so as to maximize the utility of incoming information.

Again, basic research in perception, decision making, stress, information processing capabilities, and crew interaction feeds into the applied science of assuring that fire power is directed only at the enemy.

Who knows what when makes all the difference

Research-based modifications in the chain of command and in modes of intelligence gathering lead to better decisions

We think of a chain of command as being a hallmark of military order. But sometimes strict adherence gets in the way of good decision making. A case in point was the shooting down of a commercial airliner by the crew of the Vincennes some years ago. Information known by some who were low in the chain of command could have prevented this disaster were it communicated to decision makers in the chain of command. But the distance in rank, and thus the ability to communicate between those who possessed critical information and those who needed it was too great. Behavioral and social science research has been directed at how communication occurs in a variety of human configurations. The aim of the research is to understand how best to assure that communication procedures permit sufficient group access to critical information.

A second form of this problem occurred in Somalia when U.S. troops were ambushed and killed as they were trying to capture the leader of the rebel forces. Intelligence gathering for this mission had been carried out in a way that is standard in battlefield settings but is not effective in peacekeeping settings. That is, intelligence was gathered clandestinely rather than by developing strong lines of communication and trust with local townspeople. The latter mode of intelligence gathering is standard for civilian law-enforcement officers and military police, but not for combat troops. Behavioral and social science research is being used to determine how to adjust information gathering and dissemination procedures so that those procedures are the best fit for the context in which they will be used.

The research includes experimentation with team procedures that allow critical information to reach the right level in a chain of command regardless of the rank of the person who possesses the critical information. That research is having an impact not just on the effectiveness of military communication but also on the way crews for commercial airline flights are organized and trained. The changes that have occurred because of the research have been credited with saving lives in a number of commercial airline crashes and near-crashes.

Combat is chaotic and exhausting

How can behavioral research do anything about these seeming constants of war?

Battlefields are often chaotic, and stress levels are very high. Are there ways to increase the likelihood of clear thinking, strong leadership, and good decisions under the extreme conditions of battle? Behavioral and social scientists have approached this question from several directions.

One line of research has had to do with the nature of leadership and the configuration of organizations to make best use of leaders. The leadership research has led to development of ways to assess the qualities of individual leaders. A broad division in leadership ability that has emerged is that between the strategic leader and the troop leader. Strategic leaders are able to take account of many interrelations in the planning of strategies. But their decision making tends to be slow and highly deliberative. Troop leaders, on the other hand, have the ability to take in a situation as it is unfolding and make rapid but sound decisions on the basis of available and incomplete information. Both kinds of leaders have important roles to play. But hav-

ing means to distinguish one set of leadership qualities from another allows for optimal placement of leaders.

The research on organizational structure is aimed at understanding the best ways to arrange groups of people for particular purposes. It includes research on the meaning and modes of communication among diverse coworkers, the patterns of critical information dispersal in different work configurations, attitudinal research related to ethnic, racial and gender diversity, and the interaction of leadership styles with organizational structures.

Mating the optimized configurations that emerge from the organizational research with the optimized placement indicators that emerge from the leadership research can help build military units whose ability to perform their functions is maximized. Application of these lines of research are still in their infancy, but have the potential to greatly improve the performance of units in all the armed services.

Performance and survival in extreme environments

Research to protect the warfighter without undermining ability to fight

A battlefield is, in itself, an extreme environment. But added to that reality is the fact that combat occurs in extremes of heat and cold, in the presence of toxic chemicals, at night, and under conditions of extreme fatigue. Behavioral and social science research contributes to the ability of soldiers to function and to survive in all of these extremes.

Behavioral research over many years has gone into helping soldiers survive extremes of heat and cold. Understanding how these extremes affect the human body and the ability to function cognitively have been one aspect of the research. Related to understanding the effects of the extremes has been research on various forms of protection and their relative abilities to facilitate performance in temperature extremes. As new protective materials become available, the research continues with the dual goals of maximizing protection and minimizing loss of, or even enhancing, performance while using protective gear.

Chemical warfare provides as great a challenge to researchers as extremes of temperature. Psychopharmacologists work to determine the neurotoxic effects of various chemicals, symptomatology, mode of entry to the body, and their speed of action. Then they work with other scientists and engineers to provide reliable ways to guard against or counteract the effects of the chemicals. As new agents are identified, the work to maintain protection continues.

Apparatuses that can gather and magnify heat emissions or available light have given personnel the ability to see at night. But, for a time, night vision goggles were implicated in crashes of aircraft attempting to land. The problem was especially noticeable during the Gulf War where an unprecedented number of sorties were flown at night. It was behavioral scientists who discovered that the goggles provide inadequate distance cues, and, in fact, distort perception in such a way as to make some objects appear farther away than they are. Pilots on the landing approach were plowing into the ground because they perceived the ground as being farther away than it actually was. This discovery led to modifications of the goggles that corrected the distortion, made them safer to use, and improved depth perception cues.

It is assumed that battle is as exhausting an activity as one can undertake. But behavioral research is showing that it is important to do something about that reality. The ability of individuals to function cognitively is severely impaired by fatigue for a much longer time than had been understood in the past. That knowledge has led to several areas of investigation aimed either at controlling fatigue or at overcoming at least some of the cognitive losses that result from it. Applications of the research are in their infancy in the military. But some of what has been found has been adapted for the long-haul airline industry. Though it is somewhat controversial, the practice of allowing pilot and copilot to sleep in shifts, for example, has been found effective in maintaining a high level of alertness for the individual responsible for flying the aircraft at any given time. Chemical interventions to prolong alertness under conditions of fatigue are also being investigated. The goal is to find ways to keep soldiers at adequate levels of alertness while they are on duty. The edge that these interventions give can mean the difference between survival and death.

With reduced troop strength, doing more with less is an imperative

Making machines to replace people

Devices that will replace military personnel will need specialized intelligence

Neural network research and circuitry that learns

A Navy goal is to reduce the number of people required to operate its fleet. The desire is to have robots do as much of the aboard-ship work as possible so as to free sailors to concentrate only on those things that require human activity. This will both reduce the number of personnel on ships and make better use of human resources.

Achieving that goal has required research on many fronts. Behavioral scientists have been involved with cognitive and neural network research in support of the goal. The cognitive research has been aimed at understanding how human thought occurs. This research is mated with research on how the human brain functions as it thinks. This latter research is called neural network research. The circuitry that is going into machines that will do the work that people have been doing is imitating brain circuitry thanks to the basic research. One feature of some of the circuitry is parallel processing. Computers in use until quite recently have been serial processors. That is, they perform one operation at a time. The human brain is sometimes referred to as a massively parallel processor. That is, it is carrying on many functions at once. The Navy-sponsored research is leading to design of specialized circuitry for particular purposes and to massively parallel designs that can handle large volumes of information rapidly.

Another feature of the work is to produce circuits that learn from experience. Early versions of this circuitry are already in use in an important civilian application. Learning circuits are in devices at airports that detect plastic explosives. The machines get better at their job as they are "trained" through presentation of many bomb detection scenarios. There will be a host of applications of neural network research throughout the military in the future. One of the most important early applications is in automatic recognition systems. The neural-network-based circuitry in these systems permits recognition and verification by the machine of faces, speech, and military targets. The importance of such technology for security, intelligence gathering, and precision warfare is obvious.

Smart machines will be better partners for their fellow combatants

Making partners of aircraft and pilots

Air Force interest in neural network research and applications has also been high. The research has already led to a diversity of technology improvements. I mentioned earlier the difficulty pilots have had in the past in dealing with the overwhelming amount of information that it is possible to provide. One of the solutions to that problem is adaptive flight control systems. This is a sharing of flight responsibilities between neural-network-based devices and the pilot. The relationship is not fixed. Who/what does what at any given time depends on contextual need. The goal is to create and optimize a dynamic functional relationship between aircraft and pilot or crew.

Smart machines will be better partners for other machines

Linking smart machines to overcome human information-processing limitations

A related use of neural network devices is in sensor fusion for image display. Flight environment information already comes, in part, from sophisticated sensors both on board and in other locations, including space. What neural network devices make possible are synthesis of information from many previously discreet sources and display of the product of that synthesis in one big picture. This means that, increasingly, aircraft crews will not need to look at so many individual bits of information to make judgments about flight and combat. But they also won't have to forego one important kind of information in order to concentrate on another important kind of information. They will be able to look at displays that are the product of synthesized information. So, instead of having to personally synthesize information from many instruments in order to make a judgment about what to do next, crew members will be able to look at one display to get enough information to make that judgment.

Discouragement at the lack of human capacity to process currently available information has prompted talk of scaling back work in future imagery architecture. But behavioral scientists are working to eliminate the source of discouragement. A main goal of work in behavioral analysis is to construct models of human expertise that are so good that they can be used for automating tasks such as information

synthesis now performed by humans. It is this developing knowledge about how to give aircraft the ability to process information as a skilled human expert would, but to process and synthesize vastly more of it than a human ever could, that offers hope. The promise in this research is that there will be no need to sacrifice crucial information because there is too much of it to handle. The technology of the aircraft will handle all that complexity in the way that a human with super human analytic and synthetic abilities would, leaving the pilot free to do the most important thing a pilot can do—exercise, and act on, sound judgment. To put it another way, the plane will do the "what" so that the pilot can do the "so what."

Thank you for asking for examples of the behavioral and social science research that is going on in the armed services and for examples of its applications. I haven't been exhaustive (though I've probably been exhausting) in answering your request, but I believe the information contained here begins to give an idea of the scope and variety of the work being done. These are the categories of work to which I am referring when I come before you each year to testify.

Sincerely,

DAVID JOHNSON,
Executive Director.

Senator STEVENS. Senator Inouye.

Senator INOUYE. No questions, Mr. Chairman.

Senator STEVENS. Thank you very much, Doctor. I appreciate your courtesy.

The next witness is Joan Goldberg, Executive Director of the American Society for Bone and Mineral Research, on behalf of the National Coalition for Osteoporosis and Related Bone Diseases. Good morning, ma'am.

STATEMENT OF JOAN GOLDBERG, EXECUTIVE DIRECTOR, AMERICAN SOCIETY FOR BONE AND MINERAL RESEARCH, ON BEHALF OF THE NATIONAL COALITION FOR OSTEOPOROSIS AND RELATED BONE DISEASES

Ms. GOLDBERG. Good morning. Thank you, Mr. Chairman and Senator Inouye, on behalf of the National Coalition for Osteoporosis and Related Bone Diseases, the Bone Coalition, I want to thank you for this opportunity to discuss bone research as it relates to military readiness.

I am Joan Goldberg, Executive Director of the American Society for Bone and Mineral Research. I am appearing here this morning to ask for your support for increased funding for the Department of Defense to continue its research efforts on osteoporosis and related bone diseases in fiscal year 2001.

The Bone Coalition is requesting $10 million for these research efforts. The Bone Coalition is dedicated to educating the public and its elected officials about the need for Federal research funding for bone diseases. Men and women in the military are at special risk for, and affected by, bone diseases. Stress fractures, which are associated with low bone mass, are among the most frequent injuries.

This Institute of Medicine Report, "Reducing Stress Fractures in Physically Active Military Women," which was requested by the DOD, points out that stress fractures erect a significant barrier to the total fitness and readiness of military women. The incidence of stress fractures during basic training is substantially higher in female than in male recruits.

The current stress fracture incidence for Army recruits is 2.6 percent for men and 8.1 percent for women. This injury rate has a marked impact on the health of service personnel and imposes a significant financial burden on the Federal Government by delaying the training of new recruits. Such injuries may also lead to in-

creased health problems and shortened military careers through early retirements and a possible relationship with the long-term risk of osteoporosis.

The incidence of stress fractures in the U.S. military varies with gender and with branch of service, from 0.2 percent of male Navy recruits, to 4.5 percent of Marine Corps male recruits. The incidence among females in these same training programs is higher, ranging from 0.7 percent among Navy recruits to 9.6 percent in Marine officer candidates. The costs incurred due to stress fractures among 2,000 Marine recruits is estimated to be $1.85 million per year, with 4,120 lost training days. And the figure rises to an estimated $10 million a year in medical costs and lost duty time for the U.S. military as a whole.

One of the goals of the Military Operational Medicine Research Program is to eliminate stress fractures in initial entry training in the military. Current bone research is already focusing on prevention and treatment of stress fractures, examining the role of nutrition, exercise, medication, and rehabilitation. Findings will lead to improved bone health of men and women and enhancing military readiness by reducing the incidence of stress fractures during physically intensive training.

Given that stress fractures may be related to later osteoporosis, increased research attention to the initial problem may reduce the risk of osteoporosis and other bone disorders later in life. The treatment cost burden for these disorders to DOD programs such as Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) should also be considered. Recent Navy research already demonstrates that thoughtful modification of physical training programs can delay stress fractures without compromising physical standards or training level.

Other studies suggest that increased bone remodeling precedes the occurrence of bone microdamage and stress fractures. The role of remodeling in the development of stress fracture is being tested in a DOD project using a rabbit model. A drug used to treat osteoporosis, known as alendronate, will be used to inhibit bone remodeling and increased bone porosity or weakness to determine if microdamage and the severity of the stress fracture will be diminished.

Another study of young female runners will assess the affects of oral contraceptive use on bone mineral density and incidence of stress fracture. Still another study is consolidating the knowledge we have, both published and unpublished, about the effects of resistance and endurance exercise training on bone mineral density.

The prolonged healing time of stress fractures, which requires rest from weight-bearing activity, is well known, and averages 3 months. A DOD-funded study is comparing recovery times from tibial stress fractures in subjects treated with electric field stimulation.

Continuing and expanding the DOD bone research program will help identify individuals at risk and improve their bone health with scientifically training and dietary and medical interventions. Because healthy bones are directly relevant to the preparedness of military personnel, I urge you to consider expanding the funding for the existing DOD medical research program on osteoporosis and

related bone diseases. A funding level of $10 million would be cost-effective, wise and a greatly needed investment in military preparedness.

Thank you.

[The statement follows:]

PREPARED STATEMENT OF JOAN GOLDBERG

Mr. Chairman and members of the Subcommittee, on behalf of the National Coalition for Osteoporosis and Related Bone Diseases (the Bone Coalition), I want to thank you for this opportunity to discuss bone disease research as it relates to military readiness. I am Joan Goldberg, Executive Director of the American Society for Bone and Mineral Research.

I am appearing here this morning to ask for your support for increased funding for the Department of Defense (DOD) to continue its research efforts on osteoporosis and related bone diseases in fiscal year 2001. The Bone Coalition is requesting $10 million for these research efforts.

The Bone Coalition is dedicated to educating the public and its elected officials about the need for federal research funding for bone diseases. The leading national bone disease organizations that participate in the "Bone Coalition" are: The American Society for Bone and Mineral Research; National Osteoporosis Foundation; The Paget Foundation For Paget's Disease of Bone and Related Disorders; and The Osteogenesis Imperfecta Foundation.

A myriad of bone diseases is represented by the Bone Coalition. Men and women in the military are especially at risk of and affected by bone diseases. Stress fractures, which are associated with low bone mass, are among the most frequent injuries.

An Institute of Medicine (IOM) report entitled "Reducing Stress Fracture in Physically Active Military Women," which was requested by the DOD, points out that stress fractures cause a significant barrier to the total fitness and readiness of military women. The incidence of stress fractures during basic training is substantially higher in female than in male recruits. Current stress fracture incidence for Army recruits is 2.6 percent for men and 8.1 percent for women in similar training. This injury has a marked impact on the health of service personnel and imposes a significant financial burden by delaying the training of new recruits. Stress fractures increase the length of training time, program costs, and time to military readiness. Also, stress fractures and short-term risks to bone health may share their etiology with the long-term risk of osteoporosis.

The incidence of stress fracture in male military recruits has been reported to range from 0.2 percent in U.S. Navy recruits to 4.5 percent in U.S. Marine Corps recruits. The incidence among females in these same training programs is higher, ranging from 0.7 percent in the Navy to 9.6 percent in Marine officer candidates. The cost incurred due to stress fractures among 2,000 female marine recruits is estimated to be $1,850,000 annually with 4,120 lost training days resulting in an extended training period for these women. Thus, it could be projected that the costs to the U.S. Army, a service that trains a greater number of recruits a year, would be much higher.

One of the goals of the Military Operational Medicine Research Program is to eliminate stress fractures in initial entry training in the military, a problem estimated to cost the DOD in excess of $10 million per year in medical costs and lost duty time.

Current bone research is already focusing on prevention and treatment of stress fractures, examining the role of nutrition, exercise, rehabilitation, etc. Findings will lead to improved bone health of men and women, enhancing military readiness by reducing the incidence of stress fracture during physically intensive training. Moreover, given that stress fractures may be related to later osteoporosis, increased research attention to the initial problem may reduce the risk of osteoporosis and other bone disorders later in life. The treatment cost burden for these disorders to DOD programs such as the Civilian Health and Military Programs in the Uniformed Service (CHAMPUS) should also be considered.

Recent Navy research demonstrates that thoughtful modification of physical training programs can delay the time to stress fracture without compromising physical standards or training level. The current program is expected to provide information to further reduce training injuries through better identification of at risk individuals, scientifically-based training and dietary and medical interventions.

Other studies suggest that increased bone remodeling precedes the occurrence of bone microdamage and stress fractures. The role of intracortical remodeling in the

pathogenesis of stress fracture is being tested in a project using a rabbit tibial model. A drug used to treat osteoporosis, known as alendronate, will be used to inhibit both bone remodeling and increased bone porosity to determine if microdamage and severity of stress fracture are diminished.

Studies have also found that even a weak androgen, such as dehydroepiandrostenedione (DHEA), the most important circulating androgen in women, may play an important role in attaining and maintaining high bone mineral content in women. A study of young female runners will assess the effects of oral contraceptive use on bone mineral density and incidence of stress fracture.

A previous study of cadets at the U.S. Military Academy defined changes in lumbar bone density of young men and women based on biannual measurements during their four years at the Academy. Now, nearly ten years later, these subjects will be retested with special emphasis on case comparisons to a group of 24 men and women in the original study who did not demonstrate high rates of bone density increase during the study. Another study is consolidating existing knowledge, published and unpublished, of the effects of resistance and endurance exercise training on bone mineral density in men and women using meta-analytical and other novel statistical approaches.

The prolonged healing time of stress fractures with the conservative but general favored treatment of rest from weight bearing activity is well known and averages three months. A double-blinded study is comparing recovery times from tibial stress fracture in subjects treated with active or placebo-controlled electric field stimulation, including evaluation of male and female responses. Diagnostic imaging methods such as radio-graphs, bone scan, MRI, and CT will be compared and a stress fracture severity grading system for each imaging tool developed.

Because healthy bones are directly relevant to the preparedness of military personnel, I urge you to consider expanding the funding for the existing medical research program on osteoporosis and related bone diseases at the DOD. A funding level of $10 million is needed in order to eliminate the adverse impact of these diseases on military preparedness.

Thank you for the opportunity to testify.

Senator STEVENS. I understand your emphasis on the military, but is not this a generic problem now that should be really broadened out and taken up by the National Institutes of Health (NIH)?

Ms. GOLDBERG. It is a very big problem, and NIH has several institutes that are also investing money in this such as the National Institute of Aging (NIA), Child and Health. However, none of them, individually or together, are able to fund all the research needed to answer some of the many unanswered questions.

Senator STEVENS. And what coordination is there to make sure we do not have redundancy? NIA is into, the National Academy of Sciences is into it, NIH is into it, you are already into it in Defense.

Ms. GOLDBERG. That is an excellent question. I spoke with Colonel Friedle, from the DOD yesterday. Who, before issuing the new request for proposals for the money that was funded last year, is coordinating with his contact at NIA and other institutes, to make sure that they are focusing on different areas and complementing each other's approach.

Senator STEVENS. I wanted to warn everybody, we were told yesterday that we need $1.9 billion more for 2000, for retired medical benefits, and it is going to go to about $3 billion in 2001, as we understand, for the additional costs of TRICARE and the other approaches. We are trying to use to fulfill the commitments made to retired personnel now that we have closed so many base hospitals, and they are no longer able to use those hospitals. It is going to be extremely difficult, extremely difficult, to raise any of the items for medical research this year and meet those obligations to retired people that we made.

So I do not want to mislead anybody. We will try our best. You have a real serious problem. I have talked to people out at Walter

Reed about osteoporosis and women members of the armed services, and we do want to find out about the stress fracture problem. We will look to do as much as we can to work with you.

Senator Inouye.

Senator INOUYE. Does the physical examination program that we have for recruits disclose weakness in bone structure?

Ms. GOLDBERG. No, it does not. There are tests for bone mineral density. That is not a routine part of evaluation for new recruits as far as I understand.

Senator INOUYE. So we do not know anything about the recruit until he gets in?

Ms. GOLDBERG. And part of the problem is we have what is called a normative database. We understand what is normal for a 30-year-old woman. And that is the database that is used to test bone density for post-menopausal women who are most at risk for osteoporosis. We do not have enough data yet for what is normal for a 17-year-old, a 20-year-old, or even a child.

Senator INOUYE. Thank you.

Senator STEVENS. Just to make sure I understood this, I went out and took that bone scan at Walter Reed, and I know what it is. It is a fairly long process. I do not know how you could be able to give that to every recruit before they enlist. But there ought to be some way to get a more capable method of screening. If that is what your research is looking for, we agree with you and we will see what we can do to help you.

Ms. GOLDBERG. One of the DOD-funded studies underway right now is looking at different imaging techniques, so that we have a better idea of how to predict fracture risk. The tests that you probably had, a dexoscan, is one of many, one of the more expensive tests, but it is also the gold standard. We are looking for more.

Senator STEVENS. I think we have got to be even more generic than weight and size and capability to lift. Other things have to be a factor in terms of enlistment of women in the armed services, in my opinion.

Ms. GOLDBERG. Right, understanding the biomechanical effects is another area.

Senator STEVENS. Thank you very much, Ms. Goldberg.

Ms. GOLDBERG. Thank you.

Senator STEVENS. Next is Fran Visco, President of the National Breast Cancer Coalition.

STATEMENT OF FRAN VISCO, PRESIDENT, NATIONAL BREAST CANCER COALITION

Ms. VISCO. Good morning, Mr. Chairman, Senator Inouye. Thank you very much for allowing me to speak to you this morning. As a breast cancer survivor and head of the National Breast Cancer Coalition, I want to express our gratitude for your support of the Department of Defense peer-reviewed breast cancer research funding. And I would like to request continued level funding of that program for the coming year.

The program continues to be an incredible success. We continue to have a strategic plan that is focused. The administrative costs continue to be less than 10 percent. It is one in which the Department of Defense has considerable and warranted pride. The strat-

egy continues along the lines recommended by the Institute of Medicine, the National Academy of Sciences.

And this year we once again are looking at gaps in the world of research, looking at things like concept reviews that are actually pre-idea proposals, up to and including bringing clinical trials as widespread as possible so that we can get the answers more quickly and, in the long run, save not just money but many more lives. So my plea this morning is for continued level funding of this program and, as you know, with the support of 62 Members of the Senate that we delivered to you about 1 month ago.

I am here to answer any questions about the program, but I know that, Mr. Chairman, you and Senator Inouye are very familiar with the success of the program, how it has been replicated by other programs, by other countries, by other States, and we continue to set new ground for the way in which biomedical research is performed in this country. Again, I want to thank you very much and hope that you will agree with our request for continued level funding of the program.

[The statement follows:]

PREPARED STATEMENT OF FRAN VISCO

Thank you, Mr. Chairman and members of the Appropriations Subcommittee on Defense for your exceptional leadership in the effort to increase and improve breast cancer research. As my testimony will describe in detail, the investment in cancer research made by you and this Committee is one of the contributions which has brought us closer than ever to the verge of significant discoveries about cancer. I am Fran Visco, President of the National Breast Cancer Coalition, and myself a breast cancer survivor.

On behalf of the National Breast Cancer Coalition and the 2.6 million women who are now living with breast cancer, I thank you for your strong past support of the Department of Defense's (DOD) Peer-Reviewed Breast Cancer Research Program and I urge your continued support of this important program with an appropriation of $175 million—level funding—for the program for fiscal year 2001. The National Breast Cancer Coalition believes this program is vital to the eradication of breast cancer.

As you know, the National Breast Cancer Coalition is a grassroots advocacy organization made up of over 500 organizations and more than 60,000 individuals and has been working since 1991 toward the eradication of this disease through advocacy and action. We support increased funding for breast cancer research, increased access to quality health care for all women, and increased influence of breast cancer activists at every table where decisions regarding breast cancer are made.

The DOD Peer-Reviewed Breast Cancer Research Program has been an incredible model that others have replicated. Broadly defined, the innovative research performed through the program has the potential to benefit not just breast cancer, but all cancers, as well as other diseases. Its success is literally changing the face of biomedical research in many arenas.

This program is not only innovative, but is also incredibly streamlined. As you know, it is overseen by a group of distinguished scientists and activists, as recommended by the Institute of Medicine. Because there is no bureaucracy, the program is able to quickly respond to what is currently happening in the scientific community. It is able to fill gaps, with little fuss. It is responsive, not just to the scientific community, but also to the public.

Since its inception, this program has matured from an isolated research program to a broad-reaching influential voice forging new and innovative directions for breast cancer research and science. The flexibility of the program has allowed the Army to administer this groundbreaking research effort with unparalleled efficiency and skill. In addition, an inherent part of this program has been the inclusion of consumer advocates at every level, which has created an unprecedented working relationship between advocates and scientists, and ultimately led to uncharted research in breast cancer.

It is important to note that the DOD Integration Panel that designs this program has a plan of how best to spend the funds appropriated. This plan is based on the

state of the science—both what scientists know now and the gaps in our knowledge—as well as the needs of the public. This plan coincides with our philosophy that we do not want to restrict scientific freedom, creativity and innovation. While we carefully allocate these resources we do not want to predetermine the specific research areas to be addressed. This permits us to complement and not duplicate other federal funding programs.

The National Breast Cancer Coalition has been the driving force behind this program for many years. The success of the DOD Peer-Reviewed Breast Cancer Research Program has been illustrated by two unique assessments of the program. The Institute of Medicine (IOM) which originally recommended the structure for the program, independently re-examined the program in a report published in 1997. Their findings overwhelmingly encourage the continuation of the program and offer guidance for program implementation improvements.

The 1997 IOM review of the DOD Peer-Review Breast Cancer Research Program commended the program and stated that, "the program fills a unique niche among public and private funding sources for cancer research. It is not duplicative of other programs and is a promising vehicle for forging new ideas and scientific breakthroughs in the nation's fight against breast cancer." The IOM report recommends continuing the program and establishes a solid direction for the next phase of the program. It is imperative that Congress complement the independent evaluations of the DOD Breast Cancer Research Program, as well as reiterate their own high level of commitment to the Program by appropriating the funding needed to ensure its success. The IOM report has laid the groundwork for effective and efficient implementation of the next phase of this vital research program, now all that it needs is the appropriate funding.

In addition to the IOM report, the DOD Peer-Reviewed Breast Cancer Research Program reported the progress of the program to the American people during a public meeting called the "Era of Hope." It was the first time a federally funded program reported back to the public in detail not only on the funds used, but also on the research undertaken, the knowledge gained from that research and future directions to be pursued. This meeting allowed scientists, consumers and the American public to see the exceptional progress made in breast cancer research through the DOD Peer-Reviewed Breast Cancer Research Program.

Many scientists at the "Era of Hope" meeting expressed their enthusiasm for the program and the opportunity to work substantively with consumers at every step of the research process. In fact, the scientists who have seen first hand the benefits of the DOD Peer-Reviewed Breast Cancer Research Program have issued a strong statement that in their scientific judgement the program should continue: ". . . we urge that this program receive ongoing funding. This program has been broadly defined such that the research performed will be of benefit not just for breast cancer, but for all cancers and other diseases."

The "Era of Hope" is scheduled to meet for a second time later this year.

The DOD Peer-Reviewed Breast Cancer Research Program has attracted bright, fresh scientific minds with new ideas and has continued to open the doors to how they think about breast cancer research and research in general.

Developments in the past few years have begun to offer breast cancer researchers fascinating insights into the biology of breast cancer and have brought into sharp focus the areas of research that hold promise and will build on the knowledge and investment we have made. The Innovative Developmental and Exploratory Awards (IDEA) grants of the DOD program have been critical in the effort to respond to new discoveries and to encourage and support innovative, risk-taking research. The IDEA grants have been instrumental in the development of promising breast cancer research. These grants have allowed scientists to explore beyond the realm of traditional research and have unleashed incredible new ideas and concepts. IDEA grants are uniquely designed to dramatically advance our knowledge in areas that offer the greatest potential.

IDEA grants are precisely the type of grants that cannot receive funding through more traditional programs such as the National Institutes of Health, and academic research programs. It is vital that these grants are able to continue to support the growing interest in breast cancer research—$175 million for peer-reviewed research will help sustain the IDEA grant momentum.

The DOD Peer-Reviewed Program has also sought innovative ways to translate what is discovered under the microscope to the bedside. Most recently, it defined a new funding mechanism that will carve out a niche in clinical translational research by bringing cancer clinical trials into community settings.

In addition to the fact that the DOD program provides desperately needed, excellent quality breast cancer research, it also makes extremely efficient use of its resources. In fact, over 90 percent of the funds went directly to research grants. The

federal government can truly be proud of its investment in DOD breast cancer research. The overall structure of the system has streamlined the entire funding process, while retaining traditional quality assurance mechanisms.

The National Breast Cancer Coalition is highly committed to the DOD program in every effort, as we truly believe it is one of our best chances at finding a cure or prevention for breast cancer. The Coalition and its members are dedicated to working with you to ensure the continuation of funding for this program at a level that allows this research to forge ahead.

In May of 1997, our members presented a petition with over 2.6 million signatures to the Congressional leaders on the steps of the Capitol. The petition calls on the President and the U.S. Congress to spend $2.6 billion on breast cancer research between 1997 and the year 2000. Funding for the DOD Peer-Reviewed Breast Cancer Research Program is an essential component of reaching the $2.6 billion goal that so many women and families worked to gain.

Once again, we are prepared to bring our message to Congress. This week, many of the women and family members who supported the campaign to gain the 2.6 million signatures were at our Annual Advocacy Training Conference here in Washington, D.C. More than 500 breast cancer activists from across the country joined us in continuing to mobilize behind the efforts to eradicate breast cancer. The overwhelming interest and dedication to eradicate this disease continues to be evident as people are not only signing petitions, but are willing to come all the way to Washington, D.C. to deliver their message about the importance of our commitment.

Since the very beginning of this program, in 1993, Congress has stood in support of this important investment in the fight against breast cancer. In the years since then, Mr. Chairman, you and this entire Committee have been leaders in the effort to continue this innovative investment in breast cancer research.

We ask you, the Defense Appropriations Subcommittee, to recognize the importance of what you have initiated. What you have done is set in motion an innovative and highly efficient approach to fighting the breast cancer epidemic. What you must do now is continue to support this effort by funding research that will help us win this very real and devastating war against a cruel enemy.

Thank you again for inviting me to testify and giving hope to the 2.6 million women living with breast cancer.

Senator STEVENS. Thank you very much.

I know of no problem with continuing the level funding, but as I indicated, I am not sure about any increases. I have heard that some people are going to try to increase this item, and I just want to advise against it. We have got to meet this retired obligation that has been raised so heavily with us now. And I do not know where we are going to find the money to do that. And even if we find the money to do that, there just is not money to increase. So I thank you for presenting a level funding request, and I can assure you we will do our utmost to comply with your request.

Ms. VISCO. Thank you very much.

Senator STEVENS. The fifth witness has been cancelled. The next would be Joyce Raezer, Deputy Associate Director of Government Relations with the National Military Family Association (NMFA).

STATEMENT OF JOYCE WESSEL RAEZER, DEPUTY ASSOCIATE DIRECTOR, GOVERNMENT RELATIONS, NATIONAL MILITARY FAMILY ASSOCIATION

Ms. RAEZER. Thank you, Mr. Chairman. Good morning to you and to Senator Inouye. NMFA is honored once again to address the quality of life of military families.

We are grateful to this subcommittee and to Congress for the attention last year to issues important to military members and their families—pay, retirement, housing, and the schools that educate our children—but yet our recruiting and retention crisis continues. The crisis did not suddenly appear and will not disappear overnight. It is more complicated than just the effects of a booming economy, than just concerns about pay and retirement.

The decision to join and the decision to stay is not just the service members. We are a family force, and the family joins in those decisions. To stem this recruiting and retention crisis, the Nation must first listen, as NMFA has done for 30 years, to some of the frustrations expressed by today's family force. Then the Nation must respond to the needs of the force that serves it so well.

What frustrates military families? Health care. While all parents are concerned about their children's health care, how many have to worry while on a submarine in the depths of an ocean whether their child can get a doctor's appointment? Military families are told that their health coverage is portable and thus seamless, but find instead a new set of rules governing how they must access care every time they move. TRICARE's 12-region structure fosters inconsistency in basic services, such as appointments, claims and enrollment. It is often anything but seamless.

What frustrates military families? Housing. Military family housing on the installation is often in short supply, poorly maintained and too small compared with civilian standards. For years, military families have watched family housing repair and maintenance budgets shrink and family housing deteriorate. If they live off the installation, they absorb more housing costs out of pocket than the congressionally mandated limit of 15 percent. Increases in the basic allowance for housing only seem to bring increases in rent, thus keeping out-of-pocket expenses constant.

What frustrates military families? Worrying about the quality of their children's education in a succession of school districts. Military children must make a successful transition through six to eight schools during an average school career, often to schools whose funding base is inadequate. Funding DOD schools well is important, but it is not enough to relieve military parents' anxieties about their children's education. Over 75 percent of military children attend school in civilian school districts.

What frustrates military families? No WIC overseas. While many young families depend on Government safety net programs to help them over rough times, military families often lose their access to these programs as they move, a time when they are most vulnerable, especially when moving overseas. Last year, Congress mandated that DOD begin a supplemental program similar to WIC, the United States Department of Agriculture's (USDA) Women, Infants and Children Nutrition Program.

Families who did not know they had lost access to WIC until they arrived overseas greeted that mandate and the initial funding, although small, with joy. Unfortunately, these families are not only still waiting for WIC, but still waiting for news of WIC. We urge Congress to give DOD an implementation deadline and the funding it needs to get this valuable nutrition program to these most vulnerable of our families.

What frustrates military families? The focus on food stamps rather than on the complex combination of issues affecting their financial stability. Many factors put and keep young military families on the financial edge: pay not commensurate with the demands of military service, frequent moves and their related costs, insufficient on-based housing, out-of-pocket housing and transportation expenses when families must live off the installation, the con-

sequences of recruiting someone with a family and then expecting them to live on a salary more appropriate for a single person in the barracks, a lack of good financial education and counseling, poor access to affordable credit, and operations tempo in which deployments or the threat of deployment make it difficult for the military spouse to juggle child care and a job.

Families hope that Congress and the Department of Defense can work together to address this combination of factors that keep them on the financial brink.

So what frustrates military families? That the Nation does not seem to understand that the family drives the retention decision and that supporting families is a part of military readiness. The Nation must recognize that service members' jobs are not 9:00 to 5:00, and that they involve families in ways few other jobs do.

What other employer recruits young people in their late teens and early twenties, often with families, moves them across the country or halfway around the world, and then sends the employee off somewhere else for an extended period, leaving the family behind? What other employer sends employees to places where they must fit their children with gas masks, as military members do in Korea? Military families have taken care of themselves, their children and each other for over 200 years.

They look to the Nation to understand that even a community as strong as the military community will fall apart if it is asked to do too much, with too little, for too long. They look to the Nation to understand that as more is asked of them as they do the Nation's work, then more must be asked of the Nation.

Thank you.

[The statement follows:]

PREPARED STATEMENT OF JOYCE WESSEL RAEZER

QUALITY OF LIFE ISSUES FOR MILITARY FAMILIES, APRIL 2000

Distinguished members of the Subcommittee, the National Military Family Association (NMFA) is once again honored to be able to address Military Family Quality of Life issues. NMFA is grateful to the Congress for taking a big first step last year by passing several measures to improve quality of life for military members and their families. Of particular importance were:

—Provision of a 4.8 percent pay raise, payable January 1, 2000
—Provision for pay increases of .5 percent above the Employment Cost Index for the next five years
—Repeal of the REDUX retirement plan, providing a full cost of living adjustment on retired pay
—Provision of additional funding for housing allowances.

In our preparation for our testimony this year, we realized that many concerns expressed by military families persist despite the efforts of the Congress and the Department of Defense (DOD) to address quality of life. So what is different about this year? What is unique about military families, as we have entered the new century? NMFA contends that the persistent erosion of the quality of life for our military members has caused an increased dissatisfaction with military service, thus providing the impetus for their decision to leave as well as preventing potential recruits from considering military service. No one single factor is diminishing our forces. The continual erosion of what members and their families perceive as their quality of life is contributing to their decision to leave. We know these assumptions are valid, not only because NMFA represents family members who live the life we are describing, but also because we continue to hear from our 150 plus installation representatives and military family members from all over the world.

Our armed forces are facing a recruitment and retention crisis that is unprecedented in our peacetime volunteer forces. NMFA contends that the family is the most important factor driving the retention decision. We affirm the widely quoted

statement, "we recruit a single person, but we retain a family." According to the DOD Office of Family Policy, 58 percent of military members are married. Research shows that spousal satisfaction with military life is a key factor affecting readiness and retention of the individual military member. The Chairman of the Joint Chiefs of Staff, General Hugh Shelton in his written testimony before the Senate Armed Services Committee on 8 February 2000, stated:

> Further, without the support of strong military families, we cannot sustain a force capable of meeting the demands of this new century. To preserve a high quality, professional military we must provide the quality of life that our service members and their families expect—deserve.

Today, NMFA will examine some of the issues that affect military families' quality of life and discuss the level of commitment it believes servicemembers and their families deserve from the nation they serve.

PERSTEMPO

General Shelton, in his 31 January 2000 address at the 2000 TRICARE Conference identified DOD's "big four" quality of life issues: health care, pay and compensation, retirement benefits and housing. He failed to identify "perstempo," which DOD defines as the time an individual service member spends away from their home station. NMFA believes this is a critical issue facing military families today. Perstempo is driven by the scaled down size of the services due to budget constraints coupled with an increase in overseas mission requirements. Secretary of Defense, William S. Cohen, wrote of the importance of American missions abroad in an op-ed piece in the Washington Post, 27 January 2000:

> Some charge that peacekeeping deployments are depleting military morale. Admittedly, troops can't train for a major theater war responsibility while deployed in Bosnia or Kosovo. But they gain valuable experience and leadership skills when deployed there, and quickly shift their training focus once back at home station. If improved retention rates for these deployed units are an indicator, morale actually goes up when the troops see that they can make a difference in places such as Tuzla and Urosevac.

But, what about their families? A deployment that affects hundreds of soldiers disrupts thousands of family members. Based on data collected by the Military Family Resource Center (MFRC) in 1999, more than 630,00 service members were the parents of 1.2 million children. We are a young family force: 86 percent of those children were under the age of 14. The Army has reported that approximately 75,000 soldiers have served in Bosnia since 1995. That means that more than 125,000 children have had a parent deployed to Bosnia for anywhere from six months to a year. Time away from the family cannot be made up in a two-week block leave. How do you make up for months of not reading at night, going over homework or just talking to your children? Children affected by each deployment also see the deployment's effects on the spouse who is left to play single parent. Some children are left without either parent when the single parent or dual military parents deploy. Education research indicates that there is a direct correlation between parental involvement and the educational success of children. Is it fair that we are handicapping a generation of our children by routinely deploying their parents? Certainly, servicemembers understand deploying is part of their profession but not on such a continuous basis.

Secretary Rudy de Leon, Under Secretary of Defense, Personnel and Readiness, in his written testimony of March 15 before the House Armed Services Committee, Military Personnel Subcommittee stated, "The number and frequency of deployments are increasing at a time when the size and permanent forward presence of the armed forces is declining." In other words, we are doing more with less. We cannot continue to do more with less. We either need to do less with less, or do more with more; but this more with less is going to destroy the fabric of our military families.

Family Support

As operations, deployments, and training missions continue at a high pace, the military family's lifeline—its community—feels the strain. Family support services are important even to an installation not harried by a high perstempo. Family centers, military chaplains, and installation mental health professionals help ease the transition to the military environment for newly arrived families. They provide financial counseling, information on accessing local social services, parenting classes, opportunities to learn about the community, as well as opportunities to volunteer to help others. Military youth programs offered by both installation Youth Services

and the chaplains provide meaningful activities for many military youth, especially in the vulnerable preadolescent years. In situations where the strain of the mission increases, family services become essential.

As we have testified in previous years, NMFA remains concerned that some of the programs military families need most are not given the resources to match the demand:

New Parent Support Program

The New Parent Support Program's funding continues to fluctuate, despite its proven successes in giving young families the tools and education they need and decreasing the probability of family violence. In testimony, the Chief of Naval Personnel, Vice Admiral N.R. Ryan, Jr. called the program the Navy's "primary child abuse prevention initiative providing early intervention home visitations that are designed to promote healthy functioning families, child development, and positive parent-child interactions." Because the New Parent Support Program remains one of the best and most productive family programs, NMFA urges that it be fully funded for all installations.

Overseas Mental Health Counselors

NMFA was concerned to hear in late 1999 about the loss of contract civilian mental health counselors at installations in Germany. Although DOD and the services have promised to restore counseling positions, NMFA is puzzled at how such an important asset could have been pulled out of overseas communities where resources "outside the gate" are limited, especially for adolescents and family counseling.

Deployment Family Support

When whole units—whether active duty, Reserve or Guard—deploy overseas to places like Kosovo and Bosnia much care is taken to build a strong support network for the families left behind. The Navy, with its Ombudsman program, and the Marine Corps, with its Key Volunteers, have strong networks of support for the families of their service members on ships. The Army's Family Support Groups provide significant help and links to commands for families in the deployed units.

The services have worked hard to improve communication links between deployed members and their families. Almost every deployed service member now has access to email, and families without their own computers can communicate via email at family centers and installation libraries. When the 1st Cavalry Division deployed to Bosnia from Fort Hood, Texas, the division set up a family support center with video conferencing, email, and dedicated support personnel. Families from the division could access base support services, communicate with the deployed members, and get prompt answers to questions ranging from "Why is the email down to the unit?" to "How do I get a doctor's appointment?" to "Where can I get help dealing with a rebellious teenager?" Units deploying subsequently have followed this model because they saw the link between high quality family support programs and the readiness of the service members who are deployed. Knowing that their families are well taken care of enables the servicemembers to focus on their mission.

Most of these wonderful support services, however, are not budgeted for in the cost of contingency operations. Too often, installations must find the money out of their own operations and maintenance accounts to set up the extra family programs needed when some of their units deploy. Since quality family support contributes to the readiness of the mission, NMFA believes that the cost of family support should be factored into the cost of the mission and appropriate amounts budgeted. An installation should not have to choose between providing support programs for families of deployed units and fixing the leaking water pipes in its buildings.

Reserve Family Support

Reserve and Guard units now shoulder a large burden for many of the U.S. missions abroad, carrying out tasks that were the sole purview of active duty troops just a few years ago. Providing support for Reserve Component families is a critical readiness issue; however, current active duty family support programs may not always meet the needs of Reserve Component families. Although, the perceived danger of deployment is a factor that compounds the stress for all families, Reserve Component families must often handle that stress without the support network available to active duty families.

Because of geographic dispersion, Reserve Component families often lack the support system of peers they can turn to for commiseration and assistance. Many Reservist Component members may be assigned to a unit located several states away from their homes; their families then face the stress and the "ambiguities" of deployment not only without the installation support services such as family centers, chaplain services, and military relief societies that are available to active duty families,

but also without the close-by support of other families in the unit. A website and a toll-free number can provide the link to vital information and logistical assistance Reserve Component families need, but cannot substitute for the community support system found at a military installation.

What about the "ones and twos?"

Although family support programs have generally worked well when whole units are deployed, NMFA continues to hear from the families of the "ones and twos"—the active duty and Reserve Component members deployed singly or in small groups or who are assigned overseas for a year-long unaccompanied tour. These families often do not have a readily available support network. The lucky families are those living on an installation, with an ongoing relationship with a local unit, when the servicemember deploys or leaves for an unaccompanied tour. Many others, however, find themselves isolated in a civilian community.

Families have also noted the disparities between the support offered for the some of the "high profile" assignments—the places in the news—as opposed to the places where servicemembers have gone for decades. Servicemembers deployed in support of the Bosnia operation, for example, are allowed free "morale calls" via the military's DSN lines. On the other hand, servicemembers on unaccompanied tours to Korea must pay for their phone calls home.

New Missions, New Support Strategies

As the demands of missions change, the type of family support available must also change. In the Kosovo operation last spring aircrews could leave their home bases in Europe to fly their missions over Kosovo and often return home in time for breakfast or to drop the children off at school. Although some families could deal with the situation by joking about its surreal aspects—"Pick up some milk on your way home from the war, honey"—the strain was evident on families so close to the action. Special support services will be needed in future operations like this for the children who watch their parents go off daily to fight a war that is featured on the 24-hour news channels, for the schools who must educate these children in the midst of the tensions engendered by the conflict, and for the parents, both in the sky and on the ground, who must hold the family together.

Military Family Financial Issues—It's More than Food Stamps!

The military's family support programs are especially valuable for the young families who must handle the ups and downs of the military way of life while far from home, often for the first time. NMFA thanks the Congress for its support last year for some of the most vulnerable of military families—those who lose their benefits in the Women, Infants and Children Program (WIC) simply because the military transfers them to an overseas assignment. The Congressional mandate that DOD begin a supplemental program similar to WIC and the initial funding, although small, were greeted with joy by the families who didn't know they'd lost access to WIC until they arrived overseas; by the volunteers in the military spouse clubs who had been raising money to buy formula for infants in their communities; by the family center personnel who had to tell families who came to apply for WIC that "we don't have WIC here;" and by the hospital personnel who saw too many babies not getting the nutritional food they needed. Unfortunately, all those folks are still waiting for WIC. DOD has not yet implemented the program nor given the people in the field any indication of when it will be implemented. We urge the Congress to give DOD a deadline for implementation and the funding necessary to provide the program's nutritional counseling and healthy foods to the families who need it the most.

Losing access to WIC just when a family is most vulnerable, during a military relocation overseas, only heightens the precarious financial position of many junior servicemembers. Headlines about "military families on food stamps" have focused attention on the financial plight of young military families; however, NMFA hopes that those who would seek to help these families will look beyond the headlines to address the complexities of the issue. Many families qualify for food stamps because they live in government housing and only cash income is counted when determining eligibility.

Frequent Permanent Change of Station (PCS) moves, while creating a hardship for most military families, hurt the junior families disproportionately. Service members have not seen an increase in their per diem and mileage allowance for PCS moves since 1986. Gasoline prices are at 20-year highs, only intensifying the thirteen-year lack of inflation adjustments for military move costs. A study conducted recently by DOD found that junior enlisted members were only reimbursed $0.27 on the dollar and the overall average for all ranks was only $0.62. Given that most military families move every two to three years, this financial burden can take a

toll on a family's financial well-being. Any move brings with it some emotional hardship, new schools, friends, jobs, and neighborhoods, but only military moves add such a consistent financial hardship as well.

A variety of other factors place and keep military families on the financial edge:

—out-of-pocket housing costs
—transportation expenses, especially when living far from the installation
—the consequences of recruiting someone with a family and then expecting them to live on a salary more appropriate for a single person in the barracks
—a lack of good financial education and counseling which can make soldiers vulnerable to consumer scams, unable to budget or make the best spending and saving decisions
—an operations tempo in which deployments or the threat of deployment make it difficult for the military spouse to juggle child care and a job
—poor access to affordable credit.

"Fixing" these military families' financial situations won't be easy, although the pay raises in the pipeline and DOD's proposed improvements in the funding of the Basic Allowance for Housing (BAH) will help. But, as we have testified in past years, the problems that put these families on the financial edge and created the recruiting and retention crisis did not appear overnight and won't disappear overnight either.

Housing

The military services—and military families—continue to regard housing as one of the quality of life pillars for military families. In testimony this year, Assistant Secretary of the Army (Installations and Environment) Mahlon Apgar stated:

> No single quality of life issue is as important as adequate housing for soldiers and families . . .. Families need more than "quarters;" they need a place to call "home" in communities that are safe, supportive and attractive.

Although they still look to the installation as their source of "community," most military families stationed in the United States find housing in civilian neighborhoods off the installation either by choice or because the type of housing they need is not available on the installation. They depend on the Basic Allowance for Housing (BAH) to acquire quality, affordable housing in safe neighborhoods (with good schools) at a reasonable commute from the installation. NMFA thanks the Congress for the additional funding added to the BAH in fiscal year 2000. We also applaud DOD's request for funding in fiscal year 2001 to finally lower average out-of-pocket costs to the 15 percent standard mandated by Congress, as well as its additional request to fund further increases in BAH to eliminate out-of-pocket expenses totally by 2005.

The elimination of servicemembers' out-of-pocket expenses for off-base housing in the United States is one of a three-pronged initiative established by the Secretary of Defense to improve military housing. The other components of the Secretary's plan are to increase the Department's reliance on the private sector through privatization and to maintain military construction funding.

Since the law creating the housing privatization authorities was passed in 1996, NMFA has regarded the use of privatization as a useful means of eliminating the backlog of construction of new housing and renovation of substandard housing. In 1998, the Department noted that about 200,000 of its military-owned family housing units were old, had not been adequately maintained and modernized, and needed to be renovated or replaced. DOD estimated that it would need $20 billion and more than 30 years to eliminate the backlog using traditional military construction funding. Using the privatization authorities could help DOD reduce the backlog by its target date of 2010. Although it sees the need for the infusion of private capital to improve military housing, NMFA has watched the early privatization efforts with some questions:

—How long will it take before families will move into some of this housing? The past year has been encouraging as large projects at Lackland AFB, TX and Fort Carson, CO were turned over to developers and new housing opened to families.
—Where are the standards for oversight of the development process?
—How is community input sought and used in the development process?
—How are the projects' effects on community services such as schools evaluated? Are school facility and funding needs addressed early in the development of the plan?
—Who makes sure maintenance is performed satisfactorily?
—What is the role of the installation commander?
—Who makes sure money is available for long-term maintenance and upgrades (i.e., the roof that needs to be replaced in 20 years)?

—Who is the advocate for family members living in the housing?

—Where is the priority for preserving the things that make a "military community" strong when the military no longer "owns" the houses in that community?

Last year, NMFA was concerned when services dropped their requests for most military construction funds for military housing in CONUS in favor of a focus on privatization. This year, however, NMFA is pleased that the third prong in DOD's housing initiative, military construction, is much healthier. Some areas, either because of the location, the local economy, or unique needs of the installation, will continue to require military construction funds to build or renovate family housing. It is imperative that these areas receive the funding they need and that the Department move at a quicker pace to identify the prime sites for privatization and request military construction funds for others.

We also hope that the ongoing maintenance and repair needs are not ignored. NMFA continues to hear from families about long waits for routine maintenance calls, poorly done repairs, and unsafe conditions in some housing. Families ask that maintenance accounts not be continually raided to fund other programs. They know that delayed maintenance often creates just a more expensive problem to fix later on—and they do not want to be the ones to have to live with (or in!) that problem.

Education

Military children are our nation's children. Whether they attend Department of Defense schools or civilian school districts, they deserve a quality education. Today's military force is an educated force and a family force. Military members have high expectations for their children's education. More are accepting or rejecting assignments, or even deciding to leave the military, based on perceptions about the quality of education their children will receive at prospective duty stations.

NMFA thanks this Subcommittee for its support of schools operated by the Department of Defense Education Activity (DODEA). DODEA's initiative to implement full-day kindergarten and reduced class size in the primary grades is important in ensuring that children educated in DOD schools are ready to learn in any school district in the United States. Military parents had consistently listed full-day kindergarten for overseas schools as a top educational priority; they are grateful that someone has responded to their concerns.

More than 75 percent of military children attend civilian public schools. NMFA also is grateful to this Subcommittee for its support of quality education for these children, and their civilian classmates. Congressional appropriations for the DOD Impact Aid Supplemental Funding helps those districts most heavily-impacted by the military presence. We also thank the Subcommittee for the $5 million for fiscal year 2000 to address special education needs in Hawaii as well as for the $10.5 million in DOD Quality of Life enhancements to enable several civilian schools which almost exclusively educate military children to make necessary facility repairs and renovations.

Military Family Health Care Concerns

NMFA knows that health care is a key quality of life issue impacting military families. We were very encouraged by the following remarks by General Shelton at the 2000 TRICARE Conference on 31 January 2000,

> This year we've got to address health care . . . The bottom line is that our service members and their families must be able to count on their health care system. Our fighting men and women on the frontlines of freedom need to know that their families are being taken care of.

Inequities:

While DOD considers TRICARE a program providing a uniform benefit, there are certain gross inequities occurring within the system. The 12 region structure, consisting of seven contracts with five different contractors, contains inherent flaws that foster inconsistency in basic services such as appointments, claims, and enrollment.

Because there is a variation in the TRICARE Prime services provided in each area (the scope of care provided by Military Treatment Facilities and the private sector), military families must relearn the system with each permanent change of station (PCS) move. They have to determine how to make an appointment, what percentage of their care can be provided at a military treatment facility (MTF) versus the portion of care that must be performed by civilian network providers. For those fortunate enough to receive care within the MTF system, care is provided without copayments. However, for those who must receive care from civilian network providers, a copayment is required. NMFA is pleased that the DOD proposed

budget addresses this inequity by removing copayments for active duty beneficiaries enrolled in Prime.

TRICARE Standard and Extra beneficiaries do not routinely receive any information, either a TRICARE Handbook or information from the contractor. Therefore, these beneficiaries are even less likely to know the "rules of the road" in a new region. In addition, without a network provider handbook, Standard beneficiaries are unable to determine who is in the network to take advantage of the TRICARE Extra discounts for BOTH the government and the beneficiary.

The lack of portability and reciprocity places an undue burden on beneficiaries, resulting in the disruption of care to the most mobile of all Americans, the military. At the 2000 TRICARE Conference, General Shelton stated that the TRICARE requirement forcing family members to reenroll every time they change regions "adds to their stress and frustration, and often times, their workload."

The 12-region system results in significant variations in the delivery as well as administration of benefits throughout the nation. The crux of the problem is that contracts vary between regions. In order to provide a uniform benefit, there should be one contract that specifies the benefit and apply that contract to all regions. Currently, there is one operations manual to administer the program and seven different versions of contractors' policy manuals dealing with issues such as claims processing.

DOD should define the benefit as well as a uniform set of policies for contractors to use to provide the benefit. For example, DOD should determine when TRICARE beneficiaries need to obtain pre-authorization and for what procedures—not the contractor. DOD should decide what benefits will be paid for and when—not the contractor. TRICARE is DOD's health care plan. It does not belong to the contractors.

TRICARE Prime Remote

Perhaps the greatest inequity in service occurs for those families remotely assigned who do not fall within the radius of a MTF catchment area. These families not only face the additional hardships of assignments far from the support services of military bases; the only option they have is the more expensive Standard fee for service option. It is difficult in certain areas for remotely assigned families to locate providers who participate in the TRICARE plan. For those families assigned to rural areas, it is an additional hardship when there are few providers practicing medicine in their area. What are these families to do if there are few specialists in their area and the physicians refuse to participate in the TRICARE system? We continue to hear many stories from areas where the only specialist such as a pediatrician in town refuses to treat TRICARE beneficiaries.

Even in populated regions, there continues to be difficulties in areas with few military beneficiaries, the "ones and twos." These families tell us they often face claims processing difficulties as their providers, unfamiliar with the TRICARE claims processing system find the process tedious and time consuming, often resulting in additional effort on the part of the provider to process a claim where the reimbursement is limited.

Physicians have told NMFA that reimbursement from TRICARE was less than their overhead and as a result they were losing money. In some areas, it is difficult for primary care physicians to refer TRICARE beneficiaries to specialists who also participate in TRICARE. In addition, physicians report difficulty in obtaining contractor approval for tests such as magnetic resource imagery (MRIs). Attempts to obtain authorization for care result in multiple long distance calls taking a great deal of their office personnel's time to get approvals.

NMFA is extremely pleased to note DOD's plan to provide a Prime remote benefit for these families. This will do a great deal to resolve a gross inequity in the provision of an equitable health care benefit and hopefully will relieve many of the concerns of military families. However, NMFA is anxiously waiting for DOD to inform us of what benefits will be provided as TRICARE Prime Remote.

TRICARE Business Practices

Inefficiencies in TRICARE business practices directly influence military family members' quality of life. Errors resulting from a complex claims processing system impact beneficiaries who spend an exorbitant amount of time attempting to perform claims resolution trying to correct bills for services that are supposed to be covered as a TRICARE benefit.

NMFA is grateful for the congressionally mandated standard of 95 percent of claims processed within 30 days. However, we would like to note that the standard is for "clean claims" (error free) and it is the contractor who determines the error standard. It is the latter group that causes military spouses to inform us that they expend hours on the telephone with practitioners and with contractors' claims proc-

essing staff. This causes undue stress on the part of the beneficiary, especially for the families with multiple claims.

Military families deserve a health care system that has made an investment in state of the art internet technology. Not only does the antiquated system result in claims headaches for beneficiaries; it also presents a disincentive for physicians to participate in TRICARE networks. NMFA is concerned that the cost of claims processing exceeds industry standards, resulting in scarce resources being diverted to an obsolete system rather than providing care to our beneficiaries.

What is perhaps the most egregious problem brought to our attention is that military families are being turned over to collection agencies for non-payment of disputed TRICARE bills. This causes great distress to our families as it is particularly offensive not only to their values system, but because a letter of indebtedness can mean the end of a military member's career. We are especially alarmed as families tell us they are paying the bills to avoid a bad credit rating, either because they do not realize that DOD should be covering these bills or they are exhausted from dealing with the maze associated with the complex claims processing system.

Appointments

Military families have told us that the military providers are excellent, "once you get in the door." The TRICARE system lacks customer service focus and is difficult for families to navigate a complex delivery system. General Shelton has said,

> Many service members' attitudes toward TRICARE stem from their experiences on the telephone . . .. Our service members and their families should not be forced to wait on the phone and listen to recordings for 20 minutes just to secure an appointment.

Access to the system has been a chronic problem even for Prime enrollees who have been guaranteed appointments that meet access standards. There is a lack of consistency in the appointment process not only between regions, but within regions as well. In some regions, family members call either the contractor's central scheduling, the MTF scheduling, or the clinic directly for an appointment, often not knowing which call will reward them with the appointment they need.

NMFA concurs with the Government Accounting Office (GAO) that families need a health care program that is more user friendly, less complex, more efficient, and business-like. In written testimony before the House Armed Services Committee on 15 March, 2000 GAO states that the

> . . . two most pressing issues—the difficulty of obtaining appointments for care; and the need to pay claims for care provided by civilian providers in an accurate, timely and efficient manner. Improving services in just these two dimensions would likely go a long way toward increasing beneficiary satisfaction.

We believe that beneficiary satisfaction would be greatly improved if DOD focused on its operational problems and business practices. These problems are not unique to the military health system (MHS), as they have been addressed successfully in the private sector. Again, we concur with the GAO who has stated on 15 March 2000, in their written testimony before the House Armed Services Committee,

> . . . the military health system continues to be plagued with operational problems, which are a source of beneficiaries "and providers", discontent. Problems such as accessing appointments and processing claims, while significant, are not insurmountable. Increased management attention from DOD could go a long way toward correcting these and other deficiencies, and thereby increasing beneficiary satisfaction.

Custodial Care

We are grateful to the Subcommittee for including in last year's Defense Appropriations Act, a definition of custodial care that meets industry standards to provide medically necessary care. However, last year's provisions have yet to be fully implemented across all regions and the program is moving forward slowly. If not for the intervention of Congress, DOD would have continued to pursue its unique definition of custodial care. We strongly and respectfully request that this Subcommittee reiterate the will of Congress on providing medically necessary care in this year's Appropriations Act. We urge oversight by Congress to ensure that DOD implements this policy and provides this care. Please consider that these are the families who bear the burden of caring for the chronically ill, in the direst need of medical assistance, and have been forced by DOD policy to enroll in Medicaid. Where is the equitable benefit when families are transitioned from their federal employer's health

care benefit to a state based welfare program? Our families deserve a plan consistent with other federal employees' health benefits programs.

Exceptional Family Member Program (EFMPs)

The TRICARE system has difficulty meeting the complex medical needs of its beneficiaries. Many families are told that they cannot enroll their EFMP children in Prime, because specialty care is often not available at the MTF or via the network. Families must then rely on the more expensive fee for service Standard option, when they would prefer remaining in the managed care option. As a result of being shunted into the Standard option, these families often cannot get access to military medical care for routine problems, as the system takes Prime enrollees first. A family member, who has been forced to keep their child in Standard to receive specialty treatment for a cardiac condition, is then unable to take that child to the MTF for treatment for an earache because Prime enrollees receive priority for care.

As Standard beneficiaries, these families are subject to deductibles, often required to pay for treatment prior to service. Even with initial outlays of out of pocket costs, there is often no assurance that the service will be covered until the explanation of benefits (EOB) arrives. Participation in the Standard option results in families being liable for the 15 percent above Champus Maximum Allowable Costs (CMAC). This imposes an additional financial burden, as families must obtain a supplemental policy, which may have a preexisting condition clause precluding the beneficiary from participating in the plan.

Non-availability Statements (NAS)

Current policy regarding non-availability statements has a direct impact on military families' quality of life. For those who have chosen the Standard option, they are often forced back into the MTFs for treatment. The NAS denies Standard beneficiaries, those who have chosen a fee for service option, those who have chosen to pay greater out of pocket expenses, a guarantee of one of the most critical factors in quality care, the guarantee to continuity of care

Travel

It is a gross inequity when Prime beneficiaries find that specialty care is not available within their MTF or local network and as a result, families are often forced to travel great distances at their own expense to receive specialty care. These families not only have to deal with the crisis of the illness of their loved one, they must also bear the burden of travel expenses, because the care that is to be provided as a benefit is not available within their MTF or network.

Some examples of undue travel burdens that we have heard from military families are:

—Fort Polk, LA to Fort Sam Houston, TX (7 hours one way) or Lackland AFB, TX (8 hours one way)
—Camp Lejeune, NC to Newport, VA (4 hours one way) or to Bethesda, MD (6 hours one way)
—Fort Bragg, NC to Walter Reed (4 hours one way)
—Port Hueneme, CA to Camp Pendelton, CA (3.5 hours) or to San Diego, CA (4.5 hours one way)

Retirees

When military retirees turn 65 (Medicare eligible); they lose all of their DOD funded TRICARE health care benefits other than "space available" care at military treatment facilities (MTFs). Many military members and their families believe they were promised "free health care for life." The post cold war downsizing of MTFs has resulted in a smaller MHS with fewer military medical personnel and fewer hospitals and clinics. Because priority for care is provided to Prime enrollees, the amount of space available care is decreasing for the over 65 retirees. Other Medicare eligible Federal employees continue to be covered by their employer sponsored health insurance (FEHBP) as a supplement to Medicare. NMFA considers this a major inequity in the provision of benefits.

General Shelton has stated in written testimony before the Senate Armed Services Committee on 8 February 2000,

> Let me stress that the Joint Chief's commitment to quality healthcare for all military members, including retirees, remains firm. Keeping our promise of ensuring quality healthcare for military retirees is not only the right thing to do, it also is a pragmatic decision because it sends a strong signal to all those considering a career in uniform.

The sons and daughters of those who have served, typically potential recruits, have been discouraged to pursue a military career. These potential recruits see the breach of faith that has occurred with our retirees who are their grandparents, parents, or other family members. As long as our society permits DOD not to honor its health care promises to our retiree population, it will continue to demonstrate that promises from the past are not honored, nor will the promises made to them be fulfilled.

DOD is conducting four programs to address access to health services for the over 65 population. Three programs provide health care services: Medicare Subvention (known as TRICARE Senior Prime), the FEHBP Demonstration, and the TRICARE Senior Supplement Demonstration (TSSD). The fourth program is provision of a mail order and retail pharmacy benefit called the Pharmacy Pilot Project. NMFA is very concerned for the welfare of our retirees who have served their nation well. We say enough of tests! Our retirees are dying at a rate of 3,784 per month! The veterans of World War II and Korea do not have time to wait for tests. They did not hesitate when our country called them to service. Our nation owes a debt of gratitude to our military retirees for our freedom and it is time that we paid back that debt.

Reservist Family Health Care Issues

Reserve Component families must make decisions regarding their health care benefits, which quite frankly is confusing enough without the stress of their loved one about to be placed in harm's way, or without the experience of working a complex system. Since the health care options afforded to them are relative to the length of duty and the majority of orders are for less than 180 days, most are eligible only for the Standard option. Even if their assignment is for greater than 180 days and unless they live within an MTF catchment area, they face the same Prime access challenges as remotely assigned active duty families. Because of their location, they cannot benefit from visits to TRICARE service centers or MTFs for information.

It is a difficult decision to change providers as they may have to sever their relationship with their current physician if they are not a TRICARE provider. They may have a family member currently under treatment with a trusted physician. Families go through a great deal of angst as they have relationships and trust of their physicians. It is difficult to disrupt care.

Reserve Component families face logistical issues similar to remotely assigned active duty families as they attempt to locate providers that participate in TRICARE. Claims processing poses a particular problem for this group who are not familiar with working the complex system. There are financial considerations associated with the health care benefit decision. The member's employer may discontinue paying their portion of the reservist premium. This leaves the beneficiary with COBRA rates that are 102 percent of the premium. Copays and deductibles will apply if the family is in Standard and deductibles maybe waived at the discretion of the Secretary of Defense. However, if they are not waived, this can pose an additional financial hardship to a family that has already met the deductibles required by their civilian insurance. Pre-existing conditions can prevent participation in a supplemental plan. In addition, these decisions are being made with a potential loss of income.

Because Reserve units often draw their members from several states, their leadership often faces the challenge of providing the correct information for beneficiaries in several different TRICARE regions. These families need timely accurate information in order to make a difficult decision with far reaching implications.

So, how are military families unique?

Yes, military families of today are unique. While our modern society is a mobile one, how many families move every two years for twenty to thirty years of their lives? While fathers and mothers in civilian business travel often, how many are gone for six months at a clip to places most Americans can't pronounce or find on a world atlas? While all parents are concerned about their children's health care, how many have to worry whether or not their family can access timely care while on a submarine in the depths of the ocean? While modern parents juggle jobs and time with their children, how many struggle to help with homework before going off to fight a war that night? While others are in occupations that can be life threatening, how many have to fit their children with gas masks?

Senator STEVENS. Thank you very much.

Senator.

Senator INOUYE. All I can say is amen to you, Ms. Raezer.

Ms. RAEZER. Thank you.

Senator STEVENS. Thank you very much.

The next witness is Chief Master Sergeant Mark Olanoff, Legislative Director, The Retired Enlisted Association.

STATEMENT OF MARK H. OLANOFF, CHIEF MASTER SERGEANT, U.S. AIR FORCE (RETIRED), LEGISLATIVE DIRECTOR, THE RETIRED ENLISTED ASSOCIATION

Master Sergeant OLANOFF. Good morning, Mr. Chairman. It is good to see you again. Senator Inouye, The Retired Enlisted Association (TREA) would like to thank you for co-sponsoring Senator Reid's concurrent receipt of military retired pay and Veterans Administration (VA) disability, and hope that you can work for passage this year.

And, Senator, you probably stole a lot of our thunder this morning with your support of military retiree health care, but I am going to touch on a few issues that we believe are important for the next fiscal year. We are requesting funding for comprehensive health care fixes for our aging Medicare-eligible military retirees, who were promised free lifetime health care for 20 years or more service.

With 3,784 military retirees dying each month, these men and women who drop from the military health care at age 65 cannot wait much longer for a true health care benefit. As our members say, "I will not be here to use the health care after all of the tests, and I think Congress is waiting for us to die."

Like pay and compensation last year, this is the year of health care. Our members have mobilized grassroots campaigns to fight for their promised health care both in bills in the House and in the Senate which promise lifetime health care to retirees and to access the Federal Employee Health Plan. The momentum to do something for military retirees is now. They cannot wait any longer.

General Shelton went on record in November 1999 to the Senate Armed Services Committee to say that the Joint Chiefs are committed to supporting DOD's efforts to improve both the fact and perception of military health care for the beneficiaries. Those who serve or those who have served deserve quality medical care. The administration failed to accommodate those recommendations in the fiscal year 2001 budget, so it is up to your committee, Senator, to do that.

Access to pharmaceuticals is a great concern to Medicare-eligible military retirees due to the cost and increased usage. TREA requests expansion of the base realignment and closure (BRAC) pharmacy benefit nationwide to provide a national mail order pharmacy benefit at an $8 co-pay, or a 20 percent retail pharmacy benefit for all military retirees 65 or older. If considered, please do not include the enrollment fees or deductibles that represent a significant out-of-pocket expense for enlisted retirees, whose average retired pay is under $16,000 per year. Expand the TRICARE Senior Prime nationwide by January 1, 2001, and test for a Medicare fee for service benefit.

Chairman Warner, of the Senate Armed Services Committee, recently introduced legislation, the Military Health Care Improvements Act of 2000, to provide the BRAC pharmacy benefit to all Medicare-eligible military retirees. His bill also extends the current demonstration programs until 2005. Further, the Budget Com-

mittee included a provision for a $400 million military retiree health care reserve fund to provide additional funding. We ask that you completely fund Chairman Warner's bill.

The Retired Enlisted Association recommends full funding for the Defense Health Program, including TRICARE. TRICARE funding should reflect the number of beneficiaries eligible for military health benefits, especially those requiring skilled nursing care or custodial care. Make TRICARE Standard a more attractive benefit by eliminating the 115 percent billing limit when TRICARE Standard is the second payer, and reducing the TRICARE catastrophic cap for retirees from the current $7,500 to $3,000, and eliminating pre-authorization requirements for TRICARE Standard beneficiaries.

Today, let us not forget about the medical needs of this Nation's aging retirees. They did not forget about this Nation's needs during their honorable service for this country.

Chairman Stevens and Senator Inouye, again, The Retired Enlisted Association thanks you for what you have done in the past and we appreciate the opportunity to be here today.

[The statement follows:]

PREPARED STATEMENT OF MARK H. OLANOFF

The Retired Enlisted Association (TREA) would like to thank the chairman and distinguished members of the Senate Defense Appropriations subcommittee for the opportunity to come before you to discuss funding issues as it relates to our members needs. We extend our appreciation for the funding levels last year as it pertains to health care, retirement benefits, and pay. In addition, we are requesting increased levels to meet the needs of military retirees, guard and reserve as well as active duty and their dependents.

TREA has 110,000 members and auxiliary representing all branches of the Armed Services, retired, active duty, guard and reserve whose continued concern over constrained funding levels for the Department of Defense for military personnel issues impacts their daily lives from the healthcare they receive at a military facility to the retirement check they receive in the mail. Medical care, adequate pay, inflation protected retired pay, survivor benefit plan, concurrent receipt and commissaries are concerns of the entire military community.

HEALTH CARE

With bases closing, military treatment facilities (MTFs) downsizing and demographics changing, the need to provide access to health care to our ever growing number of aging retirees creates anxiety with those that "were promised lifetime health care." The fact remains that DOD has a responsibility to those men and women who have served in the uniformed services to provide a medical benefit to those retired military beneficiaries that were promised health care. The demographics have changed from the 1950's when retirees were only 7 percent of the military health care beneficiary population, therefore Congress needs to provide adequate funding to create a plan to administer a health care benefit to retirees. National expansion of the sites and increased number of enrollees in the current Federal Employees Health Benefit Plan (FEHBP) 65+Test program is needed and the step in the right direction to testing the viable health care options for retirees access to medical care in the future. As this committee is aware, this is only one part of the matrix for accessing health care, expansion of the current BRAC pharmacy benefit and the current test of Medicare subvention will help offer a complete medical benefit for Medicare eligible military retirees.

Pharmacy: Pharmacy benefit for Medicare eligible retirees

We are requesting this committee to extend the BRAC (Base Realignment and Closure) pharmacy benefit to include all Medicare eligible military retirees regardless of where they reside. The BRAC pharmacy program provides a National Mail Order Pharmacy (NMOP) benefit at a cost of an $8 co-payment for a 30–90 day prescription, as well as a 20 percent charge for retail pharmaceuticals at TRICARE network pharmacies.

The April 29, 1999 DOD Pharmacy Benefit Report in section 2 "Pharmacy Redesign Approach and Results" subsection 2.3 estimated the cost for a NMOP and retail pharmacy benefit for 1.4 military retirees over age 65 at $400 million.

TREA was concerned after Public Law 105–261 sec. 723 (DOD pharmacy redesign) was passed, DOD met with military associations in meetings to discuss the pharmacy redesign. In January 1999, all military associations were dropped out of DOD discussions. It was not until August 1999, did DOD propose the Pharmacy Pilot Program to begin enrollment in April 2000, not the required date of October 1, 1999.

The proposal included the BRAC pharmacy benefit with a $500 enrollment fee per couple. The high enrollment fee would indeed skew the number of participants in Fleming, KY and Okeechobee, FL, simply because those who have high usage rates of pharmaceuticals would be the only ones that would participate, therefore increasing the overall enrollment cost in the future. Also, this could jeopardize the current BRAC pharmacy benefit that has no enrollment fee, but the same benefits as the Pharmacy Pilot Program with a NMOP and a 20 percent retail pharmacy network benefit.

TREA with support of other Military associations went to Congress to request a re-evaluation of the pilot program. In response, Congress directed DOD to come up with a different proposal to submit to them changing the payment structure of the pharmacy program. On November 17, Dr. Sue Bailey, Asst. Secretary for Health Affairs for DOD, met with TREA, TROA, NMFA, NAUS, NCOA, AUSA, and FRA to state that the Pilot Pharmacy Program would not change and would be implemented in April 2000.

The $500 per year for a couple or $800 when expected co-payments are included, the new Pharmacy initiative represents a significant out of pocket expense for enlisted retirees whose average retired pay is under $16,000 per year. For those retirees 65 and older that can access a BRAC pharmacy program now, those that based their pharmaceutical needs on the MTF, only 17 percent of that population access the NMOP benefit currently. Also, If you have a pharmacy benefit through a Medicare HMO, employer sponsored health care, or spouse, then you cannot access the BRAC benefit.

Again, I cannot stress the concern over the access of pharmaceuticals to our Medicare eligible military retirees due to cost and increasing use of drugs for our senior citizens. We are requesting additional funding to be allocated to expand the BRAC pharmacy benefit to all Medicare-eligible military retirees nationwide with no enrollment fees or deductibles. In addition, we are asking for complete funding for a pharmacy redesign to include a complete national formulary that addresses the drug utilization of our aging war heroes and heroines.

FEHBP—65+ test program

In order to have a fair and accurate test, we need to provide the opportunity for Medicare eligible military retirees to increase enrollment in the FEHBP 65+ test for the November 2000 open enrollment season. As we testified last year before this committee, we know that not all military retirees will enroll in this program, but we need to give them the option to make that choice.

TREA is urging this subcommittee to increase the number of demonstration sites, as well as the number of enrollees eligible to participate in the FEHBP 65+ Test effective for the November 2000 open enrollment season. Out of the 66,000 eligible to enroll only 2,500 are currently covered by FEHBP as of March 16, 2000. It is absolutely necessary that we give these retirees an equitable benefit that is as good or as equal to federal civilian retirees.

DOD did not market the program in a timely manner as seen in the low enrollment numbers. Education and marketing by DOD was essential to determining the future success of the FEHBP 65+ test. The marketing timeline dates set up by the Tricare Managed Activities (TMA) office overseeing the program were not all met. The first notification of the program for eligible beneficiaries was via a postcard due out on July 15, which was not sent until August 15, 1999. Secondly, the "Health Fairs" that were sponsored by DOD were not put in place until the first week of November, which was a month late. These eligible beneficiaries in these 8 test sites were not properly marketed to on the FEHBP 65+ test program.

The three year test deterred Medicare Eligible Military Retirees from participating in the program this year. This is a population of beneficiaries who cannot take risks in their health care, meaning to go into a three year test with no protection if the program ends. The continuity of health care for this senior population is not guaranteed in three years, therefore we request that these individual that are both in the program or will be enrolling in the program be grandfathered into the FEHBP 65+ test regardless of the success of the program.

The Fiscal Year 1999 Defense Authorization Act subtitle C Section 721 Demonstration Project to include certain covered beneficiaries within Federal Employees Health Benefits Programs clearly defined the eligibility and number of enrollees for the test program. As printed in legislation the total number of enrollees may not exceed 66,000, this was interpreted by the DOD as 66,000 total persons eligible to enroll in the test program. We knew that these designated 66,000 eligible participants would not all enroll because of the limited three year test program. Many of these participants may have employer provided insurance, Medicare Risk HMOs, Medigap policies, or have enrolled in TRICARE Senior Prime as in the case of the Dover, DE program. TREA would like to see the sites expanded nationwide and to increase the number of participants eligible to enroll.

TREA and other military association representatives went on record at a July 1, 1999 hearing in the House Civil Service Subcommittee stating the above concerns of implementing a fair test. DOD representative responded by saying that out of the 66,000 eligible participants, 70 percent would enroll. Seeing by the current 2,500 enrollment number, we feel that our arguments on implementing a fair test were not met. Remember that this program services a population of beneficiaries new to FEHBP, unlike retired Federal Employees who understand the program. It was essential that they knew how FEHBP works as a wrap health care coverage to Medicare, as well as if there were protections on their Medigap plans during this 3 year test. TREA feels that by marketing to an increased number of eligible beneficiaries, this committee will be able to have the data necessary to prove that this is a viable program for military retirees in the future.

TRICARE Senior Prime Demonstration Program

TREA would like to thank you for your support for the Tricare Senior Prime Test program, Medicare Subvention. With the favorable response to this program by military retirees in those six designated test sites, TREA is asking for nation wide implementation of TRICARE Senior Prime. Senator Phil Gramm (R-TX) introduced S. 915 to make the TRICARE Senior Prime program permanent on a phased—in basis. The bill would expand Senior Prime to ten additional locations with full-service military hospitals by January 1, 2001 and then across the remaining TRICARE Prime catchment areas no later than October 1, 2002. We are requesting that this committee provide funding to expand the Tricare Senior Prime Test nationwide to be effective Jan. 1, 2001. The test program terminates on December 31, 2000, we need legislative action for fiscal year 2001 to move this program forward. In addition, Senator John Warner (R-VA) included a provision in his bill S. 2087 to extend the TRICARE Senior Prime Test until 2005.

Many of our Medicare-eligible retirees have received letters from hospitals stating that "space availability" no longer exists or is extremely limited due to downsizing of staff at MTFs. Allowing as many Medicare-eligible military retirees to use Medicare at MTFs will provide them with yet another option for health care. Though it should be understood that this is not the complete solution to the current problem, as it would provide health service to 33 percent of the 1.4 million retirees over 65 now, it is an important piece to solving the whole health care dilemma for these beneficiaries.

The connotation of "TEST" has deterred some of our members from enrolling in TRICARE Senior Prime, though they want to participate, they have a lack of trust for the MTF that turned them away years ago only to welcome them back again with no guarantees of health care past the three year test. TREA has discussed this issue with our members that all conclude that they support the initiative to expand this program nationwide. I would like to add that S. 915 would give DOD the option to provide a fee-for-service Medicare option at certain MTFs if this would be more cost effective for those facilities.

TREA urges the support for funding from this committee to expand TRICARE Senior Prime to a permanent program. This committee's support would ensure expanding TRICARE Senior Prime to 10 additional sites by January 1, 2001 and national expansion on October 1, 2002 to provide a true health care benefit to military retirees that still reside near MTFs.

TRICARE: Full funding for all military beneficiaries

In order to ensure the viability of TRICARE for all eligible beneficiaries to the program, it is necessary that TRICARE funding reflect the number of beneficiaries eligible for military health benefits, not just the ever-declining number of people able to use the military system the previous year. The overall Defense Health Programs continue to have funding shortfalls, TREA urges this committee to provide adequate funding for military readiness as well as the current peacetime component. Our active duty members need assurances that funding will enable access to

quality health care for their families, as well as assuring incentives for these uniformed service members to be recruited and retained in the military. Also, the promise of this health care benefit must be kept for our military retirees that are over and under the age of 65.

Additional funding will be required to keep providers in TRICARE Prime networks as our members are experiencing physicians leaving the system. Most TRICARE managed care support contractors have negotiated TRICARE Prime reimbursement rates with network providers that are even lower than Medicare. Though the issue is a combination of low rates and physicians not being paid in a timely manner due to claims processing. TRICARE is giving physicians two disincentives for not signing up in the networks, low payment and slow payment.

TRICARE Standard (CHAMPUS) reimbursement levels are still much to low to attract quality health care providers. There are also unreasonable delays in reimbursement for TRICARE Standard (CHAMPUS) claims. Members have reported that in the more rural areas, and even some urban areas, where providers do not depend on a military patient base, health care providers have become increasingly unwilling to accept TRICARE Standard (CHAMPUS) patients at all. TREA feels that de-linking the CMAC (CHAMPUS maximum allowable charge) from the Medicare Schedule and authorizing higher payments to providers as necessary will improve access to quality care for our beneficiaries. The Fiscal Year 2000 Defense Authorization Act gave the Secretary of Defense the authority to go over the current CMAC rates to bring in providers into TRICARE networks, but TREA still see this being implemented.

The current claims processing system for TRICARE needs to be revamped in order to reduce the hassles of claims payment for physicians and beneficiaries. The beneficiaries end up getting caught in the middle when they receive collection notices from their creditors, even after they were told the claim would be paid by the TRICARE subcontractor. The Fiscal Year 2000 Defense Authorization Act moved to allow TRICARE contractors to use electronic processing for claims and streamlining the information flow, this being two pieces of the claims puzzle to be fixed. DOD has the authority to bring the claims system to "the best industry standard", but TREA has not seen any proposal or plan by DOD to implement a new program. We are requesting some accountability by this committee to the Secretary of Defense.

As we review the TRICARE program, the issues of low reimbursement rates and claims processing continue to be a disincentive for providers to sign up with a Prime network or to be a provider to accept TRICARE Standard. We will continue to work with this committee to address these issues, as well as the shortfalls in the overall TRICARE program too.

Improvements to TRICARE Prime

TREA appreciates your support last year on improvements to TRICARE prime, but there are aspects of the program that still need to be improved upon. Now that all 12 TRICARE regions have been up and running two years in June of this year, TREA requests your support to:

—Provide Tricare Prime Remote for active duty family members.

—Provide monetary reimbursement for transportation costs incurred by beneficiaries that travel over 100 miles to attain specialty care.

—Eliminate co-payments for active duty personnel and their family members enrolled in TRICARE Prime.

—Provide a proposal or direct the Department of Defense to give a proposal to create efficiencies in the payment of claims processing. The Fiscal Year 2000 Defense Authorization Act directed DOD to create a better mechanism for claim processing, but we have not seen any proposal or action on this issue. This continues to be a problem throughout the TRICARE regions, creating animosity for the program both from the beneficiaries and the providers.

—Ensure there is adequate quality control oversight of managed care systems (preferably by independent parties). Quality control oversight should include monitoring of patient satisfaction, assessment of clinical outcomes, adequate oversight of provider networks, and adherence to access standards in addition to utilization management.

—Ensure portability and reciprocity immediately for all beneficiaries under TRICARE Prime. We are still hearing that active duty family members get caught in a gap while moving from region to region. Therefore, greater continuity within contracts on the issue of portability and reciprocity is essential for having a seamless transition of care upon moving in and out of regions.

TRICARE Standard improvements

TRICARE Standard the fee-for-service option needs improvement to be at least the quality and standard of care as provided under FEHBP standard fee-for-service by:

—Reduce the catastrophic cap from $7,500 to $3,000.

—Eliminate the need for Non-availability statements (NAS) from military treatment facilities and clinics and completely eliminate the requirement for pre-authorization.

—Eliminate the 115 percent billing limit when TRICARE Standard is second payer to other health insurance.

S. 2003—"Keep Our Promises to America's Military Retirees Act"

We ask this committee to support Senator Tim Johnson's (D-SD) bill S. 2003, to provide FEHBP for all military retirees over and under 65. S. 2003, requires Congress to pay for the entire cost of FEHBP for military retirees that entered active duty service on, or prior to June 7, 1956, when a statuary law stated that military retirees over the age of 65 could access healthcare if "space available" existed at the MTFs. Also, this bill would enable military retirees that signed up for the military after June 7, 1956 to become eligible for FEHBP, TRICARE Standard (CHAMPUS), or TRICARE Prime upon turning age 65. Currently, military retirees that turn 65 are dropped from military healthcare. This bill gives them back the "promise of lifetime healthcare" to the men and women who chose a 20 year career in the service not only to honor this nation but to be provided with benefits such as healthcare in their senior years. Finally, H.R. 3573 enables all military retirees to have access to FEHBP effective upon retirement from twenty or more years of active duty service.

This bill has strong grass roots support because it comes closer than any other pending legislation before Congress to answering the military health care promise to America's military retirees, especially her older retirees. S. 2003 has mobilized our members in grassroots campaigns across the nation to fight for their promised health care. TREA asks this committee to consider the fact that military retirees are dying at a rate of over 3,784 a month, our members say "I will not be here to use a health care benefit after all of these tests end, I think Congress is waiting for us to die." These men and women dropped from military health care at 65, cannot wait any longer for a true health care benefit.

Care for the disabled

The statute which authorizes the CHAMPUS program prohibits the military health care system from delivering "custodial care." The statute does not provide a definition of the term. Originally, DOD interpreted the exclusion in a manner consistent with other federal health programs and how the term is understood in the health care industry generally. However, eleven years after Congress created the exclusion with no change in the statute or related legislative history, DOD reinterpreted the term "custodial care" in a manner which excludes care for those with permanent disabilities from the military health system.

DOD's definition excluded custodial care encompassing medically complex skilled care. This approach is not found in other federal health programs with this statutory exclusion. Further, this approach has been rejected by Federal courts.

Changes in DOD's policy and regulations regarding the disabled were ordered by the Fiscal Year 2000 Defense Authorization Act and the Fiscal Year 2000 Defense Appropriations Act. As of yet, DOD has not fully implemented these changes, nor has it provided the public an opportunity to participate in redefining the "custodial care" term as required by law. There is concern that DOD will not provide meaningful change without further Congressional legislation and oversight. Therefore, this committee should require DOD to redraft the definition for custodial care consistent with other Federal health plans and related case law.

TREA asks this committee to require DOD to, at a minimum, provide military families with the same amount of basic health services that are available through FEHBP. DOD should not continue to send dependents of service men and women into welfare programs in order to relinquish their responsibility to pay for needed skilled nursing care.

Medicare part B waiver for military retiree 65+

Retirees were counseled by MTF advisors not to enroll in Part "B" because they resided near MTFs and would be able to access their free health care. These retirees should not be punished with late enrollment fees due to the fact that the local MTF has closed. TREA is requesting to authorize the waiver of the penalty for not enrolling in Medicare Part "B" for Medicare-eligible military retirees.

TREA believes that this small investment will enable retirees to enroll in health care programs which require Medicare Part B for eligibility such as TRICARE Senior Prime and the Fee-for-Service Option plans in FEHBP. Currently, we have military retirees that either are paying a high penalty for Medicare Part B, or just cannot enroll because it is to costly.

Retiree dental plan

The Retiree Dental plan does not provide coverage of crucial benefits, such as bridges and crowns which are needs characteristic of our members. Currently, the contract is not subsidized by DOD, which would mean that increasing the benefit level now would make the program to costly to our aging retirees. Therefore, TREA is requesting funding for a subsidy for the DOD Retiree Dental plan's premium to expand the benefit schedule to military retirees.

Other Personnel issues:

Survivor benefits

TREA members as well as all military retirees who have invested in the Department of Defense sponsored Survivor Benefit Plan (SBP), are frustrated by the offset faced by survivors of military retirees once they reach the age of 62. Currently, a survivor of a military retiree would receive 55 percent of a military retirees retirement pay per month, if the retiree opted for full SBP. However, that amount will be reduced to 35 percent once the survivor becomes eligible for Social Security, regardless of whether or not they have earned Social Security from their own work experience or not. With the average enlisted retiree earning $16,000 per year, a Social Security-eligible survivor is left with only $6,600 in income from their spouses military service.

TREA, along with several other military retiree organizations, has worked closely with several members of Congress recently to eliminate this off-set. Last year, the Senate included legislation, outlined in S. 763 sponsored by Senator Thurmond, which would increase the amount a survivor receives from the current 35 percent to 45 percent over a five year period. TREA strongly endorsed this language and was very disappointed when it was not included in the Fiscal Year 2000 National Defense Authorization Act Conference Report.

We are currently working with members of both the House and Senate Armed Services Committees to include legislation eliminating the Social Security off-set, as defined in S. 2268 by Senator Smith of New Hampshire. It is our hope that, finally, it will be included in the Conference Report of the National Defense Authorization Act. We request that this committee appropriate the resources to implement it.

Another issue of concern regarding SBP is the implementation of the paid-up SBP program. Slated to begin in 2008, this program will allow those retirees who have been paying into SBP for 30 years and have reached the age of 70 to cease making payments but still keep their spouses covered. While we applaud this program, it is TREA's desire to move the start date up to 2003, as was called for in the original bill. As the program is currently set up, those retirees who enrolled in SBP when the program started in 1972 will pay far more than 30 years. We are currently working with members of Congress to have the paid-up program begin as early as possible. However, this committee would again have to appropriate the necessary dollars to implement it.

Concurrent receipt

TREA would like to thank the members of this Committee who appropriated the necessary funding last year to begin the special pay program for the most severely disabled military retirees. This payment, which provides certain military retirees rated 70 percent disabled or higher by the Department of Veterans Affairs (VA) with a special pay ranging from $100–$300, will be of great assistance to these disabled veterans.

TREA is grateful for this small step in addressing the fact that military retirees are the only class of federal retirees who have their retirement pay reduced when they receive VA disability compensation. The legislation passed last year only addresses a fraction of disabled retirees whose income is reduced because of their disability. We look forward to working with the members of this committee, as well as of the Armed Services Committee, to expand the number of retirees who can receive this special pay. Currently, disabled retirees who have served twenty years and those retirees who retired under early retirement legislation at the 15 year point are not eligible for this payment. Certainly, their inclusion is a matter of fairness and we look forward to quickly addressing this inequity.

The ultimate goal in this issue, as defined in S. 2357, sponsored by Senator Reid, is complete concurrent receipt of military retirement pay and VA disability compensation.

CONCLUSION

Due to the continued downsizing of MTF staff, base closures, and depleting dollars for DOD health care, the Medicare Eligible Military Retirees continue to be pushed out of military health care. We need solutions to these problems. And as we know, there is no one solution. Therefore, implementing options for those that live near MTFs or those residing outside the catchment areas, through the Medicare subvention test and FEHBP 65+ demonstration, will enable DOD to administer health care to its aging heroes and heroines in the future. Even with full Medicare Subvention, TRICARE Senior Prime, we will only be servicing 33 percent of the overall population of military retirees over the age of 65. Some of our retirees have employer sponsored health care, 17 percent, and 10 percent already have Medicare Risk HMOs, leaving 32 percent to 41 percent of the 1.4 million population to access FEHBP. The number of 65 and over aged military retirees will not deplete but continue to grow in numbers to 1.6 million in 2004.

If this committee provides funding to expand the BRAC pharmacy benefit nationwide effective October 1, 2000, many Medicare eligible retirees will pick up this benefit first. TREA feels that providing a true pharmacy benefit will provide a solution to one of our members greatest needs, costly pharmaceuticals. Therefore, this creates a cost savings in the implementation of FEHBP and TRICARE Senior Prime in the future because the pharmacy benefit is less costly for those retirees that will take it as their health benefit on October 1, 2000.

Senator STEVENS. You are looking at two of the oldest veterans in the Senate. But I have got to tell you, as I listen to the pleas for retirees, there seems to be a different standard of what the commitment was at the time of enlistment among different groups. I think that is up to the Armed Services Committee to straighten that out; not us. We do not have the capability of doing that. But I do think that some people are saying now that the commitments that were made were much broader than were made back in the days when we understood them. We are not retirees. They are going to pound us in the ground feet first. We will not get retirement benefits anyway, I do not think so.

But when you look at the commitments that were made to the people who did enlist and did serve, and served through to retirement, I do not think there is a standard out there that we understand in Congress yet. And the Armed Services Committee had better straighten that out. Because it is getting to be a difficult time.

You will recall that these benefits were not taken out of the defense bill until 10 or 12 years ago. And now, as these requirements go up, procurement for those in the services go down when we are operating under a ceiling. I just hope that you all will work within the Armed Services Committee and get a total definition of what we are talking about. If you get that definition, we will fund it. We have never reneged on a commitment, to my knowledge, that we understood.

But the difficulty in this one is I am not sure what the commitment really is in terms of payment of these costs now that the military hospitals are no longer there. The commitment that I understood was that, on a space available basis, retirees were entitled to medical health care at medical facilities operated by the military. Now that has been broadened into a commitment to provide medical care wherever they want to go in the United States and whatever the facility.

Now I am not sure that we can afford that. And we have got to get a definition. And that is what TRICARE is supposed to be trying to do with senior TRICARE. And this guy really originated that, as I recall, the concept of trying to provide an umbrella system out there where there was no military facility.

There is another round of base closures, Sergeant. I have got to tell you, it is going to get worse, not better. And we have not authorized the base closures because of this problem primarily. I do not know what we will do if we close more military hospitals. Because when you close them for the active duty, you also close them to retired people in the area. And it is a very difficult problem.

Senator, do you have any comments on that?

Senator INOUYE. You have hit it all.

Senator STEVENS. We will work with you, but somewhere there has got to be some definition of what we are talking about.

Master Sergeant OLANOFF. Senator, we are working with the Armed Services Committee on the House and the Senate side to get more clear definitions of what we should come to you and ask for appropriations. But we do bring it to your attention so you are aware of it. Thank you, sir.

Senator STEVENS. Good. Thank you very much. I appreciate it.

Dr. Wirth, President of the American Society of Tropical Medicine and Hygiene has cancelled.

The next witness is Charles Queenan, Senior Vice President for the Juvenile Diabetes Foundation (JDF) International. Good morning.

STATEMENT OF CHARLES QUEENAN, III, SENIOR VICE PRESIDENT, PHB HAGLER BAILLY, INC., ON BEHALF OF THE JUVENILE DIABETES FOUNDATION INTERNATIONAL

Mr. QUEENAN. Mr. Chairman and Senator Inouye, good morning. My name is Charles Queenan, and I am pleased to appear before you today to speak as a volunteer for JDF, the Juvenile Diabetes Foundation International.

First of all, I would like to take this opportunity to thank you both for your support over the years for JDF's efforts to find a cure for diabetes and its complications. Today I am seeking your support for $5 million in research funding to allow the Department of Defense to lead the effort to develop dual-use biosensor technology that would benefit the military as well as the 16 million Americans with diabetes.

Before I explain how DOD research in the biosensor technology area can benefit both DOD and children with diabetes, I would like to tell you about how diabetes affects my family. My wife and I are blessed to be the parents of four young children—our daughter, Jenna, who is now 11, and three younger sons. On September 11, 1991, at the age of only 3, Jenna was diagnosed with Type I diabetes, also known as juvenile diabetes.

Every day since then, Jenna has received two to three injections of insulin, and has tested her blood sugar by pricking her fingers to draw blood four to six times per day. Our goal is to keep Jenna's blood sugar levels as close to normal as possible, hoping to minimize the very substantial risk of complications down the road—complications like blindness, kidney failure, amputation, heart disease, and nerve disease.

I will never forget the first months of Jenna's diabetes. We became experts in the life-saving regimen that Jenna will need to follow for the rest of her life. But this regimen of shots and finger pricks is not a cure. Despite the progress that has been made toward finding better ways to manage diabetes, the truth is that this regimen is still a very imperfect form of life support that constantly exposes Jenna to severe and even fatal consequences.

Trying to keep Jenna's blood sugar levels close to a normal range is hard enough. Simple changes in daily routine can cause Jenna's blood sugar to drop dangerously low, leading to unconsciousness, seizure or even worse. These acute and very scary consequences of diabetes can occur if Jenna takes too much insulin, gets the flu and is unable to eat, or even if she simply runs around too much. Despite all of our efforts, the long-term outlook for Jenna and anyone with diabetes remains uncertain at best.

Diabetes has very serious long-term health consequences. It is the leading cause of kidney failure, new adult blindness and amputation. It is the second most common chronic illness affecting children, and it affects millions of minorities and elderly Americans. This disease costs our economy $105 billion per year, and its financial impact is so severe that one out of four Medicare dollars and one out of 10 health care dollars are spent on individuals with the disease. It is also a major burden on the military's own health system, not to mention the thousands of family members of individuals in the military who have the disease.

My family's story is not unique. Millions of other families have had similar experiences. But there is a role that you can play to help make a difference in improving Jenna's life and the lives of 16 million Americans who suffer from diabetes. The military and everyone who suffers from diabetes can all benefit if we could perfect a biosensor that would be able to monitor non-invasively the physiological status of an individual.

For military personnel, such a technological device could help detect and treat situations involving sickness and injury. A biosensor could monitor metabolic products to determine health status, detect toxic exposure to biological and chemical hazards, accurately determine and deliver antidotes or drug treatments required by sick or injured personnel, and deliver nutritional supplements. Such a device would improve military performance and better monitor military personnel in the field.

The military's development of the biosensor would also yield tremendous civilian uses. JDF is most interested in its applications to individuals with diabetes, where our goal is to closely monitor glucose levels in patients to maintain health and avoid long-term complications of the disease. This technology could be utilized in a way to monitor blood glucose levels accurately, constantly and non-invasively and even to help determine the level of insulin that should be administered to an individual.

Mr. Chairman and Senator Inouye, JDF requests that the subcommittee appropriate $5 million to the United States Army Medical Research and Materiel Command for research into biosensor technology for the development of non-invasive screening devices that have dual-use applications for both the military and civilian

sectors. Thank you very much for considering this request, and I would be happy to answer any of your questions.

[The statement follows:]

PREPARED STATEMENT OF CHARLES QUEENAN, III

Mr. Chairman and Members of the Subcommittee, I am Charles Queenan and I am pleased to appear before you to testify as a volunteer for the Juvenile Diabetes Foundation International (JDF). In my professional life, I am Senior Vice President of PHB Hagler Bailly Inc. However, I devote much of my spare time to working with the JDF to help find a cure for my daughter who has juvenile diabetes. Today, I am seeking your support for $5 million in research funding to allow the Department of Defense (DOD) to lead the effort to develop dual use biosensor technology that would benefit the military as well as the 16 million Americans with diabetes.

Before I explain how DOD research in the biosensor technology area can benefit both DOD and children with diabetes, I would like to tell you about how diabetes affects my family.

My wife and I are blessed to be the parents of four young children—our daughter, Jenna, who is now eleven, and three younger sons. On September 11, 1991, at the age of three, Jenna was diagnosed with Type 1 diabetes, also known as juvenile, or insulin-dependent, diabetes. Every day since then, Jenna has received two to three injections of insulin per day. Every day since then, Jenna has tested her blood sugar by pricking her fingers to draw a drop of blood four to six times per day. Our goal is to keep Jenna's blood sugar levels as close to normal as possible, hoping to minimize the very substantial risk of very scary complications down the road—complications like blindness, kidney failure, amputation, heart disease, and nerve disease.

I will never forget the first months of Jenna's diabetes. We became experts in the life-saving regimen that Jenna will need to follow for the rest of her life. But this regimen of shots and finger-pricks is not a cure. Despite the progress that has been made towards finding better ways to manage diabetes, the sad truth is that this regimen is still a very imperfect form of life support that constantly exposes Jenna to acute, severe and even fatal consequences. Trying to keep Jenna's blood sugar levels close to a normal range is hard enough. But, in addition, simple changes in her daily routine can cause Jenna's blood sugar to drop dangerously low, leading to unconsciousness, seizure or even worse. Jenna can suffer from low blood sugar and unconsciousness if she takes too much insulin, gets the flu and is unable to eat, if (as a near teen-ager!) she sleeps too long, or even if she simply runs around too much. Each of these are quite everyday occurrences for most kids.

In fact, this has happened on several occasions. One summer at camp, a diabetes camp, she was a bit more active after dinner than usual—she was unconscious and in a diabetes seizure the next morning. Just last week on a Girl Scout trip, Jenna's blood sugar plummeted to dangerous levels, requiring immediate and prolonged attention to avoid unconsciousness, just because she got up two hours earlier than normal. Our current but imperfect protection against these conditions is the blood sugar test-drawing yet more blood from Jenna's fingers in the hope that we can detect a change in her blood sugar in time to avoid a serious consequence.

This undetected low blood sugar is a risk to Jenna that profoundly changes the way we live. My wife has worn a pager and carried a cell phone every day, everywhere, since Jenna was diagnosed with diabetes. One of us has accompanied Jenna on every daylong school field trip, every Girl Scout trip, and virtually every trip away from home. As a parent, the courage and determination with which Jenna manages her diabetes inspires me. But what Jenna really wants (and those with a pre-teen child will know what I mean) is freedom—freedom from fear, freedom from restrictions—freedom that you and I take for granted, freedom that I so desperately want to give her as she grows and matures.

Despite all of these efforts, the long-term outlook for anyone with diabetes remains uncertain, at best. Diabetes has very serious long-term health consequences. It is the leading cause of kidney failure, new adult blindness and amputation. It is the second most common chronic illness affecting children and it affects millions of minorities and elderly Americans. The disease costs our economy $105 billion per year, and its financial impact is so severe that one out of four Medicare dollars and one out of ten health care dollars overall are spent on individuals with the disease. It is also a major burden on the military's own health system, not to mention the thousands of family members of individuals in the military who have the disease.

Diabetes and the Department of Defense

My family's story is not unique. Millions of other families have had similar experiences.

But, there is a role that each of you can play to help make a difference in improving Jenna's life and the lives of the 16 million Americans who suffer from diabetes.

The military and everyone who suffers from diabetes can all benefit if a technological device utilizing a biosensor can be perfected that would be able to noninvasively monitor the physiological status of an individual.

For military personnel, such a device could help detect and treat situations involving sickness and injury. In these situations, a biosensor could monitor metabolic products to determine health status, detect toxic exposure to biological and chemical hazards, accurately determine and deliver antidotes or drug treatments that may be required by sick or injured personnel, and deliver nutritional supplements. Such a device would improve military performance and better monitor military personnel in the field.

The military's development of a such a biosensor would also yield tremendous civilian uses; JDF is most interested in its applications to individuals with diabetes where our goal is to closely monitor glucose levels in patients to maintain health and avoid long-term complications of the disease. This technology could be utilized in a way to accurately, constantly, and noninvasively monitor blood glucose levels and even to help determine the level of insulin that should be administered in an individual.

We can expect that the outcome of this practice in individuals with diabetes would be an immediate and significant increase in quality of life and wellness. It would also provide a significant reduction in the complications of diabetes and associated medical costs.

Mr. Chairman, JDF requests that the Subcommittee appropriate $5 million to the United States Army Medical Research and Materiel Command for research into biosensor technology for the development of non-invasive screening devices that have dual use applications for both the military and civilian sectors.

Thank you very much for considering this request. I would be pleased to answer any of your questions.

Senator STEVENS. Thank you very much. I appreciate your testimony.

The next witness is Martin Foil, Chairman, International Brain Injury Association.

STATEMENT OF MARTIN B. FOIL, JR., CHAIRMAN, INTERNATIONAL BRAIN INJURY ASSOCIATION

Mr. FOIL. Good morning, Mr. Chairman and Senator Inouye. My son who is here with me just gave up a very lucrative job as a computer programmer to help take care of his younger brother and to help people with brain injury. His mom and I are real proud of him.

Thank you for letting me be here today. As you know, I am here as the father of Philip, a young man with a severe brain injury, to request your support for a $3.5 million plus-up for the Defense and Veterans Head Injury Program (DVHIP), which would provide a total of $10.5 million for fiscal year 2001. It is not really a plus-up if we get the money from DOD research and development (R&D), it is really level funding.

I am the past Chairman of the Brain Injury Association (BIA) and now serve as voluntary Chairman for the Institute for Brain Injury (IBIA). My real job is head of a yarn manufacturing facility in Mount Pleasant, North Carolina. I receive no compensation for these other programs. Rather I contribute money of my own simply because, gentlemen, I care. I care for the 6½ million people, like my son, living with the effects of brain injury.

It is the leading cause of death and disability of young Americans: two million each year, 90,000 of which leads to long-term dis-

ability. Males 14 to 24 have the highest incidence. It is a collaborative project among DOD, the Veterans Administration (VA), the BIA, and IBIA, which not only serves active duty but veterans. It provides information and resources to retirees, civilians and families. It truly is an exemplary case of dual-use funding. It does pay dividends.

We boast a 67 percent rate of return to active duty for our military people who are hurt. Actually, by doing that, we improve the efficiency and the reach of the medical services, and DOD receives significant savings in retirement and medical expenses. It is an important contribution to our combat readiness.

It has three major components: clinical treatment, clinical research and clinical training. For instance, we do a combat training and sports program which seeks to identify the impact of a brain injury on performance and to develop treatments to minimize effects. We have active programs in West Point, Camp Pendleton, and Fort Bragg, where we have 2,500 paratroopers participating.

These collaborators are using a ground-breaking combination of modern computer technology—for instance, Palm Pilots—as cognitive prosthetics; virtual reality approaches for assessing one's return to active duty. This model stands to revolutionize rehabilitation in the military, allowing clinicians to reach patients easily in remote locales, providing treatment interventions around the clock whenever and wherever they are needed.

Already it has had tangible results, allowing a brain injured Vietnam veteran, who has not been able to speak for 35 years, to communicate with his family via E-mail, to go shopping and to go to school via the Internet. So he is once again active and is a contributing member of society. My written testimony highlights the stories of two active duty personnel who sustained moderate to severe injuries, both of whom had been referred to medical retirement if it had not been for our intervention. Consequently, they are both back to active duty today.

In conclusion, it is a major national problem. It affects all of our men and women in the service. As we face new security challenges, declining retention rates, competition, and a robust economy for people, DOD's investment in personnel is all the more valuable. It is critical that we give every veteran the opportunity, and military personnel, the opportunity to remain on active duty, even after experiencing an injury. With proper medical care and rehabilitation, they can.

It strengthens our military readiness by helping service members get appropriate care and the ability to return to duty. So I respectfully request your support for this $3.5 million of appropriations for a total of $10.5 million. And I thank you. It is a pleasure to be here. And may I say in closing, you all have got a really difficult job. I appreciate that, and I appreciate what you do.

[The statement follows:]

PREPARED STATEMENT OF MARTIN B. FOIL, JR.

EXECUTIVE SUMMARY

Established in 1992, the Defense and Veterans Head Injury Program (DVHIP) is an integrated disease management system representing a unique collaboration

among the Department of Defense, Department of Veterans Affairs, the Brain Injury Association and the International Brain Injury Association.

Brain injury is the leading cause of death and disability in young Americans. Each year 2 million brain injuries occur, and there are now 5.3 million Americans living with long term severe disability as a result of brain injury. Each year, over 7,000 military personnel are admitted to military and veterans hospitals because of brain injury. This number does not include personnel who experienced mild brain injury, concussions, or those receiving emergency room treatment and early release. The cost to the military is conservatively estimated at $30 million annually in military retirement payments alone.

The underlying goal of the DVHIP is to ensure that military personnel and veterans with brain injury receive the best evaluation, treatment and follow-up. At the same time, DVHIP collects and compiles standardized outcome data, allowing for comparison of the relative efficacy and cost of various brain injury treatments and rehabilitation strategies. These clinical findings assist DVHIP in defining optimal treatment methods for individuals with brain injury.

The DVHIP is not a research project that could be funded by some other entity. It is a means of providing state of the art care to active duty military personnel to get them back to work as soon as possible. Military retirees and veterans are also treated by the program with the similar goal of enhancing each individuals recovery so they can return to their lives and continue to be productive citizens.

In one study, the DVHIP boasts a 90 percent return to work rate and 67 percent return to active duty rate, of service personnel with moderate to severe injuries.

The work of the DVHIP is a significant contribution to the health and readiness of the United States military and veteran populations. The three major components of the program are clinical treatment, clinical research, and clinical training. The work of the DVHIP has resulted in better care for military personnel and has optimized their chances of returning to active duty, thus saving the Department of Defense significant medical and retirement costs.

As the United States military faces new national security challenges, sagging retention rates, competition for new recruits with a robust economy in the private sector, DOD's investment in its personnel becomes all the more valuable. It is critical that military personnel be given every opportunity to remain in active duty, even after experiencing injury.

An additional $3.5 million is sought over the $7 million included in the Department of Defense's budget, for a total of $10.5 million in fiscal year 2001.

Dear Chairman Stevens and Members of the Senate Appropriations Subcommittee on Defense: My name is Martin B. Foil, Jr. and I am the father of Philip Foil, a young man with a severe brain injury. I am past Chairman of the national Brain Injury Association (BIA),[1] and I currently serve as voluntary Chairman of the International Brain Injury Association (IBIA)[2] and as a member of the Board of Directors of the John Jane Brain Injury Center at Martha Jefferson Hospital in Charlottesville, Virginia. Professionally, I am the Chief Executive Officer and Chairman of Tuscarora Yarns in Mt. Pleasant, North Carolina.

I appreciate the opportunity to provide testimony regarding the Defense and Veterans Head Injury Program (DVHIP), a collaborative effort among the Departments of Defense (DOD) and Veterans Affairs (DVA), BIA and IBIA. The DVHIP is a disease management system based on a "learn as we treat" principle, that integrates clinical care and clinical follow-up, with applied research, prevention, education and family support information. Before the DVHIP, there had been no overall systemic program for providing brain injury specific care and rehabilitation within DOD or DVA. Because of the DVHIP, our service men and women are now receiving brain injury care and rehabilitation second to none in the nation.

DVHIP is a prime example of a dual use project that contributes significantly to U.S. military readiness. It not only treats over 7,000 active duty military personnel who sustain brain injuries each year and helps them return to duty (see attached two stories of returning to duty), but the DVHIP serves as an important resource to veterans and the civilian population as well.

On behalf of the DVHIP, I respectfully request that $3.5 million be added to DOD Health Affairs for Operation and Maintenance, for brain injury treatment and serv-

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[1] BIA is a national, non-profit organization dedicated to creating a better future through prevention, education, research and advocacy. BIA serves persons with brain injury, their families and caregivers in all 50 states and the territories.

[2] IBIA is a non-profit organization dedicated to the support and development of medical and clinical professionals and others who work to improve opportunities and successes for persons with brain injury. IBIA is the only international association representing and convening brain injury professionals and specialists throughout the world.

ices of the DVHIP. As this would be in addition to the $7 million provided in DOD's budget, DVHIP funding would total $10.5 million for fiscal year 2001.

The following abbreviated explanation of the program focuses on the prevalence of brain injury in the United States and in the U.S. military, the treatment of military personnel by the DVHIP, and the assistance provided by IBIA and BIA.

The Incidence and Prevalence of Brain Injury

Traumatic brain injury (TBI) is the leading cause of death and disability among young Americans in the United States. Young men ages 14 through 24 have the highest rates of injury. However, it is often known as the "silent epidemic"—traumatic brain injury can strike anyone at any time. TBI is defined as an insult to the brain caused by an external force that may produce a diminished or altered state of consciousness and which often results in an impairment of cognitive abilities or physical functioning. TBI can also result in the disturbance of behavioral or emotional functioning.

Nationwide, there are 2 million brain injuries per year, with an estimated societal cost of over $48 billion per year, including direct care and loss of productivity. There are now 5.3 million Americans living with long term disability as a result of brain injury and some 6.5 million individuals with some form of residual effects of such injury.

In the U.S. military, there are over 7,000 peacetime TBI admissions to DOD and DVA hospitals each year. In addition to the costs of acute and long-term care, a conservatively estimated $30 million in obligated medical retirement payments is added each year in the military alone.

DVHIP Clinical Treatment, Research and Training

In addition to supporting and providing treatment, rehabilitation and case management at each of the 7 primary DVHIP TBI centers,[3] the DVHIP includes a regional network of additional secondary veterans hospitals capable of providing TBI rehabilitation, and linked to the primary lead centers for training, referrals and consultation. This is coordinated by a dedicated central DVA TBI coordinator and includes an active TBI case manager training program.

An important goal of the DVHIP is to address basic questions relating to military TBI, including acute care and the combat casualty care process as well as the effects of mild TBI on combat performance. The DVHIP continues to work on:

—Basic combat casualty care protocols that can ensure treatments for brain injury are available in the field;

—A combat training and sports TBI program which seeks to identify the impact of mild TBI on military performance and develop treatments to minimize its effects. Active programs are currently ongoing at Fort Bragg, North Carolina; West Point U.S. Military Academy, New York; and Camp Pendleton, California. The Fort Bragg program involves pre-injury baseline testing of about 2,500 paratroopers and more extensive post-injury evaluation of about 400 persons. Over 2,000 baseline evaluations have been completed to date.

—A multidisciplinary evaluation and workplace follow-up study for service members with symptomatic mild traumatic brain injury at San Diego Naval Medical Center.

—A DVHIP central referral case manager for health care providers, including a toll-free referral number for caregivers in DOD and DVA facilities.

—A TBI treatment and referral algorithm designed to assist primary caregivers in the management and referral of their patients with TBI. This now has been implemented at DVHIP sites and is being disseminated throughout the DVA medical system.

—In close collaboration with CHAMPUS/TRICARE, TRICARE demonstration projects DVHIP provides specialized treatment reimbursement and rehabilitation of military beneficiaries at the four DVHIP lead veterans sites. It is hoped that this agreement will serve as a model for future interagency collaboration in other medical specialty areas.

—DVHIP maintains DOD/DVA peacetime and combat traumatic brain injury patient registries at each of the primary and secondary centers, assisted by BIA Family Helpline personnel and state associations. While the DVHIP registry

[3] Walter Reed Army Medical Center, Washington, DC; James A. Haley Veterans Hospital, Tampa, FL; Naval Medical Center San Diego, San Diego, CA; Minneapolis Veterans Affairs Medical Center, Minneapolis, MN; Veterans Affairs Palo Alto Health Care System, Palo Alto, CA; Hunter McGuire Veterans Affairs Medical Center, Richmond, VA; Wilford Hall Medical Center, Lackland Air Force Base, TX.

presently includes mostly participants from DVHIP centers, one goal of the program is to expand it to the entire military and veterans medical systems.

Clinical rehabilitation research treatment trials utilizing a randomized, controlled design are currently being conducted by the DVHIP, including:

—A prospective randomized controlled study of home treatment versus an intensive, 8-week institutional cognitive rehabilitation program involving 120 service members with moderate to severely brain injuries at Walter Reed Army Medical Center. Analysis of results has now been completed (and widely disseminated), showing a 90 percent return to work rate and 67 percent back to active duty.

—A second multicenter randomized controlled study is comparing in-hospital cognitive therapy to in hospital functional rehabilitation for individuals with more severe TBI at the DVHIP lead veterans' centers. The primary outcome measures are return to work and level of independence at one year post injury.

—A third randomized trial now starting at Wilford Hall Air Force Medical Center will target military personnel with acute mild TBI. It will compare a program of counseling and rest on convalescent leave plus graded return to work, versus counseling and graded return to work alone. Primary outcome measure will be post-concussion symptoms and work supervisor ratings.

—DVHIP has developed a protocol for a Phase III follow-up of Vietnam War Head Injured veterans,[4] many of whom have returned to meaningful and often very productive lives. This study provides a unique opportunity to study TBI and the aging process.

—Based on exciting findings by the DVHIP, it has developed three neuroprotective trials for service men and women with both severe and mild TBI. Including combat training injury in Marines at Camp Pendleton, these studies will utilize safe and inexpensive compounds—pyruvate and niacinamide—to protect energy metabolism in the injured brain.

IBIA Collaboration with DVHIP

Unlike research projects funded by the National Institutes of Health, DVHIP research is treatment oriented, showing immediate results in the real world. IBIA, through the John Jane Brain Injury Center at Martha Jefferson Hospital in Charlottesville, Virginia assists in the three major components of the DVHIP: clinical treatment, clinical research and clinical training:

—IBIA/DVHIP supports research and treatment to address neurobehavioral problems that affect return to work and fitness for duty rates.

—The IBIA is sponsoring the development of universal guidelines for the treatment of mild traumatic brain injury, penetrating head injury, and pediatric brain injury, along with practice guidelines development for neurobehavioral problems and bowel and bladder dysfunction following brain injury. These projects raise the standards of care worldwide.

—The John Jane Brain Injury Center is moving brain injury rehabilitation into the twenty-first century, using a groundbreaking combination of modern computer technologies, virtual reality approaches for assessing military personnel's ability to return to work and other uses. This model stands to revolutionize rehabilitation in military and civilian settings, allowing clinicians to reach patients easily in remote locales, providing treatment interventions around the clock, wherever they are needed.

—IBIA/DVHIP conducts collaborative outcomes research utilizing functional Magnetic Resonance Imaging (fMRI) to identify brain lesion location and create diagnostic criteria for mild and moderate brain injuries which are significant problems in the military; this research is valuable to maintaining readiness by discerning who is capable of returning to active duty.

—IBIA/DVHIP conducts studies on executive dysfunction and decision making in persons with mild TBI (mild TBI is the single most important reason for failure to return to active duty, work or school); this study complements efforts to improve military readiness.

—Active duty military personnel have benefited from an intensive 15-session treatment intervention for mild traumatic brain injury. This program, which focuses on life skill training and cognitive prosthetics, has drastically shortened disability times for the participants.

—Already this nascent research is paying off with tangible results, allowing a brain injured Vietnam veteran in Charlottesville, Virginia, a man who has not been able to produce articulate speech for 35 years, to communicate with his

[4] Of the 58,000 U.S. combat fatalities in the Vietnam war, approximately 23,000 or 40 percent were due to head and neck wounds. Overall, about 19 percent of battle casualties and 14 percent of survivors sustained a head injury during that war.

family via email and to learn to shop and go to school via internet. He is once again a productive citizen.

BIA Services—Information and Resources, Prevention and Education

The Brain Injury Association serves an important role in the program by providing information and resources to any and all active duty military personnel, retirees, veterans and family member seeking assistance for brain injury treatment, placement, rehabilitation, and general information.

In particular, BIA does the following:

—Maintains a nationwide 1–800 help line, staffed by trained specialists;

—Established the American Academy for the Certification of Brain Injury Specialists (AACBIS) and develops and disseminates materials used to train staff working in brain injury programs at DVHIP sites. Materials include the AACBIS Clinical Examiner Manual, AACBIS Brochure and Training Manual Level I. Initial work on Level II standards and curriculum began in 1999.

—Produced and distributed a revised version of the DVHIP Case Manager's Manual, and reprinted the DVHIP Information Brochure; Road to Rehabilitation; "Causes, Consequences and Challenges of Brain Injury" Brochure and an Information and Resource Manual.

—The Information and Resources Department of BIA acts as a clearinghouse of community service information and resources for military personnel, veterans and civilians and responds to tens of thousands of inquiries for assistance through its free Family Help Line. Through BIA's state affiliates, some 50,000 calls for assistance are answered each year, and hundreds of thousands of informational brochures, pamphlets, books, videos, and other material are distributed.

—BIA/DVHIP educational brochures feature background information on brain injury, the DVHIP, and the lead and network DVHIP sites. They are available at any one of the military or Department of Veterans Affairs Medical Centers, and are also provided to referral sources in both military and civilian sectors in an effort to increase awareness of the DVHIP and to increase accessions to the research protocol.

—BIA publishes a bimonthly newsletter, TBI Challenge! with a circulation of over 30,000, and a full color quarterly magazine for professionals, Brain Injury Source with a circulation of over 20,000. Each issue of the Source features a regular column entitled "Military Zone" which is written by staff members from DVHIP sites. The Fall 1999 issue of the Source was dedicated solely to the DVHIP.

—BIA's Brain Injury Resource Center™ (BIRC), provides easy access to a multimedia computer library through a touch-screen monitor and program that allows users to learn about brain injury at a personalized pace. The BIRC is available in over 60 locations across the country, including 18 DOD and VA hospitals.[5]

—BIA developed DVHIP's website and continues to work on providing DVHIP resources and information.

—BIA/DVHIP continues its Violence and Brain Injury Project (VBIP), which is based on the premise that brain injury is a significant risk factor for violent behavior. VBIP addresses various aspects of violent behavior, including causes, prevention and education.

—The VBIP is responsible for integrating prevention education curricula into DOD and civilian schools and military communities. The HeadSmart® Schools Program is currently being used in over 120 schools nationwide including 26 military dependent schools, affecting the education of over 100,000 students. In addition, there are HeadSmart® Military Communities in 7 military facilities.[6]

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[5] Central Arkansas Veterans Health Care Network, North Little Rock, AR; Darnall Army Community Hospital, Ft. Hood, TX; Denver Veterans Affairs Medical Center, Denver, CO; Hines Veterans Affairs Medical Center, Hines, IL; James A. Haley VA Medical Center, Tampa, FL; Madigan Army Medical Center, Takoma, WA; Minneapolis VA Medical Center, Minneapolis, MN; National Naval Medical Center, Bethesda, MD; Palo Alto VA Medical Center, Palo Alto, CA; Portsmouth Naval Medical Center, Portsmouth, VA; Richmond VA Medical Center, Richmond, VA; San Diego Naval Medical Center, San Diego, CA; San Juan VA Hospital, San Juan, Puerto Rico; Seattle Veterans Affairs Medical Center, Seattle, WA; Tripler Army Medical Center, Hawaii; Walter Reed Army Medical Center, Washington, DC; Wilford Hall Air Force Medical Center, San Antonio, TX; Womack Army Medical Center, Fort Bragg, NC; VA Medical Center, Albuquerque, NM.

[6] Fort Bragg, NC; Fort Knox, KY; Fort Campbell, TN; Fort Bliss, TX; Fort Sam Houston, TX; West Point, NY; Wright Patterson Airforce Base, OH.

Conclusion

The work of the DVHIP is a significant contribution to the health and readiness of the United States military and veteran populations. The three major components of the program are clinical treatment, clinical research, and clinical training. The work of the DVHIP has resulted in better care for military personnel and has optimized their chances of returning to active duty, thus saving the Department of Defense significant medical and retirement costs.

As the United States military faces new national security challenges, sagging retention rates, competition for new recruits with a robust economy in the private sector, DOD's investment in its personnel becomes all the more valuable. It is therefore critical that military personnel be given every opportunity to remain in active duty, even after experiencing injury.

DVHIP is in a unique position to combine the treatment of military personnel and veterans with the program's education, information and support services. This synergy allows DOD and VA, in partnership with BIA and IBIA, to help prevent and treat this "silent epidemic" and for the DVHIP program to lead the nation in providing state of the art care to all active duty military personnel and veterans with brain injury.

We respectfully request funding of $10.5 million for fiscal year 2001 to continue this important program.

ATTACHMENT

L.C., AD USAF E5

This 26-year old woman was involved in a motor vehicle accident when her car ran off the road in August of 1996. She was transferred to a local university hospital, was unconscious for approximately 24 hours and was monitored in the Intensive Care Unit on a respirator. Upon awakening she was taken off the respirator and appeared "drowsy and confused." She would become easily agitated and required close observation. Her speech was slurred and difficult to understand. She slowly became oriented to person and place by the 10th day after her injury when she was transferred to the WRAMC Defense and Veterans Head Injury Program (DVHIP). An MRI of her brain revealed multiple punctate lesions in the right and left frontal white matter, the right and left thalamus, and bilaterally in the cerebellar hemispheres consistent with shear injuries (micro tears of the brain matter) from the accident.

While at DVHIP this patient was evaluated and found to have difficulties in the areas of memory, low mood, organization and planning (executive function), attention, and written and spoken language comprehension. After receiving several weeks of rehabilitation, she returned to duty and did not fare well. Readmission to the DVHIP was undertaken, and the patient was reevaluated and additional treatments were prescribed. She again returned to limited duty, and over the next 12 months demonstrated gradual improvement in her many symptoms and progressed to working at duty full time as an Air Force NCO. Approximately one year after her injury, and after participating in the DVHIP rehabilitative effort, this individual was able to enter officer's basic school (as she had intended prior to her accident) and successfully graduated in the middle of her class. She is currently a 2LT and performing well at her duty station.

This individual is an excellent example of a soldier who suffered a significant brain injury and might easily have been medically retired within the first 3 to 6 months after her injury, particularly after failing to succeed initially back at duty. With the support and expertise of the DVHIP she was able to successfully return to duty and perform in an outstanding manner.

R.W., AD USA E5

This 27-year old man was thrown from his car during an auto accident while stationed in Germany in March of 1994. He suffered a traumatic brain injury and was unconscious and on a respirator in a German hospital for the first 10 days after his accident. He also suffered a number of other non-life threatening facial and soft tissue injuries. He was transferred to the WRAMC DVHIP from Germany approximately one month after his accident. He had no recollection of his accident of stay in Germany, and little appreciation for his difficulties while in the hospital. He was easily agitated and demanded release from the hospital, to the point where urgent psychiatric consultation was required to manage his aggressive behavior medically. On evaluation at the DVHIP, this soldier displayed a number of difficulties in the areas of problem solving, error detection, completing complex tasks, or maintaining his attention. An MRI of his brain revealed contusions of both of his frontal lobes. He continued to show a dense amnesia, but began to show he could lay down new

memories. He was enrolled in the DVHIP eight-week rehabilitation program. Upon completion of the program, he was returned to limited duty. With the support of the DVHIP staff and his local command he made an excellent recovery, completing Ranger School approximately 18 months after his injury. Two and a half years after his injury, this soldier displayed continued good duty performance as a mechanic for the Army.

Once again, due to the nature of his injury, the long period of unconsciousness and behavioral discontrol, this soldier would have been referred for medical retirement without the intervention and ongoing support of the DVHIP.

Senator STEVENS. Thank you very much. We appreciate your coming. Nice to have you with us.

Our next witness will be retired Commander Mike Lord, testifying for The Military Coalition. Good morning.

STATEMENT OF MIKE LORD, COMMANDER, JAGC, U.S. NAVY (RETIRED), EXECUTIVE DIRECTOR, COMMISSIONED OFFICERS ASSOCIATION, U.S. PUBLIC HEALTH SERVICE, INC., CO-CHAIR, THE MILITARY COALITION HEALTH CARE COMMITTEE

Commander LORD. Good morning, Mr. Chairman, Senator Inouye. It is an honor to have the opportunity to address this subcommittee today. And as the Executive Director of the Commissioned Officers Association of the U.S. Public Health Service and Co-Chair of The Military Coalition's Health Care Committee, I am pleased to represent our views.

I think our written statement adequately represents these views, and I would simply want to elaborate a bit today on the comments we have already made concerning the health care issues surrounding Medicare-eligible beneficiaries. As Mark Olanoff mentioned, your comments about funding in fiscal years 2001 and 2002 the health care benefit for retirees, those comments somewhat stole his thunder, I think your comments after Mr. Olanoff finished probably stole the rest of the thunder that was left for me. But I do have a couple of comments concerning our view toward what the solution might be in terms of health care for retired Medicare benefits.

Senator STEVENS. You know that when we looked at that we found that the Department had not requested the money to pay for the contractors providing TRICARE. And when we did get the request, it was about 40 percent of the bills that had actually been presented at the time.

Commander LORD. Right.

Senator STEVENS. And now we are looking to try to keep that level up for the next year, with $1.5 billion plus, and looking at it in terms of the bills from prior years and this year. It is almost impossible to figure out how we are going to handle that in the next year. And I think that is the toughest problem that the Defense Department faces this year is to find a way to pay the bills that it has incurred already. And God only knows how big they are going to be in the years after this. So we have got to get a handle on it, and I would appreciate whatever your Coalition can do to help us.

Commander LORD. We agree with you, Mr. Chairman. And as our written comments reflect, we are concerned by the constant annual underfunding of the defense health budget, which creates the problems that you are trying to face and fix this year.

With respect to the Medicare-eligible beneficiaries, just very quickly, we think there is a three-part approach to the fix. One is the initiative by Senator Warner that was introduced just this week, S. 2486, with many cosponsors from the Senate, providing the BRAC pharmacy benefit to Medicare-eligible beneficiaries. We think this is going to solve a lot of the problems regarding the retiree, over-65 health care problems that we are trying to fix at this point.

Senator STEVENS. Well, it would solve it if he tells me where he finds the money.

Commander LORD. I wish I could, Mr. Chairman.

Senator STEVENS. I wish he could, too.

Commander LORD. The second issue, TRICARE Senior Prime, which is already successfully being demonstrated at six sites, works. Beneficiaries are pleased. We are in the demonstration phase, and we are at the point now where we need to move beyond demonstrations and onto nationwide implementation, perhaps on a phased-in basis.

Finally, the Federal Employees Health Benefits Program (FEHBP) is in a demonstration mode at this point, and the data still is being collected in that regard. However, we think this still has lots of potential, and it is a fix. And we think the problems we are experiencing at this point with dismal participation have to do largely with lack of education on the part of the beneficiaries and the fear of the unknown. And we would urge continued effort by DOD to provide greater education so that people are willing to participate in what would be a very excellent benefit for them. We are pleased that DOD has seen fit to expand the demonstration area.

A couple of comments in closing, Mr. Chairman. We appreciate that problems are involved in trying to draft comprehensive health care education for over-65 beneficiaries. We recognize that enactment of the legislation needed to provide retired service members with health care does not come without cost. When we explain what is needed and why, including up here on the Hill, we regularly receive nods of agreement, followed by, "How are we going to pay for it?" as you and I just exchanged a moment ago. And I know you have unique concerns in that regard.

We believe, however, that it is not just a nice thing to do. It is an obligation. It is a debt owed to retirees. And we would submit that these retirees, who were responsible for safeguarding the freedoms that we Americans experience, deserve what was promised to them many years ago. In this case, the price of having this service, this comprehensive health care, these Americans cannot wait. As I think Mark Olanoff mentioned, they are dying at a rate approaching 100 every day. They need to have their needs met now.

Thank you, once again, Mr. Chairman and Senator Inouye. It is a pleasure being here before you, and I would be happy to answer any questions you might have.

[The statement follows:]

PREPARED STATEMENT OF CDR MIKE LORD

Mr. Chairman and distinguished members of the committee: On behalf of The Military Coalition, we would like to express appreciation to the Chairman and distinguished members of the Senate Appropriations Committee's Subcommittee on Defense for holding this important hearing. This testimony provides the collective

views of the following military and veterans organizations which represent more than 5 million members of the seven uniformed services, officer and enlisted, active, reserve, National Guard, veterans and retired plus their families and survivors.

—Air Force Association
—Air Force Sergeants Association
—Army Aviation Association of America
—Association of Military Surgeons of the United States
—Association of the United States Army
—Chief Warrant Officer and Warrant Officer Association, United States Coast Guard
—Commissioned Officers Association of the United States Public Health Service, Inc.
—Enlisted Association of the National Guard of the United States
—Fleet Reserve Association
—Gold Star Wives of America, Inc.
—Jewish War Veterans of the United States of America
—Marine Corps League
—Marine Corps Reserve Officers Association
—Military Chaplains Association of the United States of America
—Military Order of the Purple Heart
—National Guard Association of the United States
—National Military Family Association
—National Order of Battlefield Commissions
—Naval Enlisted Reserve Association
—Naval Reserve Association
—Navy League of the United States
—Reserve Officers Association
—Society of Medical Consultants to the Armed Forces
—The Retired Enlisted Association
—The Retired Officers Association
—United Armed Forces Association
—United States Army Warrant Officers Association
—United States Coast Guard Chief Petty Officers Association
—Veterans of Foreign Wars
—Veterans' Widows International Network, Inc.

The Military Coalition does not and has not received any federal grants, and does not have nor has had any contracts with the federal government.

INTRODUCTION

The Military Coalition is very grateful that through this Subcommittee's efforts, the last two years have seen significant breakthroughs in our mutual efforts to secure health care equity for all uniformed services beneficiaries, particularly with respect to the Medicare-eligibles who have been increasingly locked out of the military health care system. This Subcommittee's efforts to upgrade the overall TRICARE program, oversee the implementation of the redesign of the pharmacy system, and ensure the implementation of the test of enrolling Medicare-eligibles in the Federal Employees Health Benefits Program (FEHBP–65) were major highlights of the first session of the 106th Congress.

But all of us appreciate that many of these initiatives are only the first steps, albeit critical ones, on the road to providing the kind of health care coverage uniformed service beneficiaries have earned and deserve. Much remains to be done, both to ensure demonstration programs already approved are implemented fairly and successfully and to take the further steps that will be necessary to achieve our mutual goals in this extremely important area.

RESTORE HEALTH CARE EQUITY FOR MEDICARE ELIGIBLE BENEFICIARIES

Before we turn our attention to our continuing concerns with TRICARE, we would first like to thank the Subcommittee for its role in enacting legislation in the last two years for two demonstration programs aimed at restoring equitable health care benefits for Medicare-eligible uniformed services beneficiaries. These two tests—TRICARE Senior Prime, and FEHBP–65—will go a long way toward restoring the commitment to lifetime health care made to these older individuals when they entered the service as young recruits, and reiterated time and again as an inducement to serve until retirement.

Pharmacy Redesign Pilot Program.—In the fiscal year 1999 and fiscal year 2000 Defense Authorization Acts, Congress passed legislation directing the Defense Department to redesign its pharmacy programs. One of the goals of the pharmacy re-

design was to expand the retail and mail-order pharmacy benefit to all Medicare-eligible uniformed services beneficiaries regardless of where they reside. As a precursor to the eventual nationwide expansion of this benefit, Congress mandated that DOD implement a pilot program at two sites to allow Medicare-eligible uniformed services beneficiaries to participate in DOD's TRICARE retail and National Mail-Order Pharmacy programs. The Coalition has worked closely with DOD in the past year on the pharmacy redesign and pilot program, and has had the opportunity to provide input into how the pharmacy benefit should be structured, particularly for those who are Medicare-eligible. The Coalition applauds DOD's efforts in this regard and realizes this has not been an easy task. We are, however, disappointed that DOD will fail to seize on the opportunity to realize significant savings in its pharmacy redesign. Unaccountably, DOD believes it must charge an annual enrollment fee of $200 per person ($400 for a family if both are Medicare-eligible) for those who enroll in the Pilot Program.

While the Coalition understands DOD concerns about cost if the Pilot Program were expanded nationwide, we believe that in this instance, DOD may be "penny wise, and pound foolish" since even a $200 enrollment fee creates a major disincentive for beneficiaries to participate in the program, and significantly increases the likelihood that the program will not be successful because:

—It will deter participation by significant numbers of enlisted families and survivors (we know from experience with the Survivor Benefit Plan that payments of approximately $50 per month deter many junior enlisted retirees from participating);

—The substantial premium will result in adverse selection, whereby only those with substantial medication costs are likely to enroll—which will increase the per-person cost to DOD and provide misleading data on the cost of expanding the pilot worldwide.

—It makes the prescription drug option, in terms of value received for dollars expended, a poor third choice compared to TRICARE Senior Prime and FEHBP–65, especially since those who desire to take advantage of the prescription benefit will still consider it necessary to purchase a Medicare supplemental insurance policy.

Most importantly, the Coalition believes that many Medicare-eligible service beneficiaries would be satisfied with the restoration of the pharmacy benefit they lost when they lost their eligibility for TRICARE. Provision of the pharmacy benefit is the least expensive option for DOD, compared to TRICARE Senior Prime or FEHBP, and the more beneficiaries who elect that benefit, the less it will cost DOD to fulfill the promise of lifetime health care under other options. Under this scenario, we question DOD's decision to implement a $200 enrollment fee which could make the least expensive option to DOD the most unattractive to beneficiaries. The Coalition strongly believes that if the BRAC pharmacy benefit (which includes both the National Mail-Order and TRICARE retail pharmacy programs) were expanded nationwide by October 1, 2000, far fewer beneficiaries would subsequently seek the more costly FEHBP or TRICARE Senior Prime options. Expansion of the BRAC benefit, without an enrollment fee, beginning in fiscal year 2001 is certainly feasible since it would only require a one-time contract adjustment.

The Coalition requests that this Subcommittee appropriate the additional funds necessary to expand the BRAC pharmacy benefit (which includes both the National Mail-Order and TRICARE retail pharmacy program) with no deductible or enrollment fee to ALL Medicare-eligible uniformed services beneficiaries by October 1, 2000.

TRICARE Senior Prime.—The Budget Reconciliation Act of 1997 provided for a demonstration program to test the concept of Medicare subvention, now called TRICARE Senior Prime. Under this test, Medicare-eligible uniformed services beneficiaries in six demonstration areas were given the opportunity to enroll in a health maintenance organization (HMO) type plan, similar to TRICARE Prime, with some of the cost of their care being reimbursed to DOD by Medicare.

This test has been successfully implemented in all of the demonstration sites and, by all accounts, has been very well received by eligible beneficiaries at each site. A recent survey conducted by The Retired Officers Association (TROA) indicates that over 90 percent of the Senior Prime enrollees are satisfied with the program and 90 percent reported they would remain in the program through December 2000 (when current authority for this demonstration expires).

The Department of Defense has expressed a strong desire to expand this program to other sites across the country, but is reluctant to do so until they can resolve concerns about the level of effort and reimbursement rates from the Health Care Financing Administration (HCFA). The Military Coalition supports expansion of this

test, and would like to take the additional step of making TRICARE Senior Prime a permanent program as soon as possible.

There is strong legislative support in Congress for expansion of this program. Last year, Senator Phil Gramm (R-TX) introduced S. 915 to make the TRICARE Senior Prime program permanent on a phased basis. S. 915 would provide authority to expand TRICARE Senior Prime to 10 additional locations in calendar year 2000 and then to the remaining TRICARE Prime catchment areas where feasible after October 1, 2002. Senator Gramm's legislation also would authorize non-enrollees to use TRICARE Senior Prime services on a fee-for-service basis. And Senator McCain's bill—S. 2013 would also accomplish the same objective. The Military Coalition believes this would be particularly useful, for the Department of Defense as well as beneficiaries, at some of the smaller facilities with little or no inpatient capability. At such facilities, most specialty and inpatient care would have to be purchased from civilian sources, thus making it operationally and financially difficult to implement a Medicare HMO program.

The Military Coalition urges the Subcommittee to work with the Senate Armed Services Committee to enact legislation (such as S. 915 and S. 2013) to expand TRICARE Senior Prime to an additional 10 sites by January 1, 2001 and make the program permanent. (At the very minimum, the TRICARE Senior Prime at the current sites should be extended for at least another year.) The Coalition also urges this Subcommittee to support legislation to authorize at least a test to allow non-enrollees to use TRICARE Senior Prime services on a fee-for-service basis.

FEHBP–65 Demonstration.—The Military Coalition was pleased with the provision passed in the Fiscal Year 1999 Defense Authorization Act requiring a test to allow up to 66,000 Medicare-eligible uniformed service beneficiaries to enroll in the Federal Employees Health Benefit Program (FEHBP–65) at six to ten sites around the country. The Coalition appreciates the hard work that DOD did to choose the sites, and finish all preparations in time for the open enrollment period last November.

However, the Coalition has been extremely disappointed with the dismal enrollment results, which remain low even after DOD extended the open enrollment period to 60 days and redoubled its efforts to notify and educate eligible beneficiaries in the test sites. The Coalition believes the extremely low participation rate—2,550 beneficiaries or approximately four percent of the 66,000 enrollees authorized by the Fiscal Year 1999 Defense Authorization Act—is attributable to beneficiary inertia, aggravated by:

—Lack of timely delivery of accurate and comprehensive information about the FEHBP–65 test to eligible beneficiaries;
—Fear of venturing into uncharted waters with the worry they would have to change plans again when the test authority expires in 2002;
—Concerns about pre-existing medical conditions if the test terminates and they need to resume their Medigap coverage;
—A lack of understanding about FEHBP including the potential cost savings over their existing Medicare supplementals if they were to opt for this alternative;
—Uncertainty about the benefits provided under the various FEHBP plans to beneficiaries who are also enrolled in Medicare Part B.

To illustrate, DOD marketing materials for the FEHBP–65 test failed to adequately highlight that copays and deductibles are waived for fee-for-service plans for Medicare-eligibles enrolled in Medicare Part B. This is a real shortcoming given that virtually all of the potential enrollees are enrolled in Medicare Part B.

As the initial participation has been so low, and thus the financial impact of the test has been much less than anticipated, the Coalition would like to thank DOD for selecting two additional sites with large beneficiary populations of 25,000 in each site for inclusion in the test next year. However, the Coalition would also like to recommend that the zip codes applicable to the current sites be expanded to reach additional potential enrollees.

Finally, the Coalition strongly recommends that DOD continue to increase efforts to communicate and explain fully the benefits available under the FEHBP test, including the option to revert to a Medigap policy without pre-existing illness restrictions should the test be terminated. These efforts should include ensuring that all eligible beneficiaries in each site receive notification of this test. DOD itself admitted there was a 10 percent error rate in its first mail-outs, but to date has made no effort to correct the database. Further DOD apparently will make no effort to notify those who will be turning 65 during the test period they would be eligible to enroll in the FEHBP–65 test. The Coalition would like to pause at this point and thank Senator Christopher "Kit" Bond (R-MO) for his letter to the Assistant Secretary of Defense emphasizing the increased and continued need to educate beneficiaries about the FEHBP program.

To move toward this objective, the Coalition supports S. 2013, introduced by Senator John McCain, which would expand and make permanent the demonstration program allowing Medicare-eligible uniformed services beneficiaries to enroll in FEHBP–65. S. 2013 limits the program to 275,000 beneficiaries—a number we believe will accommodate worldwide enrollment in FEHBP—and thereby limits the cost of this initiative to approximately $600 million per year in current dollars, beginning in 2003. The cost in 2002—the first year the expanded program could be implemented would be approximately $130 million less because current law already authorizes 66,000 enrollees.

The Coalition strongly recommends that this Subcommittee support efforts to expand the FEHBP–65 program worldwide as quickly as feasible and make it a permanent program.

Initial expansion of the test this year, guaranteed enrollment beyond the test date, and an aggressive educational program are the only ways that a fair assessment can be made of the propensity of uniformed services beneficiaries to enroll in the program, the resultant government cost, and the success or failure of FEHBP as an option to honor the lifetime health care commitment.

Finally, S. 2003, The Keep Our Promises to America's Military Retirees Act, introduced by Senator Tim Johnson (D-SD) and S. 2013, "Honoring Health Care Commitments to Servicemembers Past and Present Act of 2000", are landmark proposals because they recognize that those who entered the service before June 7, 1956, were promised free health care for life and should not be penalized by a subsequent change in statute. The strength of this commitment was most eloquently described by Judge Roger Vinson when he ruled in the Federal District Court in Florida that "that the plaintiffs certainly have a strong equitable argument that the government should abide by its promises. Regrettably, the law does not permit me to order the United States to do so. Under the Constitutional separation of powers, relief for the plaintiffs must come from Congress and not from the Judiciary."

With a burgeoning budget surplus, including an additional $40 billion announced last week, our older uniformed services beneficiaries cannot accept lack of funding as a valid reason for Congress' failure to meet its obligation to them. In its self-proclaimed "Year of Health Care," DOD had a major opportunity to take the lead in keeping commitments to servicemembers and start erasing the skepticism and distrust that years of broken health care promises have engendered among the retired population. Putting these initiatives in the President's budget would have made them much easier for Congress to enact. But once again, the Administration has chosen to punt its moral responsibilities to the Legislative Branch. Please don't compound the Administration's inaction by punting these responsibilities to a new Congress.

Defense's civilian leadership has apparently chosen to ignore how directly this continuing abrogation affects military readiness. Today's active duty members are tomorrow's retirees, and they are well aware of how their predecessors are being treated. More and more, the retirees who were the Services' best recruiters are reluctant to recommend a service career to their children and those of their friends and neighbors. This is not only an issue of equity and employer obligation. It's a readiness issue as well.

The Military Coalition urges this Subcommittee to work with the Senate leadership to find the necessary funding offsets to enact S. 2003 or S. 2013.

IMPROVEMENTS IN TRICARE

The Coalition is pleased that great strides were made in the Fiscal Year 2000 Defense Authorization Act to fix some of the more egregious problems with TRICARE, and thanks the Subcommittee for its role in appropriating the necessary resources for the following provisions:

—Permitting the Secretary of Defense to increase TRICARE reimbursement levels where necessary to attract quality health care providers;
—Requiring DOD to expedite and improve the claims reimbursement process and provide incentives for health care providers to participate in Prime networks;
—Requiring DOD to identify and implement other administrative efficiencies such as greater use of the Internet to further streamline claims processing, enrollment procedures, etc.
—Ensuring that DOD promptly implements portability and reciprocity for TRICARE Prime enrollees.

However, the Coalition remains concerned about other problems that continue to crop up on a consistent basis.

Adequate Funding for TRICARE.—The Military Coalition continues to hear each year of funding shortfalls in the overall Defense Health Program which are passed

down to each of the Services' health care budgets. However, it appears that fiscal year 2001 is off to a good start with DOD proposing an additional $350 million to cover the increased pharmaceutical costs; higher than anticipated costs of the TRICARE managed care support contracts; and the new custodial care benefit addressed by Congress last year.

The Coalition remains concerned, however, this is not enough to address future funding shortfalls that might occur as a result of unanticipated medical readiness operations. And even DOD has admitted the increase in Defense Health spending may not cover the increase in TRICARE managed care support contract costs since DOD has not yet identified and paid all of the contractor claims for increased cost.

Congress, and the Defense Department, must be willing to budget adequate resources for the Defense Health Program, not just for medical readiness operations, but also for the peacetime health care component. The Coalition believes that an adequately funded health care benefit is just as important to recruitment and retention of qualified uniformed services personnel as are pay and retirement benefits. Further, the promise of this health care benefit into retirement must be kept if servicemembers are to be convinced that serving 20 or more years in uniform is in their best interests.

The Military Coalition recommends, therefore, that this Subcommittee appropriate sufficient funding for the Defense Health Program, not just for military medical readiness, but also for DOD peacetime health care operations, including the TRICARE program and initiatives for Medicare-eligible uniformed service retirees.

TRICARE Prime Equity Innovations.—The Coalition continues to hear from families of servicemembers assigned to remote areas where there is no TRICARE Prime option. These families are being unfairly burdened by having to pay much higher copayments for care than their counterparts assigned to areas where they can enroll in TRICARE Prime if they so choose. Although this problem was addressed two years ago in the Fiscal Year 1998 Defense Authorization Act, which authorized the Secretary of Defense to waive deductibles and copayments for active duty personnel assigned to duty locations more than 50 miles from a military hospital, this provision did not address health care costs for family members.

The Coalition was therefore delighted to hear that the Secretary of Defense included approximately $80 million to the fiscal year 2001 Defense Health Budget request to waive all TRICARE Prime copayments and to provide TRICARE Prime Remote to family members of active duty service members stationed in remote locations away from military medical facilities. However, the Coalition believes that additional funds must be provided to extend TRICARE Prime Remote to retirees as well.

The Military Coalition strongly supports waiving all copayments for active duty family members, retirees and their family members and survivors enrolled in PRIME. The Coalition, therefore, urges this Subcommittee to provide funding for these long overdue initiatives. The Coalition also urges this Subcommittee to appropriate sufficient funds to ensure that health care costs for active duty family members, and retirees, who reside in areas not served by TRICARE Prime, do not exceed the co-payments of family members who participate in TRICARE Prime.

Fix Problems with new TRICARE 3.0 Contract.—The Coalition is concerned about several aspects of the new TRICARE 3.0 managed care support contract which is due to be implemented this year beginning in TRICARE Region 11. For example, the new 3.0 contract incorporates enrollment-based capitation funding for military medical treatment facilities (otherwise known as alternative financing). And yet Sect. 744 of the Fiscal Year 1999 Defense Authorization Act required DOD to conduct a study on the implications of the alternative financing before applying it nationwide. This report was to have been submitted by March 1, 1999, yet, to the Coalition's knowledge, DOD never initiated the required study.

The Coalition is also concerned that the TRICARE 3.0 contract will provide too much latitude for contractors to implement their own policies and processes for managing the TRICARE managed care program. While the Coalition applauds innovations by the contractors to improve the TRICARE program, the Coalition is also aware that there are some contractors who have implemented procedures that have only made the program more difficult for the beneficiaries. For example, TRICARE contractors have interpreted requirements for preauthorization for care very differently from Region to Region. In Region 1, the managed care contractor, Sierra Military Health Services, requires preauthorization for all inpatient care regardless of the beneficiary's enrollment status (Prime or Standard) or residence (in or out of the catchment area of an MTF). The Coalition is dismayed that pre-authorization is even required for TRICARE beneficiaries when they have other health insurance that pays first. This blanket requirement for preauthorization is creating havoc among beneficiaries in this Region. Conversely, in the TRICARE Central Region, the

managed care contractor, Tri-West, has relaxed its preauthorization requirements. Tri-West adopted the more efficient approach of pinpointing certain procedures that should be more closely scrutinized for preauthorization and eliminated preauthorization requirements for the rest. This is just one example of how different contractors can apply "best industry practices" in dramatically different ways, in effect creating a completely different TRICARE Prime program. The Coalition believes that the new 3.0 contract further encourages such variances, with the potential result being 6 different TRICARE Programs in 12 different TRICARE Regions. Such variance would be devastating for the beneficiaries.

The Coalition strongly recommends that the Subcommittee prohibit the use of appropriated funds to implement the new TRICARE 3.0 contract until DOD completes the Congressionally mandated study on the enrollment based capitation funding methodology and until DOD finds a way to ensure that "best industry practices" can be applied in such a manner as to keep the TRICARE program uniform in benefits, practices and procedures in the different Regions.

Fully Implement Portability and Reciprocity.—Although DOD has issued a policy memorandum stating that TRICARE Prime enrollees in one region will be able to receive services from Prime in another region (reciprocity) and will be able to transfer their enrollment when they move (portability), this policy still has yet to be fully implemented in all existing TRICARE regions. Enrollees are still experiencing a disruption in enrollment when they move between regions and are still not able to receive services from another TRICARE Region. The lack of reciprocity is presenting particular difficulties for TRICARE beneficiaries living in "border" areas where two TRICARE regions intersect. In some of the more rural areas, the closest provider or pharmacy may actually be located in another TRICARE region, and yet due to the lack of reciprocity, these beneficiaries cannot use these providers or pharmacies. This situation must be rectified immediately. TRICARE must become a seamless system to truly serve a beneficiary population that is the most mobile in the country.

The Coalition urges immediate implementation of portability and reciprocity to minimize the disruption in TRICARE Prime services for beneficiaries.

Uneven Benefit under TRICARE Prime.—Sometimes TRICARE Prime enrollees, particularly those enrolled in the Exceptional Family Member program, or those with complicated health care problems, moving from one TRICARE region to another find that care authorized or covered in one Region is not authorized or covered in the new Region. Often specific specialty care is promised in the new Region, and then upon arrival, the family is told to disenroll the beneficiary from Prime in order to continue with that care. Although this may affect only a small number of beneficiaries, these are the very beneficiaries who direly need continuity of care and cannot afford the higher costs under TRICARE Standard.

The Coalition strongly recommends that care for these exceptional cases be effectively managed in an integrated manner across all TRICARE regions. Beneficiaries requiring specific specialty care should not be shunted into Standard simply because the managed care contractor is not able to provide that particular specialty within the Prime network.

TMC is particularly grateful to this Subcommittee for including in last year's Defense Appropriations Act a definition of Custodial Care that meets industry standards. While the requirement has not been fully implemented across all TRICARE Regions, it is slowly being put into place. Without this Subcommittee's intervention, DOD would have certainly continued implementing its "unique" definition of medically necessary care for those beneficiaries considered custodial patients. The result would have meant either cost shifting to Medicaid, or a loss of medically necessary care for the most vulnerable of the DOD beneficiary population or both.

The Coalition further implores this Subcommittee to again include in the Appropriations Act the provision protecting the medically necessary care for custodial patients.

Access standards for TRICARE Prime.—The Coalition continues to document numerous instances in most TRICARE Regions where access standards for time and for distance have not been met. Interestingly enough, these reports now seem to be focused on military hospitals not meeting access standards rather than managed care support contractors. While the Coalition applauds the progress made by the civilian contractors in addressing this problem, this is only half of the story. Military hospitals must also be held accountable to the very same access standards that must be adhered to by the civilian contractors.

The Coalition strongly recommends that this Subcommittee hold military hospitals accountable to the same access standards that are now being met, apparently successfully, by managed care contractors, particularly if DOD is to be allowed to

continue to bring as much health care as possible back into military treatment facilities.

The Coalition also wants to address one more issue concerning access to care under TRICARE Prime. In areas where specialty care is not available, Prime enrollees have been forced to travel great distances from their MTFs to receive this care. Such travel places an undue burden on beneficiaries who travel at their own expense.

The Coalition strongly recommends this Subcommittee appropriate additional funds for TRICARE to cover the expenses of Prime enrollees who have to travel more than 100 miles to get specialty care.

115 percent Billing Limit Under TRICARE Standard.—In 1995, DOD unilaterally reinterpreted the 115 percent billing limit in cases of third party insurance so as to substantially reduce TRICARE's reimbursement to beneficiaries. While providers may charge any amount, TRICARE only recognizes amounts up to 115 percent of the TRICARE "allowable charge" for a given procedure. Under DOD's previous interpretation, any third party insurer would pay first, then TRICARE (formerly CHAMPUS) would pay any balance up to 75 percent of the allowable charge (80 percent for active duty dependents).

Since the reinterpretation, TRICARE will not pay anything at all if the third party insurer pays an amount equal to or higher than the 115 percent billing limit.

DOD's shift in policy unfairly penalizes beneficiaries with other health insurance plans, by making them pay out of pocket what TRICARE previously covered. In other words, they reduce TRICARE's costs, but may forfeit their entire TRICARE benefit because of private sector employment or some other factor that provides them private health insurance. In practice, despite statutory intent, these individuals have no TRICARE benefit.

The Military Coalition urges the Subcommittee to support elimination of the 115 percent billing limit when TRICARE Standard is second payer to other health insurance.

Requirements for Non Availability Statements under TRICARE Standard.—The Military Coalition continues to believe that all requirements for a Non Availability Statement (NAS) should be eliminated for those beneficiaries choosing to participate in TRICARE Standard. By choosing to remain in Standard, beneficiaries are voluntarily accepting higher copayments and deductibles in return for having the freedom to choose their own providers. The Coalition appreciates that the intent of NAS system, when CHAMPUS was an evolving program, was to maximize the use of military treatment facilities. However, when TRICARE was created, it offered beneficiaries a choice in how to exercise their health care benefit. DOD should allow beneficiaries this choice, and not insist that Standard beneficiaries jump through hoops to exercise this choice, particularly since most care in military hospitals and clinics is being given on a first priority basis to Prime enrollees anyway. More importantly, this capricious policy frequently denies TRICARE Standard beneficiaries one of the most important principles of top quality health care—continuity of care.

The Coalition strongly recommends that all requirements for Non Availability Statements be removed from the TRICARE Standard option.

Catastrophic Cap under Standard.—The TRICARE Standard (CHAMPUS) catastrophic cap on out of pockets is still $7,500 for retirees. This is much higher than other civilian fee-for-service plans which traditionally set limits between $2,000 if preferred providers are seen and $3,750 if non-preferred providers are used. The current catastrophic cap of $7,500 imposes an extraordinary financial burden on beneficiaries in TRICARE Standard and severely disadvantages them compared to active duty families and those enrolled in TRICARE Prime.

The Coalition strongly recommends that as a matter of equity, this cap be reduced to a maximum of $3,000.

CONCLUSION

The Military Coalition would like to reiterate its profound gratitude for all of the hard work this Subcommittee has done in the last two years to provide the resources necessary to promote health care equity for all uniformed services beneficiaries, particularly those who are Medicare-eligibles. The Subcommittee's efforts to authorize the implementation of the TRICARE Senior Prime and the FEHBP–65 tests are important steps toward honoring the lifetime health care commitment. However it is now time to take further steps to fully restore this promise by expanding the BRAC Pharmacy benefit nationwide by October 1, 2000; expanding TRICARE Senior Prime to 10 additional sites by January 2001 and nationwide in 2002; and expanding the FEHBP program to two additional sites starting this November, and then nationwide by January 2002.

The Coalition also recommends that special consideration be given to individuals who entered the service before June 7, 1956 as proposed in S. 2003 and S. 2013. As George Washington said in a March 18, 1783, letter to Continental Congress pleading that those who put their lives at risk for the betterment of all their countrymen should not have their sacrifices be met by the empty promises of an ungrateful nation "For if, besides the simple payment of their Wages, a further compensation is not due to the sufferings and sacrifices of the Officers, then I have been mistaken indeed. If the whole Army have not merited whatever a grateful people can bestow, then have I been beguiled by prejudice, and built opinion on the basis of error. If this Country should not in the event perform every thing which has been requested in the late memorial to Congress, then will my belief become vain, and the hope that has been excited void of foundation. . . . But I am under no such apprehension, a Country rescued by their Arms from impending ruin, will never leave unpaid the debt of gratitude."

Much work also remains to be done with the TRICARE program. Immediate efforts must be undertaken, both by Congress, and by DOD to: ensure adequate funding for TRICARE to attract and retain quality health care providers; implement Congressionally mandated fixes to the claims processing system in a timely manner; reduce or eliminate preauthorization and NAS requirements; reduce the TRICARE Standard catastrophic cap to $3,000; waive Prime copayments and implement Prime Remote for all enrollees; and fix the new TRICARE 3.0 managed care contract to ensure TRICARE delivers a uniform health care program across the different regions.

Senator STEVENS. To your last comment, I just returned from my 50th anniversary at law school. I want you to know that my generation is dying every day without regard to the health care problems. Let us not mix the two up.

Thank you.

Questions, Senator Inouye.

Senator INOUYE. No, Mr. Chairman.

Senator STEVENS. Thank you very much. I should say our generation.

Our next witness is Ronald Violi, of the Children's Hospital of Pittsburgh, along with Dr. Sven Bursell, of the Joslin Diabetes Center.

STATEMENT OF RONALD L. VIOLI, CHILDREN'S HOSPITAL OF PITTSBURGH

ACCOMPANIED BY SVEN BURSELL, M.D., JOSLIN DIABETES CENTER

Mr. VIOLI. Mr. Chairman, Senators, thanks for the opportunity to be here today. I am here today to talk about a cure for juvenile diabetes.

Last year, you provided both Joslin and Children's the opportunity to establish the Joint Diabetes Project, which allows each of us to contribute our unique strengths for treating and researching diabetes. Our principal investigator, Dr. Massimo Trucco, who is here with us today, has found a link behind common childhood viruses and juvenile diabetes. We believe this virus triggers the onset of juvenile diabetes in children who are genetically at risk for developing this disease. This research, which is being conducted in collaboration with the Army and specialists at Walter Reed Hospital, will ultimately help to develop a diabetes vaccine.

In addition, as part of our first year 2000 proposal, we are collaborating with scientists at Carnegie Mellon University and with experts in Germany to access and develop the expertise in using advanced technology for gene and antibody screening. Ultimately, these studies will allow us to screen larger populations of children

more cost effectively so we can better identify children at risk for developing diabetes.

Once these children have been identified, they can be followed more closely and vaccinated against this disease. Last year, the Diabetes Research Working Group identified both immune therapy and eyelet cell transplantation as offering the greatest potential benefit for the cure and treatment of diabetes.

With our request for an additional $7 million in funding for fiscal year 2001, we plan to focus our research on three core objectives that will encompass these protocols. First, we intend to recruit scientists with expertise in improving the transplantation of insulin-producing cells to eliminate the need for anti-rejection medication. Second, we will transfer some of our successful protocols into human clinical trials. And, finally, using in vitro techniques, we will take stem cells from the pancreas or bone marrow of the diabetic patient, manipulate them in the lab, and return them to the patient with the intent of generating new insulin-producing cells.

We fully recognize that funding for these efforts cannot come from only one source. Next week we will be formally announcing the fact that Dr. Trucco has recently been awarded a 5-year, $10 million grant from the Juvenile Diabetes Foundation for a complementary study.

We look forward to continuing our work with our colleagues from Joslin and concentrating our collective efforts on finding a cure for this disease. However, a substantial Federal commitment to diabetes research remains critical to our success. And we hope that you will consider our request. We appreciate your support. And to all members of the subcommittee, thank you so very much.

Senator STEVENS. Dr. Bursell.

Dr. BURSELL. Yes, Mr. Chairman, Senator Inouye, thank you for the opportunity to present our project today. The Joslin Diabetes Center Project focuses on providing eye health care to all diabetic patients within the DOD health care system, including dependents of DOD personnel. Unfortunately, we know that only about half of our diabetic patients receive appropriate eye care, despite the fact that a program of eye care with annual assessment of the retina produces significant personal savings, reductions of risks of other diabetes-related complications, as well as a saving of available health care dollars.

As you will recall, the Joslin Vision Network (JVN) is a telemedicine platform that facilitates remote acquisition of retinal images taken without the need of pupil dilation and centralized resources at diabetes-related centers of excellence, providing retinal assessments, treatment and education plans. Furthermore, we have shown that this program provides diagnoses that are equivalent in accuracy to the current clinical gold standard for retinal assessment.

At the end of the current year of funding, we will have deployed JVN image acquisition sites in Hawaii, at the Tripler Army Medical Center and at the Honolulu VA, in the New England area, in Alaska, at Elmendorf Air Force Base, and at the Walter Reed Army Medical Center, in Maryland. Additionally, the development efforts resulting from the current funding will result in an application that is totally compliant with existing DOD medical information in-

frastructure. This will allow us to realize an application for diabetic eye care that is cost sensitive and resource efficient.

Further, the application architecture will provide the platform for a seamless integration into the Internet environment to support a comprehensive interactive diabetes care program. This diabetes health care application within the current jurisdiction will be available to any patient within the DOD health care system, and will provide early detection technology and superior eye care capability.

For the fiscal year 2001, we are requesting level funding of $7 million. These funds will allow us to continue to provide these services and to refine the application with the development of interactive, Internet-based modules focusing on collaborative, comprehensive diabetes management systems that also incorporate the JVN eye health care and diabetes health care and self-management and education module. It is anticipated that these refinements will broaden the scope and availability of diabetes detection, care and prevention within the DOD health care environment.

Additionally, we anticipate an accelerated deployment over the next year of new sites, including new remote sites in the Alaska area. And on the academic side, we currently have two papers that have been accepted in peer-review journals and two papers that are currently under review, one of them was actually spearheaded by the research group at the Tripler Army Medical Center.

Conversations with program officials within the DOD applied research and defense health programs have indicated that 2 more years of operational application of this technology will be required before DOD adopts the JVN application as a standard component within the defense health care protocol. Finally, of the $7 million requested, 49 percent, or $3.4 million, would be allocated to DOD and VA participation, and costs associated with program implementation. We respectfully request continuation of funding at the level of $7 million for the Joslin Diabetes Center Project and to fully fund the $14 million for the combined project.

Thank you, Mr. Chairman and Senator Inouye, for your continued support of this very exciting project that represents a groundbreaking paradigm for providing diabetes health care to all diabetic patients. Thank you, Senators.

[The statement follows:]

PREPARED STATEMENT OF RONALD VIOLI

Introduction

Mr. Chairman and members of the Committee, I would like to thank you for the opportunity to appear before you. I am Ronald Violi, Chairman and Chief Executive Officer of Children's Hospital of Pittsburgh. Joining me today to present an update on the Joint Diabetes Project is Dr. Sven Bursell of the Joslin Diabetes Center. We are here to provide information on our work with the Departments of Defense and Veteran's Affairs to address the growing health concerns and emotional, financial and physical costs related to diabetes. In the United States, there are 10.3 million people diagnosed with diabetes, and a new case is diagnosed every 40 seconds. It is estimated that there are 16 million Americans who have diabetes. Many of those affected are the families and children of current and former members of the armed services.

The establishment of the Joint Diabetes Project has allowed each of our institutions to contribute its unique strengths and extraordinary scientific and patient care talents to this partnership. Last year, you provided us with the opportunity to combine our resources to offer the most advanced detection, treatment, prevention and basic and applied research approaches in the world to manage diabetes and its re-

sulting complications. Our proposal for second year funding will allow us to continue to provide the most balanced approach available to address Type 1 and Type 2 diabetes (or juvenile and adult onset diabetes, respectively).

Children's Hospital of Pittsburgh Plan for Fiscal Year 2001

Although we have just submitted our proposal for current year funding, we anticipate being able to move forward with our aggressive juvenile diabetes vaccine research program. In fiscal year 2001, Children's Hospital of Pittsburgh (CHP) will continue to focus upon the autoimmune response involved with Insulin-Dependent Diabetes Mellitus (IDDM). The collaboration between CHP and the University of Pittsburgh Medical Center and its research resources will facilitate the study of diabetes from a variety of juvenile and adult perspectives, making possible the development of preventive and transplantation protocols for intervention. Last year, both of these approaches (immunotherapy and islet transplantation) were designated by the congressionally established Diabetes Research Working Group to offer the greatest potential benefit.

Under the direction of our principal investigator, Dr. Massimo Trucco, Head of the Division of Immunogenetics of the Department of Pediatrics and Director of a new diabetes center sponsored by the Juvenile Diabetes Foundation International (JDFI); and through our work with the Army's Telemedicine and Advanced Technology Research Center (TATRC), groundbreaking research will continue to be studied regarding the link between Coxsackievirus B or CVB, a common childhood virus, which we believe may trigger the onset of juvenile diabetes in children who are genetically predisposed. As a component of our fiscal year 2000 funding, we have proposed to continue our work with Army medical personnel at Fort Detrick and with specialists in Endocrinology at Walter Reed Army Medical Center. This important research is aimed at developing a vaccine, which will prevent genetically at-risk children from developing diabetes.

This work involves extensive collaboration between scientists at CHP and experts in flourochromes and robotic devices at the National Science Foundation's Science and Technology Center located at Carnegie Mellon University in Pittsburgh, along with experts in microarray technology at the University of Tuebingen in Germany. This combined expertise will allow for the screening of an exceptionally high number of parameters, such as genetic and immunologic diabetes risk markers, in a very limited amount of time (less than 30 minutes) which could then serve a larger population at a very reduced cost.

This use of existing advanced technology and rapidly developing new technology will allow scientists to improve the ability to predict those individuals who are susceptible to the disease and to allow them to design safe protocols of intervention for those at high-risk for developing the disease.

Fiscal Year 2001 Program Overview

For fiscal year 2001, we have defined the following goals and related activities that will expand upon the initial juvenile diabetes research program funded by Congress through the Department of Defense in fiscal year 2000:

—Recruit new scientists with expertise in establishing and testing new tolerogenic approaches aimed at eliminating the need for immune suppression regimens to prevent pancreatic islet graft rejection.

—Transfer some of the proposed successful protocols of therapy from the animal model to human clinical trials.

—Exploit the characteristics of pluripotent cells still present in the pancreas and bone marrow of the adult patient to generate new, non-autoimmune-prone, insulin-secreting pancreatic beta-cells useful to replace the lost ones without any rejection problems.

Fiscal Year 2001 CHP/Diabetes Institute of Pittsburgh Funding Request—$7,000,000

The CHP/Diabetes Institute of Pittsburgh has been established through the creation of a successful public-private partnership. Our ability to secure support for this project from the federal government has helped to provide the crucial leverage that recently resulted in a diabetes research grant from a private donor. This is in addition to the $6 million in seed money that has been provided by CHP and UPMC to create the Institute. We continue to seek funding from the National Institutes of Health and although it has not yet been publicly announced, Dr. Trucco has recently learned that the national Juvenile Diabetes Foundation has awarded him a 5-year, $10 million grant focused on making the cells in the islet of the pancreas more resistant to rejection once transplanted into the patient to cure diabetes. This grant will enhance the current research that has been undertaken with the Department of Defense by providing funding for another diabetes research program with

a complementary focus within the Institute. This public-private partnership has been developed to create a world-class, state-of-the-art research center that will have a tremendous impact at both the regional and national levels.

CHP/Diabetes Institute of Pittsburgh Expenses

The proposed budget will consider expenditures associated with the isolation, genetic modification, expansion and transplantation of animal and human pancreatic islet cells.

Renovation of additional laboratory space to house a state-of-the-art endocrine cell isolation core facility and expansion of the animal facilities will use part of the financial support. The remainder of the support will be used to recruit appropriate personnel and to purchase required equipment and reagents necessary to reach the proposed goals. Fifteen percent (15 percent) will be used for the Department's administration fee.

Total CHP/Diabetes Project Costs—$7,000,000.

Joslin Diabetes Center Plan for Fiscal Year 2001

The Joslin diabetes detection, care and treatment project, which includes the Joslin Vision Network (JVN) telemedicine initiative and the Diabetes Outpatient Intensive Treatment Program (DOIT), is a coordinated effort in the diagnosis, management, and treatment of diabetes and diabetic retinopathy. Joslin Diabetes Center, the Department of Defense and the Department of Veterans' Affairs have joined in a cooperative effort to deploy and evaluate this disease management healthcare model.

Following an implementation planning workshop involving all identified participants, systems have been deployed at DOD sites in Hawaii and VA sites in Hawaii and sites in the New England VISN1 region. Training at Joslin Diabetes Center in Boston, instruction manuals for image acquisition and image review and manuals of operation for the JVN/DOD/VA clinical studies were authored and disseminated to project participants.

Patient recruitment into the initial clinical trials was initiated following Investigational Review Board approval from the various participating sites. It is anticipated that patient recruitment for these clinical studies will be completed by June 2000 at which point the data collected will be analyzed by the identified participants of the Data Analysis Committee with respect to the primary and secondary outcomes detailed in the project Manual of Operations.

Additionally, the JVN image validation study is currently undergoing peer review for publication in Ophthalmology. The results from this study demonstrated the equivalence between the JVN undilated digital video retinal images and the current "gold standard" Early Treatment Diabetic Retinopathy Study dilated 7 standard field 35 mm retinal photography with respect to diagnosis of clinical level of diabetic retinopathy and appropriate referral to specialty ophthalmology services.

The results from the image validation study and preliminary results from the proposed clinical studies have been presented at the annual American Telemedicine Association, Association for Research in Vision and Ophthalmology, American Diabetes Association and American Academy of Optometry annual meetings.

The prototype JVN system with electronic medical record templates designed specifically for the proposed clinical studies were successfully deployed at Tripler Army Medical Center (TAMC), Honolulu VA, VISN1 (Brockton VA and Jamaica Plain VA) and at the Joslin Diabetes Center. Images are being transmitted daily from all remote sites to the Reading Center at Joslin. TAMC has imaged and transferred over the Internet to the Reading Center at Joslin more than 220 patients initially as part of their certification process and more recently as part of the randomized clinical trial. The VISN1 sites have also imaged and transferred over 400 patients to Joslin as part of the same process.

As part of the DOIT program proposed for this project, the 2 VISN1 sites have randomized 42 patients into the DOIT intervention arm of program, the experimental study cohort, and 35 into the Edu Post program, the control cohort consisting of patients receiving only the current standard of care. In Hawaii, TAMC has enrolled and randomized 49 patients into the DOIT intervention arm and 42 into the control Edu Post arm of the study.

By jointly developing and implementing these research protocols for the JVN Diabetes Health Care system, we are in a position to move forward with a phased implementation of an evidence based practice model that can be scaled for high volume deployment in a resource efficient and cost effective manner at any identified site.

Fiscal Year 2000-Fiscal Year 2001 Objectives

The clinical research objectives are to complete the present randomized clinical trials, to enroll the identified sites where JVN will be deployed for this funding year into the clinical trials studies, and to provide service and support for these sites.

The use of the JVN equipment and expansion of screening opportunities are a major focus for fiscal year 2000 activities. Expansion of this pilot demonstration project will entail the planning and implementation of new deployments that currently being considered for Walter Reed Army Medical Center (WRAMC), Elmendorf Air Force Base in Alaska, and VISN–1 sites in Togus, Maine, and West Haven, Connecticut. The actual number of sites deployed to will depend on the telecommunications infrastructure at the identified sites and the ease and costs associated with interfacing the JVN technology into the existing infrastructure.

An equally important concentration of resources in fiscal year 2000 is focused on refining the technical core using outcomes based medical and case management scenarios to develop a diabetes healthcare model that is modular, customizable and that can be seamlessly integrated into the existing DOD and VA telemedicine systems. The overarching vision for the DOD/VA/JVN project is a web-based comprehensive diabetes health care system that can be interactively used by both patients and providers, that incorporates diagnosis specific education and training modules for patients and providers and that incorporates software applications that allow outcome measures to be statistically assessed and individual treatment programs to be interactively adjusted based on these outcome measures. The JVN Eye Health care system exists as a component of a comprehensive diabetes management system that relies on leveraging the current WRAMC Cardiology Outcomes Project (CADRE) and incorporating other clinical disciplines such as endocrinology, vascular surgery and internal medicine.

In order to make the above vision a reality we will expend considerable effort in migrating the JVN demonstration technology platform into an application that is totally compliant with existing DOD medical informatics infrastructures and the existing VISTA infrastructure of the VA system. This will encompass the integration of hardware and software in close collaboration with available resources from the VA VISTA program and the DOD DINPACS program to ensure DICOM and HL7 compliancy that will allow a highly scaleable transparent integration of the JVN Diabetes Eye Health Care system into the existing health informatics infrastructures of the DOD and VA systems. The proposed development effort for Y2000 will result in an application that is cost sensitive and resource efficient with respect to support and maintenance of the JVN component for an accelerated deployment in the future and will support an Internet based application that will provide Diabetes Outpatient Intensive Training in a virtual environment.

For the fiscal year 2001 project phase, we have established the following tasks, targets, and activities:

—Deployment of a viable, sustainable, and refined operating JVN Diabetes Eye Health Care model which is currently being developed for this cooperative telemedicine project.
—Develop a modularized medical outcomes based telemedicine diabetes intensive treatment program in collaboration with the DOD and VA with outcome measures incorporated into software based on clinical results and research experiences of the Y2000 efforts.
—Develop curriculum based patient and provider educational modules.
—Plan and develop a web-based comprehensive Diabetes Management System.
—Technical core activities will include:
  —Medical record migration into the Internet environment using existing transaction engines with the goal of ultimately providing a universal medical record platform
  —Secure telecommunication infrastructure
    —Internet based Virtual Private Network
  —Interactive healthcare portals
    —Internet transaction engines for interactive diabetes management that empowers both the provider and the patient into appropriate evidence based clinical management on the provider side and improved self management on the patient side that will potentially result in significant risk reductions of diabetic complications and an improved quality of life for all diabetic patients
—The three Hawaii DOD/VA sites will complete validation studies and expand their JVN/intensive treatment demonstration projects with respect to integration of the program into the virtual environment leveraging the Internet based application efforts. This will require further randomized clinical trials to vali-

date the value of the interactive Internet based diabetes care intervention program.

—Elmendorf Air Force Base will become operational as an image acquisition, image review, and intensive treatment site. Plans are underway for the deployment and field testing of mobile JVN image acquisition units which will serve as a prototype for widespread outreach of the Joslin Diabetes Eye and Health Care system in a truly remote area.

—WRAMC will become fully operational with respect to the JVN image acquisition for retinopathy assessment with plans for JVN reading center certification.

—VISN–1 will develop the infrastructure for a fully certified and operational JVN Reading Center to support the Brockton, West Roxbury, Togus and West Haven image acquisition/image review sites.

—Boston area VA sites will complete validation studies and expand their patient population for further randomized clinical trials using the interactive Internet based diabetes care intervention program.

—Refine the concept of the Web-based Comprehensive Diabetes Management system that will integrate applications involving not only the JVN but also applications based on endocrinology, cardiology, vascular surgery and internal medicine.

—Fiscal year 2001 Joslin Diabetes Center level funding request—$7,000,000

  —DOD/VA Program Participation Costs—$2,560,000

  —DOD Management and Administration Fees—$840,000

  —Joslin Diabetes Center Costs—$3,600,000

Level funding for the overall project in fiscal year 2001 provides for the continued implementation and development of the existing demonstration project sites; completion of important validation and certification studies; integration of refined, sustainable technology; and the planning and development of an Internet based interactive comprehensive diabetes management system that incorporates the JVN/DOIT interactive diabetes health care system.

With the continued successful implementation of this groundbreaking Joslin/DOD/VA telemedicine project representing a unique partnership between a government agency and an academic institution, we envision a phased integration into regular clinical and budget operations beginning in fiscal year 2002.

Following the sustained implementation of this validation phase of the project, Joslin will provide scientific, technical, clinical and management assistance in the ongoing planning development, monitoring and evaluation of the JVN diabetes health care system as an integral component of the envisioned Comprehensive Diabetes Management System.

Joslin funding summary

DOD/VA Program Participation Costs (current)	$2,560,000
DOD Management and Administration Fees	840,000
Joslin Diabetes Center Expenses	3,600,000
Total, Joslin project cost	7,000,000

Joslin Diabetes Center Funding Justification

The budget that Joslin is submitting for fiscal year 2001 again addresses all known expense items and Federal agency participation costs. The DOD standard management and administration fee has been approximately 12 percent for each of the past two years. These fees are spread across several agencies within DOD, which is apparently a standard practice for extramural contracts. In addition, an across the board cut of 1.5 percent, or $80,000, was also levied against fiscal year 2000 project funding.

We have taken those elements into consideration and budgeted accordingly. Of the total of $7 million related to the Joslin Diabetes Center pilot program, $2,560,000 of this amount would be split among DOD and VA for their program costs associated with this project. Of the remaining funds, we estimate that $840,000 would be levied by DOD against the project. Therefore, the remaining $3,600,000 would be used for continued JVN development and purchase of equipment, supplies, travel and Joslin personnel to carry out the program objectives outlined in this statement.

I would like to point out that the Departments of Defense and Veterans Affairs are gaining expertise and expanding their sites using Joslin's technology, that Joslin's direct receipt of Federal funds is declining. This is by Joslin's design. In fiscal year 2000, Joslin actually will receive $4 million of the $7 million apportioned for this project, or approximately 57 percent of the total. In fiscal year 2001, of the $7 million we are requesting, Joslin's share declines to $3,600,000, or slightly over

50 percent of the total. The balance of funds will be used by DOD and VA for program and administrative management of this expanding project.

Summary

Fiscal year 2001 federal funding for the Joint Diabetes Project will allow this collaborative initiative to improve the diagnosis and treatment of diabetes to benefit the dependents of employees and enlisted personnel through the concentration of efforts to identify advanced treatment protocols and cutting-edge research to ultimately identify a cure for the disease.

Summary—Joint Diabetes Project, Fiscal Year 2001 Funding

Joslin Diabetes Center	$7,000,000
(DOD and VA Costs, DOD Administration and Management Fees)	(3,400,000)
Children's Hospital of Pittsburgh	7,000,000
(DOD Administration and Management Fees)	(980,000)
Total Program	14,000,000

Mr. Chairman, we are pleased to be a part of this project with the Department of Defense and appreciate the support that your Committee provided to us last year, and we would be appreciative of your continued support again this year. We would be pleased to answer any questions from you or any other Members of the Committee.

Senator STEVENS. Thank you very much. Did you make a request to the Health and Human Services Subcommittee this year for funding through NIH?

Dr. BURSELL. We have not made a request for funding through NIH at this point. What we anticipate doing is using the results that we develop from this demonstration program to actually move forward with formal NIH funding.

Senator STEVENS. Mr. Violi, have you requested funds through the other subcommittee?

Mr. VIOLI. Yes, we have.

Senator STEVENS. How much did you request there?

Mr. VIOLI. I do not know. Dr. Trucco might be able to answer that.

Dr. TRUCCO. Out of different grants of $150,000 to $200,000, we have a total of five.

Senator STEVENS. What is the total you requested from that subcommittee?

Mr. VIOLI. From NIH.

Dr. TRUCCO. I would say that it totals $1.5 million.

Ms. VISCO. $1.5 million, Senator.

Senator STEVENS. Thank you very much.

Senator DOMENICI. Mr. Chairman.

Senator STEVENS. Yes, Senator Domenici.

Senator DOMENICI. I wonder if you would do me a favor. When you get to the 21st witness, would you insert my statement?

Senator STEVENS. I would be very pleased to do that.

Do you have any questions at this time?

Senator DOMENICI. First, I want to commend you, Mr. Chairman, and the distinguished ranking member, Senator Inouye, for your hard work on Indian Affairs. I think we all have come to realize, in terms of the population of the United States that is most vulnerable to diabetes, that it is the Indian population.

That is not to degrade these funding requests, but, we have groups of Native Americans, the largest group being the Navajo Tribe, where the propensity for diabetes is so high that some stat-

isticians would indicate that if we do not turn it around, this disease could actually eliminate the Navajo people in a period of 30 or 40 years.

In the 1997 Balanced Budget Act, we established two programs with mandatory funding of $30 million a year each for diabetes. One program focused on the national diabetes problem, and one focused on Indian diabetes. I hope both programs are working in the direction of alleviating some of the problems and getting some prevention in existing programs.

I want to commend our witness in particular on the Juvenile Diabetes Association. We work with your program in New Mexico and elsewhere. You have the most fantastic citizens involved at the ground level working with the young people. It makes sense to do what we can in every appropriations bill, and to the extent that I can, I want you to know that I support diabetes efforts.

Thank you, Mr. Chairman.

Mr. VIOLI. Thank you, Senator. I think it is important to point out that most folks today are talking about treatment of diabetes. And that is certainly important. We at Children's Hospital, in Pittsburgh, today are talking about a cure for juvenile diabetes. We are very excited about what we are doing and where we are going.

This is a first. It has been a long time coming. Dr. Trucco is a world-renown expert in this. We are collaborating with people all over the world and throughout the United States. We really think we have something here. And we think, at the end of the day, it will be the answer.

Senator STEVENS. Thank you very much. We have to move on. I want you to know I am disturbed about the amount of the DOD and VA administrative costs and management fees. I intend to ask the GAO to examine the management fees that are being charged by the various departments, as they merely write checks to various entities that we have urged them to work with in terms of these research programs. The total management fee in your request is $4 million out of $14 million.

We can get cheaper managers than the Department of Defense if they do not wake up. We will put it somewhere else. I do hope you talk to them about the level of these management administrative costs, that it is too high, much too high. And I think the GAO should tell us what is a reasonable figure for managing money that we allocate to specific projects such as yours. We thank you very much.

Mr. VIOLI. Thank you, Senator.

Dr. BURSELL. Thank you, sir.

Senator STEVENS. Our next witness is Dr. Genevieve Ames, on behalf of the Research Society on Alcoholism.

Good morning, Doctor.

STATEMENT OF GENEVIEVE M. AMES, PH.D., ASSOCIATE DIRECTOR AND SENIOR RESEARCH SCIENTIST, PREVENTION RESEARCH CENTER/PACIFIC INSTITUTE FOR RESEARCH AND EVALUATION, AND PROGRAM DIRECTOR, NIAAA PRE AND POST DOCTORAL TRAINING PROGRAM, PREVENTION RESEARCH CENTER AND SCHOOL OF PUBLIC HEALTH, AND ADJUNCT PROFESSOR, DIVISION OF PUBLIC HEALTH BIOLOGY AND EPIDEMIOLOGY, SCHOOL OF PUBLIC HEALTH, UNIVERSITY OF CALIFORNIA, BERKELEY

Dr. AMES. Good morning, Mr. Chairman and members of the subcommittee. Thank you for giving us an opportunity to testify here today.

I am a Research Scientist from the Prevention Research Center in University of California School of Public Health in Berkeley, and I am pleased to talk to you today about funding for research on alcoholism and alcohol abuse. I am sorry the Senator from New Mexico just left, because I wanted to mention—he said 50 percent of Native American and aboriginal people are diabetic. On some reservations in the United States, 50 percent of the people are also alcoholics.

I would like to make several points today about drinking in the military and our request for more funding to go to research that will focus specifically on the military. Heavy drinking among military men is over 40 percent more prevalent than in the civilian sector and, among young men aged 18 to 25, the rate of heavy alcohol use is about 1.8 times higher for the military than for civilians; and one in four men aged 21 to 25 engage in heavy drinking.

The prevalence of heavy drinking is particularly high among service men that are not married in the Marine Corps and in the Army. And for all personnel in the E–1 through E–3 pay grades, it is 26 percent in those grades who are heavy drinkers. Alcohol abuse costs the Nation at large approximately $167 billion annually. About one-tenth of this pays for treatment, the rest is the cost of lost productivity, accidents, violence, driving while intoxicated (DWI) and premature death due to alcohol-related illnesses.

In the military, it is unknown what the cost of alcoholism and alcohol abuse is, but it is likely to be enormous. We do know that among personnel in the lowest pay grades, E–1 to E–3, about one in five experiences productivity loss due to drinking. One in six reports serious consequences of drinking. One in 10 reports symptoms of alcohol dependence. And, finally, heavy drinkers are more likely to report a higher number of days each month with mental health problems and the need for evaluation of depression.

Although heavy alcohol use in the military has declined significantly since 1980, the rates have remained relatively stable in recent years, and there has been no decline since 1995. These findings stand in striking contrast to the dramatic decline in rates of illicit drug use in the military over the same period. There has been a 90-percent decrease in drug use between 1980 and 1998, which is very positive.

The unchanging high levels of heavy drinking and negative alcohol-related consequences highlight the critical need for more research and programmatic programs. So what research advances have been made that are useful for the military? Well, we are poised at this time with unprecedented opportunities in biomedical

and behavioral alcohol research. Genetic research will improve our understanding of the interaction between heredity and the environment in the development of alcoholism.

The field of neuroscience is a promising area. We are developing more effective drug therapies for alcoholism. And this requires an improved understanding of how alcohol changes the brain function to create craving, loss of control, tolerance, and the alcohol withdrawal syndrome.

Clinical trials of various treatment approaches are in process. For example, Naltrexone, which is a drug that blocks the brain's natural opiates, has shown to reduce craving for alcohol. And that research is still being carried out.

Most importantly, scientists are exploring ways to develop new programs for primary prevention of problems associated with alcohol. And for the military, in my view, and other members of the Research Society on Alcoholism, this is an important approach. Prevention is important because it intervenes with problems before they occur as opposed to after the damage is done. When we speak of costly alcohol-related problems, we are talking about accidents, injuries, violence, lowered productivity, lowered safety, increased illness, and disrupted family and community life.

We are making forward progress in all of these areas and, as you know, the National Institute on Alcohol Abuse and Alcoholism and the Department of Veterans Affairs is severely underfunded. Moreover, few studies focus on prevention and treatment approaches that are specific to the needs of the military. I myself am doing research on the military. And, to my knowledge, I am the only one that I know of at this time in all of the National Institute on Alcohol Abuse and Alcoholism (NIAAA) that is conducting studies that focus specifically on drinking in the military.

So we are asking that the DOD contribute $10 million—the Research Society on Alcoholism is asking that. We urge the Department of Defense to allocate this amount out of the next fiscal budget to go toward alcohol research. And these funds could be administered directly by the Department of Defense, as they were last year, alone, or they could be jointly with VA and NIAAA. This would allow the military to be a part of the advance of opportunities to research into the causes, consequences, prevention, and treatment of alcohol abuse and alcoholism.

Thank you.

[The statement follows:]

PREPARED STATEMENT OF GENEVIEVE M. AMES

The Research Society on Alcoholism (RSA), is a professional research society whose 1,200 members conduct basic, clinical, and psychosocial research on alcoholism and alcohol abuse.

In recent years, our organization has submitted testimony to this subcommittee about alcoholism in the military, a serious problem that compromises national preparedness and the defense of the nation. We are deeply grateful that the Congress recognized this problem by providing additional funding for medical research in the Defense health program in recent years. We are particularly pleased that alcohol research has been specifically mentioned as one area to be funded. Furthermore, we are pleased to report that more than one-third of the proposals submitted to the Department of Defense (DOD) for the fiscal year 1999 biomedical research funds were for alcoholism research. You will recall that Congress appropriated $19.5 million in fiscal year 1999 to DOD to cover research in 15 areas, including alcoholism research. We believe that this demonstrates a clear need for more research in this

area and would like to propose that additional funds be directed towards research that will address the problem of alcoholism and alcohol abuse in the military.

Alcoholism is a tragedy that touches all Americans. One in ten Americans will suffer from alcoholism or alcohol abuse and their drinking will impact on their family, their community, and society as a whole. Recent research indicates that alcoholism and alcohol abuse cost the nation approximately $167 billion annually. One tenth of this pays for treatment; the rest is the cost of lost productivity, accidents, violence, and premature death.

In the military, the costs of alcoholism and alcohol abuse are likely to be enormous. Heavy drinking among military men is over 40 percent more prevalent than in the civilian sector. Among young men aged 18 to 25, the rate of heavy alcohol use is about 1.8 times higher for the military than for civilians. According to the 1998 Department of Defense Survey of Health Related Behaviors Among Military Personnel, one in four young military men engages in heavy drinking, defined as having five or more drinks at least once a week. The prevalence of heavy drinking is particularly high among service men that are not married (23.9 percent), those in the Army (17.2 percent) and Marine Corps (23.0 percent), and for personnel in the E1–E3 pay grades (25.9 percent). Further, among personnel in the lowest pay grades (i.e., E1 to E3), about 1 in 5 experiences productivity loss due to drinking (20.7 percent), 1 in 6 reports serious consequences of drinking (15.2 percent), and 1 in 10 reports symptoms of alcohol dependence (10.2 percent). Because these negative effects are most prominent among the junior enlisted personnel, the absolute numbers of personnel experiencing drinking problems are quite large. Finally, heavy drinkers are more likely to report a higher number of days each month with mental health problems and the need for evaluation of depression.

Importantly, although heavy alcohol use and associated negative effects have declined significantly since 1980 (the first DOD Health Survey), rates have been relatively stable over the past decade and there was no decline from 1995 to 1998. These findings stand in striking contrast to dramatic declines in rates of illicit drug use among military personnel over the same period, with a decrease of over 90.2 percent between 1980 and 1998. The unchanging, high levels of heavy drinking and negative alcohol-related consequences highlight the critical need for more programmatic effort and resources directly targeting alcohol use in the military. Many talented and dedicated people in the Department of Defense are working hard to reduce heavy drinking in the military, but current prevention and treatment programs are simply not good enough. In the 1998 DOD survey, a substantial proportion of current heavy alcohol drinkers had a history of alcohol treatment since entering the military, indicating that they are at high risk for future alcohol-related problems and additional treatment episodes.

Research holds the promise of developing a better understanding of the etiology of alcoholism, more effective prevention programs and new and better methods for the treatment of alcoholism. Unfortunately, alcohol research, which is conducted primarily at the National Institute on Alcohol Abuse and Alcoholism (NIAAA) at the National Institutes of Health and in the Department of Veterans Affairs (DVA), is severely underfunded. Moreover, few studies funded by the NIAAA and the VA focus on prevention and treatment approaches that are specific to the needs of the military. Little is known about how prevention measures should be implemented in the unique social context of military work and life. The Research Society on Alcoholism urges the Department of Defense to fund research into the causes, consequences, prevention, and treatment of alcohol abuse and alcoholism.

We are poised at a time of unprecedented opportunities in alcohol research. Scientists are exploring new ways to prevent alcohol-associated accidents and violence, and prevention trials are developing methods to address problem use. For the first time scientists have identified discrete regions of the human genome that contribute to the inheritance of alcoholism. Genetic research will accelerate the rational design of drugs to treat alcoholism and improve our understanding of the interaction between heredity and environment in the development of alcoholism. The field of neuroscience is another promising area of alcohol research. The development of more effective drug therapies for alcoholism requires an improved understanding of how alcohol changes brain function to produce craving, loss of control, tolerance, and the alcohol withdrawal syndrome. This knowledge is starting to bear fruit. Naltrexone, a drug that blocks the brain's natural opiates, reduces craving for alcohol and helps maintain abstinence. Ongoing clinical trials will help determine which patients benefit most from Naltrexone and how the drug can best be used. Other promising treatment agents are currently undergoing evaluation in the United States. The military needs to be part of this effort.

Alcohol abuse and alcoholism are devastating problems of national importance. The high rates of heavy drinking and associated problems among military personnel

demand immediate and increased attention. Rates of alcohol use have remained unacceptably high for the last decade while most other health indicators in the military have shown substantial and clinically significant improvements.

Alcohol research has now reached a critical juncture, and the scientific opportunities are numerous. With the support of this subcommittee and the Congress, we believe that we can produce significant advances in alcohol research and aid in understanding and reducing the problem of alcoholism and alcohol abuse in the military.

Recommendation: The Research Society on Alcoholism urges that $10 million be allocated to research on alcohol abuse and alcoholism. These funds could be administered by the Department of Defense alone or jointly with the VA and NIAAA. This request balances the increased morbidity, mortality, lost productivity, accidents, and an overall reduction in readiness caused by the high rate of alcohol abuse and alcoholism in the military with the abundance of research opportunities to more effectively prevent and treat alcohol dependence and alcoholism among the men and women serving in our armed forces.

Senator STEVENS. Thank you very much.

At the request of the chairman of the House Defense Appropriations Committee last year, we did initiate a program of $7 million annually for alcoholism research. And we will work with him again this year. He showed a great initiative in that area, and we intend to talk to him again this year to see what he wants to do in this area.

We thank you very much, Doctor.

Dr. AMES. Thank you.

Senator STEVENS. The next witness is retired Colonel Partridge, on behalf of the National Association for Uniformed Services.

STATEMENT OF COL. CHARLES C. PARTRIDGE, U.S. ARMY (RETIRED), LEGISLATIVE COUNSEL, NATIONAL ASSOCIATION FOR UNIFORMED SERVICES

Colonel PARTRIDGE. Good morning, Chairman Stevens, Senator Inouye.

Senator STEVENS. Good morning. Nice to see you again.

Colonel PARTRIDGE. Good to see you again, Mr. Chairman. I am going up this weekend to talk to retirees at Fairbanks. I am looking forward to getting back up to Alaska and to seeing a group of those hardy Alaskans.

Senator STEVENS. You are one of these spring birds that comes in after it thaws out, Colonel.

Colonel PARTRIDGE. That is exactly right.

We were excited when the Chairman of the Joint Chiefs of Staff and the Secretary of Defense and other senior officials publicly stated that this was the year to fix health care. However, when the budget came over this year, it was short. It was short, in our estimate, by about $600 million. This means, then, that the Congress has to make up that shortage and then look for money to make any improvements.

That is the reason that S. 2003 and similar bills have such strong support throughout the country around the military community. They would like to see some sort of permanent fix to this problem. We believe, in the long term, that setting up an accrual accounting system, similar to what is being done to military retired pay to Federal retired and Federal civilian health care, is the solution. But, for now, we want to ask your support for funding of Senator Warner's bill, which was introduced last Monday, and which would take care of several problems, the most critical of which is the prescription drug benefit.

Senator STEVENS. Is not a major problem failure to pay the accumulated bills to date, Colonel? Have you seen that list of the accumulated bills that have not been paid?

Colonel PARTRIDGE. I have not seen the details, but I know that they are talking somewhere between $800 million and over $1 billion in unpaid bills that they did not send a request over for.

Senator STEVENS. The contractors came in to see us yesterday, and it was well over $1 billion in past bills that had been presented which had not been paid.

Colonel PARTRIDGE. Yes, sir, I understand that. And the shortage I was talking about was over and above that.

Senator STEVENS. I understand that. I am glad you understand that. Thank you.

Colonel PARTRIDGE. Yes, that is the problem. Of course, our concern is that they are going to pay for those bills at our expense. That is our concern.

The administration has been making major changes to the military health system since 1988, and we still have not solved the problem. But, as I was saying, the prescription drug benefit is going to be a big step. We have a group of retirees out in Oregon, a retired Navy chief, organized a bus—they paid $40 a head, spent 7 hours on that bus, to go get prescription drugs. And we believe this bill by Senator Warner and 23 other Senators is going to stop those buses and allow these people to order their drugs at the same price that the others do—$8 for a 90-day supply. And if it is not there, they can buy it downtown with 20 percent co-pay. We think that is a great step in the right direction.

We are also supporting expanding the Federal Employees Health Benefit test because there are going to be more base closures. When these bases close, the hospitals close; what are we going to do then? The TRICARE Senior Prime program and some of these other programs are not going to work where there are not major military hospitals.

Senator STEVENS. You guys are going to have to tell them over at the Department of Defense that that is a cost of closing bases. They tell us how much money we are saving by closing bases. They never take into account the added cost for retirees and even for the individuals still in the service to obtain health care outside of those base hospitals. It is really bad.

Colonel PARTRIDGE. We agree with you, Mr. Chairman. And we have been telling them they have got to put that in the mix, the cost of providing care, plus the increased cost of Medicare when they close them. They do not like to address that issue either.

We appreciate your holding these hearings each year. We appreciate the opportunity to present our views. And we want to work with this committee and of course with the Armed Services Committee to make sure that this problem is solved and solved promptly.

Thank you, Mr. Chairman.

[The statement follows:]

PREPARED STATEMENT OF CHARLES C. PARTRIDGE

Mr. Chairman and distinguished members of the Committee, the National Association for Uniformed Services (NAUS) and the Society of Military Widows (SMW)

would like to express their appreciation to you for holding these important hearings. The testimony provided here represents the collective views of our members.

The National Association for Uniformed Services represents all seven of the uniformed services and is the only military association that represents all ranks, all grades, all components, family members and survivors. The Society of Military Widows became affiliated with us in 1984. Together our nation-wide membership stands at 160,000 that when added to our supporters and friends puts our effective strength at over half a million.

Medical care is one of the top concerns of the military community and the top concern of NAUS and SMW. With base and hospital closures and the continual downsizing of medical personnel and military treatment facilities, the increasing lack of available health care continues to be a major concern to active and retired personnel alike.

We at NAUS want to thank the committee for its long standing interest in Military Health Care and we hope that significant improvements can be made this year.

BACKGROUND

The Military Health System has several missions, first and foremost is caring for active duty troops and maintaining military medical care readiness, readiness training and contingency operations as well as providing care for active duty family members; continuing to provide promised, lifetime medical care to military retirees, and their family members. To carry out these missions, top quality personnel to staff military medical units, hospitals and clinics are essential. These personnel are attracted to military medicine through the Uniformed Services University of the Health Sciences, the U.S. Health Profession Scholarship Program and quality graduate medical education programs sponsored by the various military medical services. Each is an important element of the system and are all linked together. Additionally, as we are seeing today with the recruiting shortages in all services except for the Marine Corps, keeping faith with the retirees by keeping the medical health care promise is vital to our strong all volunteer force and to our national defense. In a 1999 Christian Science Monitor article addressing recruitment problems, Major General Evan Gaddis, the commander of the Army's Recruiting Command headquartered in Fort Knox made special note of the fact that "military retirees, upset over a steady erosion of benefits like health care and pensions, aren't talking up military careers to young adults as they might once have."

Earlier this year, Defense Secretary Bill Cohen and the Chairman of the Joint Chiefs of Staff, General Henry Shelton, testified before the Senate Armed Services Full Committee. Secretary Cohen had this to say:

"We have made a pledge, whether it's legal or not, it's a moral obligation that we will take care of all of those who served, retired veterans and their families, and we have not done so. There are big bills involved in this. This is no small matter."

In response to a question concerning retiree health care from Senator Chuck Robb, General Shelton said:

"Sir, I think the first thing we need to do is make sure that we acknowledge our commitment to the retirees for their years of service and for what we basically committed to at the time that they were recruited into the armed forces.

We've got—we've got actual recruiting posters that very vividly state that not only would they be taken care [of], but that their families would be taken care of. And of course, in their minds they—we have broken that commitment. And I think we have."

A military medical system is necessary to support not only the present active forces but also to meet future requirements. To attract, maintain and properly certify highly qualified medical professionals requires assuring them that they will have a complete range of patients with varied health problems to include older retirees. They can't be adequately trained treating only young (average age 23) service members and young family members. This means it is imperative to maintain a strong, vibrant, capable direct care system.

The Defense Health System has undergone a significant downsizing in the past 10 years and continues to shrink. The number of normal beds has decreased by 41 percent (12,000), expanded beds have decreased by 46 percent (20,000), the number of hospitals has decreased by 35 percent (58) and the number of medical centers has decreased by 33 percent (6). Additionally, military medical personnel have decreased by 13 percent while civilian medical personnel have decreased by 22 percent. Please contrast these reductions with the 10 percent reduction in the eligible serviced population (867,000) during the past 10 years. According to the Department of Defense "demand continues to exceed supply, especially among retirees" all the while, the "Medicare eligible population (is) growing 4 to 5 percent annually". And the various

DOD medical departments continue to decrease their uniformed officer medical personnel.

NAUS HEALTH CARE PLAN

The NAUS plan is founded upon strong, fully-funded and fully-staffed military treatment facilities (MTFs). Branching out from the MTF foundation, the NAUS plan supports a high quality TRICARE Standard (CHAMPUS) benefit for life. Complementing and completing the plan for military beneficiaries who do not have access to or for whom the MTF/TRICARE program does not meet their needs, NAUS supports the option of the Federal Employees Health Benefits Program (FEHBP).

TRICARE: FULL FUNDING FOR ALL MILITARY BENEFICIARIES

In order to ensure the viability of TRICARE for all eligible beneficiaries to the program, it is necessary that TRICARE funding reflect the number of beneficiaries eligible for military health benefits, not just the ever-declining number of people able to use the military system the previous year. The overall Defense Health Program continues to have funding shortfalls, NAUS urges this committee to provide adequate funding for military readiness as well as the current peacetime component. Our active duty members need assurances that funding will enable access to quality health care for their families, as well as assuring incentives for these uniformed service members to be recruited and retained in the military. Further, the promise of this health care benefit must be kept for our military retirees that are over and under the age of 65.

Additional funding will be required to keep providers in TRICARE Prime networks as our members are experiencing physicians leaving the system. Most TRICARE managed care support contractors have negotiated TRICARE Prime reimbursement rates with network providers that are even lower than Medicare. The issue however is a combination of low rates and physicians not being paid in a timely manner due to claims processing. TRICARE is giving physicians two disincentives for not signing up in the networks, low payment and slow payment. Members have reported that in the more rural areas, and even some urban areas, where providers do not depend on a military patient base, health care providers have become increasingly unwilling to accept TRICARE Standard (CHAMPUS) patients at all. NAUS feels that de-linking the CMAC (CHAMPUS maximum allowable charge) from the Medicare Schedule and directing higher payments to providers as necessary will improve access to quality care for our beneficiaries. The fiscal year 2000 Defense Authorization Act gave the Secretary of Defense the authority to go over the current CMAC rates to bring providers into TRICARE networks, but NAUS has not seen this implemented. When CHAMPUS, now TRICARE Standard was enacted in 1966, the standard DOD used was a benefit at least equal to FEHBP high option Blue Cross/Blue Shield, without imposing a premium. Over the years this benefit has been decimated. It is time to fix it.

Please note that the administrative expenses associated with other federal health programs were computed and provided to the National Bipartisan Commission on the Future of Medicare by the General Accounting Office. GAO reported that the administrative expenses for Medicare, FEHBP and Medicaid were each 1 tenth of one percent of the total expenditures of the respective programs, whereas the Department of Defense's expenses were "not available".

Members of this Committee, if we do not address these health care needs the response will be continued reduction in retention and recruiting.

MTF Funding: The Department of Defense has directed that the military treatment facilities (MTFs) draw patients back into the military system to improve cost-effectiveness and to ensure medical readiness. To accomplish this, improved infrastructure and staffing additional funds are needed. Walter Reed Army Medical Center (WRAMC), the US Army's flagship medical center, is an ideal location to initiate a pilot program implementing this initiative. Savings from this effort can be significant. Funding for the necessary infrastructure improvement and increased staffing are needed and could begin by authorizing $20 million for WRAMC for this purpose.

TRICARE FRAUD AND ABUSE

According to GAO Report HEHS–99–142, July 30, 1999, "There is general consensus in DOD and the health care industry that fraud and abuse could account for 10 to 20 percent of all health care costs. Given TRICARE managed care contract expenditures of $5.7 billion between 1996 and 1998, DOD could have lost over $1 billion to fraud and abuse during this period . . ." Of the approximately 50 million claims processed between 1996–1998, the responsible contractors referred only 101 potential fraud cases for investigation by DOD. This low level of fraud identification

has occurred because DOD contracts do not require contractors to aggressively identify and prevent fraud and abuse.

By acting immediately to solve this problem, some $1 billion can be made available to improve military health care for fiscal year 2001 and beyond.

MEDICARE SUBVENTION: TRICARE SENIOR PRIME

With the favorable response to TRICARE Senior Prime by military retirees in six designated test sites, NAUS is asking for nation wide implementation of TRICARE Senior Prime. Senator Phil Gramm (R-TX) introduced S. 915 to make the TRICARE Senior Prime program permanent on a phased-in basis. The bill would expand Senior Prime to ten additional locations with full-service military hospitals by January 1, 2000 and then across the remaining TRICARE Prime catchment areas no later than October 1, 2002. We are requesting that Congress require DOD to expand the Tricare Senior Prime Test nationwide to be effective Jan. 1, 2001. The test program terminates on December 31, 2000, we need funding in fiscal year 2001 to move this program forward.

In the meantime, there are other looming difficulties with the TRICARE Senior Prime program. The Health Care Financing Administration (HCFA) has provided $43 million in interim payments to DOD and DOD will be allowed to retain $6 million despite the fact that DOD has already paid out $40 million in claims. In our opinion, the reimbursement rates and rules between HCFA and DOD should be renegotiated. Also, at the present time, DOD hospitals are providing services of $187 more per enrollee per month than they are receiving in HCFA reimbursements. With over 30,000 enrolled retirees and their family members, this is over $5.6 million per month. The simple fact of the matter is that if health care is to be provided to military retirees, dollars must be provided to MTFs from HCFA and the Defense Health Program. Since care provided in MTFs is less expensive than in the civilian sector, this is a good investment and is good for the taxpayer.

FEE-FOR-SERVICE MEDICARE SUBVENTION

We would like to see another Medicare reimbursement option added on a fee-for-service basis. Senator Gramm's bill, S. 915, would give DOD the option to provide a fee-for-service Medicare option at certain MTFs if this would be more cost effective for those facilities. This would allow Medicare eligible military beneficiaries to keep their standard Medicare benefit, and when using the MTFs "ON A SPACE AVAILABLE BASIS" to present their Medicare Card to the MTF. The MTF would bill Medicare as other providers do, except that it would be on a discounted basis to reflect the lower cost of care provided by the MTFs.

This would save Medicare Trust funds while making more efficient use of MTFs and use capacity that otherwise would not be used. This also supports our contention that Medicare eligible military medical beneficiaries earned the promised lifetime medical care for themselves and their eligible family members in MTFs and they paid for Medicare Part A coverage through mandatory deductions from their military and civilian pay checks. The combined earned and paid for health care access is clear justification for this fee-for-service option.

FEHBP OPTION

In order to have a fair and accurate test, we need to provide the opportunity for Medicare eligible military retirees to increase enrollment in the FEHBP test for the November 2000 open enrollment season. As we testified last year before this committee, we know that not all military retirees will enroll in this program, but we need to give them the option to make that choice in order to determine the future of providing care for those that have served in the military. NAUS is urgently requesting this subcommittee's support for necessary funding to increase the number of demonstration sites, as well as the number of enrollees eligible to participate in the program effective for the November 2000 open enrollment season. We feel that S. 2087 gives DOD authority to expand the sites, but does not direct and make them accountable to open up additional sites. It is absolutely essential that we give these retirees an equitable benefit that is as good or as equal to federal retirees.

PHARMACY ISSUES

We are requesting extension of the BRAC (Base Realignment and Closure) pharmacy benefit to include all Medicare eligible military retirees regardless of location. The BRAC pharmacy program provides a National Mail Order Pharmacy (NMOP) benefit at a cost of an $8 co-payment for a 90 day prescription (30 days for certain

controlled drugs), as well as a 20 percent co-payment for retail pharmaceuticals at TRICARE network pharmacies.

The April 29, 1999 DOD Pharmacy Benefit Report in section 2 "Pharmacy Redesign Approach and Results" subsection 2.3 estimated the cost for a NMOP and retail pharmacy benefit for 1.4 military retirees over age 65 at 400 million dollars. We understand DOD has since increased that estimate by $100 million.

S. 2003 AND H.R. 3573, KEEP OUR PROMISES TO AMERICA'S MILITARY RETIREES ACT

These bills have strong grass roots support because they come closer than any other pending legislation before Congress to answering the military health care promise to America's military retirees, especially her older retirees. Today H.R. 3573 has over 280 cosponsors and S. 2003, has 27 cosponsors. Both S. 2003 and H.R. 3573 have been pushed to the forefront by a huge wave of grass roots support that continues to grow. Mr. Chairman and members of the Committee, we ask you to consider the fact that the World War II era military retirees are dying at a rate of over 3,300 a month. Continued testing and demonstrations will not assist most military retirees. S. 2003/H.R. 3573 would provide retirees a choice—the Federal Employees Health Benefits Program to military retirees, at no cost to those who entered the service before June of 1956, and at the same subsidized rate for those who entered after. It would also extend the current TRICARE program to Medicare eligible retirees and their families. These older retirees and their families have no guaranteed DOD health benefit once they reach age 65, the only federal employees who lose their health care once they become Medicare eligible. As mentioned earlier in this testimony, the Defense Health Program is on life support with few signs of improvement because of continued under-funding and other factors. We urge Congress to solve the health care crisis this year.

H.R. 3697, "THE RETIRED MILITARY PHARMACY BENEFITS IMPROVEMENT ACT OF 2000."

This bill was introduced on 16 February 2000 and would allow all eligible retired members of the Uniformed Services and their family members to receive prescription drug benefits presently available only to Medicare-eligible retirees living near base closure sites or in a TRICARE Senior Prime demonstration area. In effect, it opens the National Mail Order Pharmacy Program and the TRICARE pharmacy network to all military retirees, regardless of age or location.

S. 2087: MILITARY HEALTH CARE ACT 2000

Key Provisions

—Demonstration Programs for Medicare Eligible Retirees (TRICARE Senior Prime and FEHBP) are extended through 31 December 2005 and expanded.

—Military Pharmacy Programs—Expands the National Mail Order Pharmacy Program (NMOP) to Medicare eligible beneficiaries with a $150 deductible per year. (The approximate cost is $300 million per year). For the Pharmacy Pilot Program—Direct reduced pharmacy enrollment fee, implementation of deductible, quarterly/monthly payments. The fee schedule is not contained in the legislation.

—TRICARE Prime—Several major improvements to TRICARE Prime Remote and TRICARE Prime for the active duty as well as for improved business practices and custodial care.

—DOD/VA Cooperative Program—For patient safety, directs DOD and VA to perform two studies for record and pharmacy tracking between the two activities.

—Accrual Financing of Military Retirement Health Care—Initiate two studies to assess the feasibility and desirability of financing the military health care program for retirees on an accrual basis. ($2 million)

NAUS appreciates the work from the Senate and House Armed Services Committees to address the needs of Active Duty members and their dependents. Providing TRICARE Prime Remote and eliminating TRICARE co-payments for active duty family members is essential and needed. Increasing the funding level for custodial care to 100 million dollars, 60 million more than the budget request, is greatly appreciated by those military families.

As just mentioned in our discussion of the pharmacy benefit, we strongly support expanding the BRAC pharmacy benefit with no deductibles or enrollment fees. In addition, the expanded BRAC pharmacy benefit should include access to the retail pharmacy networks with the 20 percent copayment. This is part of the current BRAC pharmacy benefit and should be part of the be pharmacy benefit for all beneficiaries.

We also support multi year extensions of the demonstration programs as proposed in S. 2087 so long as more beneficiaries are allowed to participate. There is no reason to limit the FEHBP to 8 or 10 areas—these boundaries should be removed and the cost controlled by capping the number of participants. Nevertheless, the cap should be increased beyond 66,000.

NAUS is continually concerned for the over 65 military retirees that are dropped by military health care. The message from our members continues to be that they will never see the benefit of a test program if they are not here to use it. The result of extending these tests for an additional two to three years creates anxiety with our members that may not live to see a true benefit being implemented nationwide. The pharmacy benefit will meet the needs of those beneficiaries without any coverage for their drugs, but this committee must understand that the need for acute drugs purchased in the retail pharmacy are needed too. The pharmacy redesign project should be no less generous than the BRAC benefit.

CARE FOR THE DISABLED

The Department of Defense (DOD) has routinely promulgated regulations and policies which have the affect of baring the permanently disabled from the Military Health System. When challenged before either Congress or a Federal Court DOD's actions have been over turned, and the department has been expressly ordered to deliver care to the disabled.

Changes in DOD's policy and regulations regarding the disabled were ordered by The Defense Authorization Act for fiscal year 2000 and the Defense Appropriations Act for fiscal year 2000. However, the Department has yet to fully implement these changes, nor has it provided the public an opportunity to participate as required by law. There is concern, grounded in the Departments' previous treatment of the disabled, that meaningful change is unlikely without further Congressional oversight, directives and remedial legislation.

The recently proposed S. 2087 appears to be a good first step, inasmuch as it continues Congresses objections to the transition of the disabled out of the Military Health System. However, more work is necessary. Congress should require DOD to redraft its custodial care definition in a manner consistent with other federal health programs and related case law. Congress should require DOD to, at a minimum, provide military families with the same amount of basic health services that are available through the FEHBP. DOD should be prohibited from sending Military families to welfare programs by gaming technical provisions. Congress must assure that those categories of beneficiaries for whom disability is the basis of eligibility in the military health system have access to a meaningful benefit.

UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES

NAUS thanks this committee for its strong support for providing necessary funding for the continued operations of the Uniformed Services University of the Health Sciences. Study after study has shown that when all factors are considered USUHS is more cost effective than the US Health Profession Scholarship Program. We urge you to continue your support for this school which is a national resource.

There is currently an $8.3 million Navy Military Construction Project request to construct academic facilities to redress the overcrowding of the existing small class room facilities and to meet current and projected demands for specialized educational support and the associated administrative spaces necessary to conduct accredited graduate-level medical education. This Committee's support in adding those funds to the MILCON portion of the Defense Health Program's budget would be greatly appreciated. The ability of the University to maintain its accreditation and unique commitments to the TRISERVICE healthcare community will continue to be negatively impacted by temporary, inefficient, and costly space fixes which fail to deliver students, faculty, and staff unfettered access to the primary assets of the University, its people and interactions available on campus.

MEDICARE PART B WAIVER FOR MILITARY RETIREE 65+

Retirees were counseled by military health benefits advisors not to enroll in Part "B" because they resided near MTFs and would be able to access their free health care. These retirees should not be punished with late enrollment fees due to the fact that the local MTF has closed. NAUS has requested the waiver of the penalty for not enrolling in Medicare Part "B" for Medicare-eligible military retirees

NAUS believes that this small investment will enable retirees to enroll in health care programs which require Medicare Part B for eligibility such as TRICARE Senior Prime and the Fee-for-Service Option plans in FEHBP. Currently, we have mili-

tary retirees that are either paying a high penalty for Medicare Part B, or just cannot enroll because it is to costly.

RETIREE DENTAL PROGRAM

The Retiree Dental plan does not provide coverage of crucial benefits, such as bridges and crowns which are needs characteristic of our members. Currently, the contract is not subsidized by DOD, which would mean that increasing the benefit level now would make the program to costly to are aging retirees. Therefore, NAUS has requested funding for a subsidy for the DOD Retiree Dental plan's premium to expand the benefit schedule to military retirees.

CONCLUSION

Every one of these problems cited here has a common thread—save money by eliminating or reducing care provided. The fewer beneficiaries served means the fewer DOD dollars needed to provide health care and increases the dollars available for equipment and weapons systems. Regardless of the promises made and of all the intentions of this Congress, health care for military retirees is not treated as a benefit and it certainly is not treated as an entitlement. Health care for military retirees, their families and their survivors is merely a line item expense in the DOD budget to be squeezed for more pressing needs by comptrollers and budget analysts who do not rely on the Defense Health Program for their health care.

A solution recommended by NAUS to partially address this concern is to make the funding mechanism for military retiree health care the same as it is for other federal retirees—adding it to the entitlement's portion of the budget—and to stop making retiree health care compete for the same Defense dollars used in weapons programs, research and development or operations and maintenance.

Senator STEVENS. Thank you, Colonel. We look forward to working with you on this. This is our number one issue this year, too. We will work it out with you. Before we are finished, we will consult with you to make sure that we do it so that you understand what we are doing.

Do you have any questions, Senator?

Senator INOUYE. No, Mr. Chairman.

Senator STEVENS. Thank you very much.

Colonel PARTRIDGE. Thank you, sir.

Senator STEVENS. We are going to skip witness 16 and go to witness 17, Mr. Van Nest, from the American Association of Nurse Anesthetists, Federal Government Affairs Office. We will get to the other witness here in just a minute. We had a request for a Senator to be present when the other witness testified.

STATEMENT OF RONALD VAN NEST, CERTIFIED REGISTERED NURSE ANESTHETIST, FEDERAL GOVERNMENT AFFAIRS OFFICE, AMERICAN ASSOCIATION OF NURSE ANESTHETISTS (AANA)

Mr. VAN NEST. Mr. Chairman, Senator Inouye, thank you for the opportunity to testify before this committee today. My name is Ronald Van Nest, and I am a Certified Registered Nurse Anesthetist (CRNA). I served in the United States Navy for 30 years. I was the CRNA consultant to the Navy's Surgeon General when I was a member of the American Association of Nurse Anesthetists Federal Services Committee.

I am testifying today on behalf of the American Association of Nurse Anesthetists, which represents more than 28,000 CRNA's, including over 600 that served in the armed forces. While I would ask that my written remarks be submitted for the record, I hope to inform you today about the impending nursing shortage facing this country and how this committee may help the Department of Defense face that crisis.

There has been a chronic shortage of CRNA's in the military in recent years, which may only be exacerbated by the impending critical shortage of nurses nationwide. It has been reported that as many as 59 percent of civilian institutions are recruiting to fill CRNA positions. This creates a competitive hiring market that is difficult for the military to compete in. Yet recruitment and retention of CRNA's must remain of utmost importance in order to ensure that our Federal services can meet their medical mission.

This committee can and has assisted in this effort. We would like to thank the members of this committee for their continued support of funding of the incentive special pay and the board certification pay for nurse anesthetists. These special pays help the military to remain competitive in the job market, and assist them in presenting military nurse anesthesia as an attractive professional choice.

We believe that more appropriate utilization of its anesthesia providers could benefit the Department of Defense even more. In many military missions today, CRNA's are the ones who are deployed with combat units or aboard aircraft carriers as the sole anesthesia providers, with no anesthesiologists present. Currently, in both Kosovo and Macedonia, there is a single nurse anesthetist that is providing all of the anesthesia care in these locations. Again, no anesthesiologists present.

If such practice models are acceptable for deployed situations, there is no reason they should not be accepted in urban military treatment facilities. Yet there are some service branches that require multiple anesthesia providers to do the same job that has been performed safely and effectively for over 100 years by CRNA's alone.

Of all the branches, the Navy is doing a very good job of utilizing providers more effectively. In fact, last month, Rear Admiral Kathleen Martin, Director of the Navy Nurse Corps, testified before this committee. To quote from her testimony:

> Our advanced practice nurses all practice to the fullest extent of their competency and practice scope to ensure that the right provider delivers care to the right patient based on their health requirements. In this manner, we maximize our provider assets while allowing them to maintain those critical practice competencies needed for wartime roles. We recommend that this committee direct all branches of the Department of Defense to utilize their anesthesia providers in the most cost-effective manner, prohibiting supervision requirements in urban facilities that only drive up the cost while doing nothing to enhance the quality of care.

In conclusion, the AANA thanks this committee again for its support of military nurse anesthetists through the incentive special pay and the board certification pay. AANA believes that more appropriate utilization of CRNA's in the military is of critical concern, and is an area that could be examined for increased cost savings. I thank the committee members for your consideration of these issues, and I will be very happy to answer any of your questions.

[The statement follows:]

PREPARED STATEMENT OF RONALD VAN NEST

The American Association of Nurse Anesthetists (AANA) is the professional association that represents over 28,000 certified registered nurse anesthetists (CRNAs) in the United States, including over 600 CRNAs in the military services. The AANA appreciates the opportunity to provide testimony regarding CRNAs in the military. We would also like to thank this committee for the help it has given us in assisting

the Department of Defense (DOD) and each of the Services to recruit and retain CRNAs.

BACKGROUND INFORMATION ON NURSE ANESTHETISTS IN THE DOD

The practice of anesthesia is a recognized specialty within both the nursing and medical professions. Both CRNAs and anesthesiologists (MDAs) administer anesthesia for all types of surgical procedures, from the simplest to the most complex, either as single providers or in a "care team setting." Patient outcomes data has consistently shown that there is no significant difference in outcomes between the two providers. CRNAs and MDAs are both educated to use the same anesthesia processes in the provision of anesthesia and related services.

Nurse anesthetists have been the principal anesthesia providers in combat areas in every war the U.S. has been engaged since World War I. Military nurse anesthetists have been honored and decorated by the U.S. and foreign governments for outstanding achievements, resulting from their dedication and commitment to duty, and competence in managing seriously wounded casualties. In World War II, there were 17 nurse anesthetists to every one anesthesiologist. In Vietnam, the ratio of CRNAs to physician anesthetists was approximately 3:1. Two nurse anesthetists were killed in Vietnam and their names have been engraved on the Vietnam Memorial Wall. During the Panama strike, only CRNAs were sent with the fighting forces. Nurse anesthetists served with honor during Desert Shield and Desert Storm. Military CRNAs continue to provide critical anesthesia support to humanitarian missions around the globe in such places as Somalia, Haiti and Bosnia. Currently a single CRNA is providing all the anesthesia care to our servicemen and women in Kosovo and Macedonia. No anesthesiologists are assigned to these missions.

NURSING SHORTAGE PREDICTED: HOW THIS COMMITTEE CAN HELP THE DOD

In all of the Services, maintaining adequate numbers of active duty CRNAs is of utmost concern. For several years, the number of CRNAs serving in active duty has consistently fallen short of the number authorized by DOD as needed providers. This is further complicated by the predicted national nursing shortage that has been well publicized in the press and professional journals. Enrollments in nursing programs continue to decline and the nursing workforce continues to age and retire. Recruitment of nurse anesthetists for the military becomes increasingly difficult when the civilian sector faces such critical shortages. According to a recent survey by the AANA Administrative Management Committee survey, as many as 59 percent of civilian institutions in the country are also actively recruiting CRNAs. This means that the military must work even harder at recruiting and retaining nurse anesthetists. This Committee can greatly assist in the effort to attract and maintain essential numbers of nurse anesthetists in the military by their support of special pays.

The Incentive Special Pay for Nurses

As recently as March 8, 2000, Brigadier General Barbara C. Brannon, Director of Medical Readiness and Nursing Services, Department of the Surgeon General for the Department of the Air Force, testified before the Senate DOD Appropriations Committee that "[t]o attract the right nurses with the right skills, recruiting incentives are essential." We couldn't agree more. Special pays for nurse anesthetists have become a crucial component in recruiting and retaining adequate numbers in the military.

According to a March, 1994 study requested by the Health Policy Directorate of Health Affairs and conducted by DOD, a large pay gap existed between annual civilian and military pay in 1992. This study concluded that "this earnings gap is a major reason why the military has difficulty retaining CRNAs." In order to address this pay gap, in the fiscal year 1995 Defense Authorization bill Congress authorized the implementation of an increase in the annual Incentive Special Pay (ISP) for nurse anesthetists from $6,000 to $15,000 for those CRNAs no longer under service obligation to pay back their anesthesia education. Those CRNAs who remain obligated receive the $6,000 ISP.

There has been no change in the ISP since the increase instituted in fiscal year 1995, while it is certain that civilian pay has continued to rise during this time. In addition, those CRNAs under obligation who are receiving only $6,000 suffer from an even larger pay gap. It would seem that the basic principle uncovered by the 1994 DOD Health Affairs study would still hold true today—that a large earnings gap contributes greatly to difficulties in retaining CRNAs.

Colonel Deborah Gustke, Assistant Chief of the Army Nurse Corps, testified on March 8, 2000 that "Your support of nursing specialty pay is enabling us to recruit specialty nurses in a competitive hiring environment." Again, we strongly concur. Therefore, it is vitally important that the Incentive Special Pay for CRNAs be maintained and even increased as we enter this period of a severe nursing shortage.

AANA thanks this Committee for its support of the annual ISP for nurse anesthetists. AANA strongly recommends the continuation, and even an increase in the annual ISP for CRNAs, which recognizes the special skills and advanced education that CRNAs bring to the DOD health care system.

Board Certification Pay for Nurses

Included in the fiscal year 1996 Defense Authorization bill was language authorizing the implementation of a board certification pay for certain non-MD health care professionals, including advanced practice nurses. AANA is highly supportive of board certification pay for all advanced practice nurses. The establishment of this type of pay for nurses recognizes that there are levels of excellence in the profession of nursing that should be recognized, just as in the medical profession. In addition, this pay may assist in closing the earnings gap, which may help with retention of CRNAs.

While many CRNAs have received board certification pay to date, there are many that remain ineligible. Since certification to practice as a CRNA does not require a specific master's degree, many nurse anesthetists have chosen to diversify their education by pursuing an advanced degree in other related fields. But CRNAs with masters degrees in education, administration, or management are not eligible for board certification pay since their graduate degree is not in a clinical specialty. Many CRNAs who have non-clinical master's degrees either chose or were guided by their respective services to pursue a degree other than in a clinical specialty. Many feel that diversity in education equates to a stronger, more viable profession. CRNAs do utilize education and management principles in their everyday practice and these skills are vital to performance of their duties. To deny a bonus to these individuals is unfair, and will certainly affect their morale as they work side-by-side with their less-experienced colleagues, who will collect a bonus for which they are not eligible. In addition, in the future this bonus will act as a financial disincentive for nurse anesthetists to diversify and broaden their horizons.

AANA encourages DOD and the respective services to reexamine the issue of awarding board certification pay only to CRNAs who have clinical master's degrees.

EFFECTIVE UTILIZATION OF PROVIDERS IS CRUCIAL

In light of the fact that it costs less to educate CRNAs, that nurse anesthetists draw minimal bonuses compared to physician anesthesiologists, and that numerous studies show there is no significant differences in outcomes between anesthesia providers, it is clear that CRNAs are a cost-effective anesthesia provider for the military. From a budgetary standpoint, it is vitally important to utilize these high quality, cost-effective anesthesia providers in appropriate ratios with their physician anesthesiologist counterparts. "Over-supervision" is not only unproductive, it is financially wasteful and unnecessary.

The U.S. military services do not require anesthesiologist supervision of CRNAs. There are many military medical treatment facilities throughout the world which have military CRNAs as their sole anesthesia providers, and this practice arrangement has not had a negative impact on the quality of anesthesia care. Increasing numbers of anesthesiologists in the military has resulted in practice models with wasteful practice ratios. There continues to be proposals in various branches of the military for increased supervision of CRNAs, with attempts by physician anesthesiologists to place unnecessary supervision language into local military treatment facility policies which would require strict adherence to a practice model of one CRNA to every one anesthesiologist.

A practice model requiring one anesthesiologist for every nurse anesthetist would be financially wasteful. Even a requirement of having one anesthesiologist to every two or three CRNAs is also wasteful. But even more importantly, the Services would lose mobilization effectiveness by requiring multiple anesthesia providers where autonomous CRNAs have previously provided anesthesia safely and effectively for over 100 years. This military standard is based on the need of the Services to provide a wide range of health care with as few providers as necessary during mobilization to remote or isolated locations. Historically, CRNAs have always worked independently at such locations; therefore, there is no basis for requiring supervision of CRNAs when they then return to more urban facilities. A predetermined ratio of supervision should not become part of the practice environment. The supervision of CRNAs should be based on the experience of the anesthesia care providers (both

CRNA and anesthesiologist), the mission of the medical treatment facility, and the complexity and type of surgical procedure. Rear Admiral Kathleen Martin, Director of the Navy Nurse Corps, testified:

> Our advanced practice nurses—all practice to the fullest extent of their competency and practice scope to ensure the right care provider delivers care to the right patient based on their health requirements. In this manner, we maximize our provider assets while allowing them to maintain those critical practice competencies needed for wartime roles.

The ability to function autonomously in remote locations is required of all military CRNAs. It is the promise of this independence that draws many to military anesthesia service. Therefore, any attempt to adopt an anesthesia practice standard that would require that an anesthesia care team consisting of a CRNA and a supervising anesthesiologist to deliver all anesthesia would not only undermine mobilization effectiveness, but it would also prove detrimental to the morale of military CRNAs and would undermine attempts by the Services to recruit highly motivated individuals.

AANA recommends that this Committee direct DOD to maintain the mobilization effectiveness of CRNAs by enforcement of the current practice standard of autonomous anesthesia care by CRNAs in all locations.

CONCLUSION

In conclusion, the AANA believes that retention and the appropriate utilization of CRNAs in the Services is of critical concern. Many military facilities are suffering from ineffective practice models, and therefore inefficient use of provider services. The efforts detailed above will assist the Services in maintaining the military's ability to meet its peacetime and mobilization medical mission in a cost-effective manner without sacrificing quality of care. We thank the Committee for its support of CRNAs. For further information, please contact Greta Todd, AANA Associate Director of Federal Government Affairs, at 202/484–8400.

Senator INOUYE (presiding). I just wanted to say that I agreed with your testimony. If the anesthesiologists are so concerned about the activities of your organization, they should go to Bosnia also.

Mr. VAN NEST. Thank you, sir.

Senator INOUYE. Thank you very much.

May I now call upon Dr. Philip Boudjouk, Professor of Chemistry and Vice President of Research at North Dakota State University, and Chairman of the Board of the Coalition of the EPSCoR States.

Senator DORGAN. Mr. Chairman, let me just welcome Dr. Boudjouk. I have been at another hearing this morning, but I am happy to be able to come by. He is, as you indicated, Chairman of the Board of the Coalition of EPSCoR States, which is a very important program for not only North Dakota but also for Alaska and other States. We welcome Dr. Boudjouk here.

Senator INOUYE. Doctor.

STATEMENT OF PHILIP BOUDJOUK, PH.D., PROFESSOR OF CHEMISTRY AND VICE PRESIDENT OF RESEARCH, NORTH DAKOTA STATE UNIVERSITY, AND CHAIRMAN OF THE BOARD, COALITION OF EPSCoR STATES

Dr. BOUDJOUK. Thank you, Senator. Mr. Chairman and members of the subcommittee, I thank you for the opportunity to submit this testimony regarding the Defense Department's basic scientific research program and the Defense Experimental Program to Stimulate Competitive Research (EPSCoR).

I would like to say a special thanks to Senator Dorgan, for his leadership in supporting the EPSCoR program at the Department of Defense and several other agencies.

As you know, my name is Philip Boudjouk. I am Professor of Chemistry and Vice President for Research at North Dakota State University. In addition, I am Chairman of the Board of the Coalition of EPSCoR States. I am here today to speak in support of funding for the Defense Department's Experimental Program to Stimulate Competitive Research. This statement is submitted on behalf of the 19 States and Puerto Rico that participate in EPSCoR. I am especially pleased to report that Alaska is the most recent State designated by the National Science Foundation as eligible to participate in the EPSCoR program.

The Coalition of EPSCoR States supports the Defense Department's request of $9.9 million for the Defense EPSCoR program. But we respectfully urge the subcommittee to appropriate an additional $15 million for this productive program. The Coalition also supports the Department's budget request for basic research, of which the Defense EPSCoR program is but a small part.

Based on the positive results of the National Science Foundation (NSF) program, Congress created EPSCoR programs in six additional Federal agencies. One of these is the Defense Department. The Defense Experimental Program to Stimulate Competitive Research (DEPSCoR) program, as it is known, for the Department of Defense, contributes to the States' goals of developing and enhancing their research capabilities while simultaneously supporting the Defense Department's research goals.

In my own experience, DEPSCoR has motivated me to establish contacts and collaborative relationships with DOD researchers on two important projects: Navy-sponsored research on nanomaterials, that is, those particles smaller than one-billionth of a meter; and Air Force sponsored research on corrosion. Because of these initial contacts, I was able to develop meaningful relationships with other researchers in academia and in industry that have helped me establish my research in both areas. The initial investments have paid off in North Dakota.

Several DOD-supported researchers, with critical help from DEPSCoR, have formed a center that focuses its efforts on corrosion, targeting specifically corrosion problems of aluminum alloys found in the KC–135 transport and F–22 fighter planes. This center now enjoys considerable support from the Department of Defense and private industry—both through competitive means I might add. We are now marshalling our resources to form a center that is directed to advancing the knowledge base and applications of nanomaterials.

Last year, the Defense Department issued an announcement of competition under the aegis of the Defense EPSCoR program. A total of 256 projects were received from the 18 States eligible to participate in DEPSCoR.

Let me now tell you something about our program in North Dakota. Twenty-three DEPSCoR projects have been funded in North Dakota since 1994. The projects were developed by North Dakota science and engineering researchers, in collaboration with DOD program officers, to address topics critical to defense readiness and capabilities. The program is a true partnership between DOD, the State of North Dakota and the universities involved.

The research topics cover a wide spectrum of issues important to the DOD mission. We have DOD-sponsored efforts in logistics, database development, encryption science, and a variety of materials-based programs. For example, one of my projects has led to a very safe and low-temperature method of production of semiconductor materials such as gallium arsenide, tin sulfide, and tin selenide in a new and useful form—quantum dots—that is, less than one-billionth of a meter in size. Semiconductors in this form open the door to a broad range of useful properties. You shall be seeing these nanomaterials in all phases of our lives where electronic equipment is important, from very sensitive optical detectors, to microlaser, to vanishingly small transmitters.

In North Dakota, we are now embedding these incredibly small particles in polymers to develop an entirely new class of polymeric materials. The sky is the limit here. One could say that the smaller the particle, the larger the potential for scientific and technical advances.

Mr. Chairman, this is a very exciting new area of scientific research. It can really change the way our world will be in the future, and it will provide our military with significant new warfighting capabilities for the 21st century. The Department of Defense is at the forefront of this research, and DEPSCoR-supported researchers are playing an important role in maintaining our Nation's leadership in this vital area.

An important area of research supported by the Defense Department's EPSCoR program, corrosion science, is one in which several of our researchers have made significant advances in developing new testing methods to detect corrosion in the earliest possible stages and in making new conductive polymers that short circuit the corrosion process. A center has been formed at North Dakota State University and has already succeeded in obtaining significant financial support from industry and the Department of Defense.

We have established new collaborations with Wright Patterson Air Force Base and Tinker Air Force Base that keep our efforts focused on defense-critical projects. At this time, we are dedicating substantial resources to the corrosion problems associated with the C–135 transport.

The planning for this and other Federal EPSCoR programs in North Dakota involve faculty and administrators from across the State in a remarkably cooperative and collaborative effort. Indeed, one of the most significant successes of the EPSCoR program nationwide has been the partnerships it has engendered. These partnerships extend beyond the universities, to include the State government and industry as we develop the program goals, research projects, and program funding. Because matching funds are required in EPSCoR projects, the program has explicit buy-in and visibility with the North Dakota Legislature.

Senator STEVENS (presiding). Dr. Boudjouk, I am going to have to keep you to somewhere near the 5-minute time limit. And we do have some questions we would like to ask you. So could you finish your statement, please?

Dr. BOUDJOUK. Thank you very much, Senator.

In conclusion, Mr. Chairman, the Coalition of EPSCoR States supports the Defense Department's basic research programs for

budget function 6.1 and 6.2. Thank you for consideration of this request.

[The statement follows:]

PREPARED STATEMENT OF DR. PHILIP BOUDJOUK

Mr. Chairman and members of the Subcommittee, I thank you for the opportunity to submit this testimony regarding the Defense Department's basic scientific research program and the Defense Experimental Program to Stimulate Competitive Research (EPSCoR).

My name is Philip Boudjouk. I am a Professor of Chemistry and Vice President for Research at North Dakota State University. In addition, I am Chairman of the Board of the Coalition of EPSCoR States. I am here today to speak in support of funding for the Defense Department's Experimental Program to Stimulate Competitive Research (EPSCoR). This statement is submitted on behalf of the nineteen states and Puerto Rico that participate in EPSCoR [1].

The Coalition of EPSCoR States supports the Defense Department's budget request of $9.895 million for the Defense EPSCoR program, but we respectfully urge the Subcommittee to appropriate an additional $15 million for this productive program. The Coalition also supports the Department's budget request for basic research, of which the Defense EPSCoR program is but a small part.

EPSCoR is a research and development program that was first initiated by the National Science Foundation. Through a merit review process, EPSCoR is improving our Nation's science and technology capability by funding research activities of talented researchers at universities and non-profit organizations in states that historically have not received significant Federal research and development funding. EPSCoR helps researchers, institutions, and states improve their research capabilities and quality in order to compete more effectively for non-EPSCoR research funds. EPSCoR is a catalyst for change and is widely viewed as a "model" Federal-state partnership.

Based on the positive results of the NSF program, Congress created EPSCoR programs in six additional federal agencies. One of these is the Defense Department. The individual agency EPSCoR programs, much in the same way as the NSF EPSCoR, help researchers and institutions in participating states to improve the quality of their research so they can compete for non-EPSCoR research funds. The federal-wide EPSCoR effort funds only merit-based, peer reviewed programs that work to enhance the competitiveness of research institutions and increase the probability of long-term growth of competitive funding.

EPSCoR relies heavily on state involvement and participation, including non-federal matching funds. Due to the federal/state partnership upon which EPSCoR relies, EPSCoR is often considered a model program, and is a wise use of taxpayer funds during these difficult fiscal times.

The Defense EPSCoR (DEPSCoR) program contributes to the states' goals of developing and enhancing their research capabilities, while simultaneously supporting the Defense Department's research goals. DEPSCoR grants are based on recommendations from the EPSCoR state committees and the Department's own evaluation and ranking. Research proposals are only funded if they provide the Defense Department with research in areas important to national defense.

In my own experience, the North Dakota State EPSCoR program set forth criteria that encouraged collaboration with Defense Department scientists and engineers prior to the submission of my proposal to the DEPSCoR program. This motivated me to establish contacts and collaborative relationships with DOD researchers on two important projects: Navy sponsored research on nanomaterials, i.e., particles smaller than one-billionth of a meter, and Air Force sponsored research on corrosion. Because of these initial contacts, I was also able to develop meaningful relationships with other researchers in academia and industry that have helped me establish my research in both areas. The initial investments have paid off in North Dakota.

Several DOD supported researchers, with critical help from DEPSCoR, have formed a center that focuses its efforts on corrosion, targeting specifically, corrosion problems of aluminum alloys found in the C/KC–135 transport and F22 fighter planes. This center now enjoys considerable support from the Department of De-

[1] Alabama, Alaska, Arkansas, Idaho, Kansas, Kentucky, Louisiana, Maine, Mississippi, Montana, Nebraska, Nevada, North Dakota, North Dakota, Puerto Rico, South Carolina, South Dakota, Vermont, West Virginia, and Wyoming.

fense and private industry. We are now marshalling our resources to form a center that is directed to advancing the knowledge base and applications of nanomaterials.

DEPSCoR was originally authorized by Section 257 of the National Defense Authorization Act of 1995 (Public Law 103–337), which states that the Defense EPSCoR program's objectives are to:

—enhance the capabilities of institutions of higher education in eligible states to develop, plan, and execute science and engineering research that is competitive under the peer-review systems used for awarding Federal research assistance; and

—increase the probability of long-term growth in the competitively awarded financial assistance that universities in eligible states receive from the Federal Government for science and engineering research.

Last year the Defense Department issued an announcement of a competition under the aegis of the Defense EPSCoR program. A total of 256 projects were received from the 18 states eligible to participate in DEPSCoR. Following review of the individual projects by the appropriate research office (the Army Research Office, the Ballistic Missile Defense Organization, the Office of Naval Research, or the Air Force Office of Scientific Research), 81 projects were selected for funding with $24 million made available in fiscal year 2000. The average award was $296,000.

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For example, one of my projects has led to a very safe and low temperature method of production of semiconductor materials such as gallium arsenide, tin sulfide, and tin selenide in a new and useful form, quantum dots, i.e., less than one ten billionth of a meter. Semiconductors in this form open the door to broad range of useful properties. We shall be seeing these "nanomaterials" in all phases of our lives where electronic equipment is important: from very sensitive optical detectors to micro lasers to vanishingly small transmitters. In North Dakota, we are now imbedding these incredibly small particles in polymers to develop an entirely new class of polymeric materials. The sky is the limit here. One could say that the smaller the particle, the larger the potential for scientific and technical advances.

Mr. Chairman, this a very exciting new area of scientific research. It can really change the way our world will be in the future and it will provide our military with significant new war-fighting capabilities for the 21st Century. The Department of Defense is at the forefront of this research and DEPSCoR supported researchers are playing an important role in maintaining our nation's leadership in this vital area.

In another important area of research supported by the Defense Department's EPSCoR program, corrosion science, several of our researchers have made significant advances in developing new testing methods to detect corrosion in the earliest possible stages and in making new conductive polymers that "short circuit" the corrosion process. A center has been formed at North Dakota State University and has already succeeded in obtaining significant financial support from industry and the Defense Department. We have established new collaborations with Wright Patterson Air Force Base and Tinker Air Force Base that keep our efforts focused on critical projects. At this time we are dedicating substantial resources to the corrosion problems associated with the C–135 transport.

The planning for this and the other federal EPSCoR programs in North Dakota involve faculty and administrators from across the state in a remarkably cooperative and collaborative effort. Indeed, one of the most significant successes of the EPSCoR program has been the partnerships it has engendered. These partnerships extend beyond the universities to include the state government and industry as we develop the program goals, research projects, and program funding. Because matching funds are required in EPSCoR projects, the program has explicit buy-in and visibility with the North Dakota Legislature.

The partnership concept extends also to our interactions with the federal agencies. Joint development of the Defense EPSCoR and other EPSCoR program goals and objectives will ensure that the program achieves its mission of stimulating competitive research. Indeed, given the buy-in and participation by so many constituencies, EPSCoR is a good example and model for federal-state partnerships in science and technology.

It is important that the DEPSCoR program continues this very important role of bringing new researchers into productive relationships with DOD, and avoids the ever-present danger of using DEPSCoR funds to replace existing DOD funding of already-established researchers.

It has been our experience that the EPSCoR programs yield a return far beyond the original investment. EPSCoR allows the states to accomplish more than is possible through the regular research programs. It has helped North Dakota attract and retain young researchers who are able to demonstrate through EPSCoR support of their research, that they have bright futures in fields of research that are of interest to the Defense Department. The Coalition appreciates this Subcommittee's longstanding support for Defense EPSCoR and we urge you to continue that support. The Coalition recognizes the very tight fiscal constraints this Subcommittee faces in the new era of a balanced federal budget, but we respectfully request that you provide $25 million for the Defense EPSCoR program for fiscal year 2001.

The Defense Department's Experimental Program to Stimulate Competitive Research is a wise and worthwhile investment of scarce public resources. It will continue to contribute significantly to efforts to build scientific and engineering research efforts in support of national defense needs.

Mr. Chairman, the Coalition of EPSCoR States, supports the Defense Department's basic research programs (budget functions 6.1 and 6.2). With the end of the Cold War, the technological demands facing our military have increased. New research must be pursued to meet new challenges in the fields of information warfare, high technology terrorism, the proliferation of weapons of mass destruction and threats in diverse parts of the world.

It is essential that Congress ensure that scientific research and technological advances in support of our military are not eroded because of the lack of adequate funding for DOD's basic and applied research. There are legitimate concerns that the fiscal year 2001 budget request fails to keep pace with the needs of science and technology. The Coalition of EPSCoR States supports realistic funding levels that support vigorous science and engineering research programs at the Defense Department.

Thank you for your consideration of this request.

Senator STEVENS. Are you going into the nanoscience area now with your research?

Dr. BOUDJOUK. Yes.

Senator STEVENS. You have a center of excellence developing there for that?

Dr. BOUDJOUK. We are developing that in our State, yes. It is a collaboration effort between the University of North Dakota and North Dakota State University.

Senator STEVENS. I have urged our University to do the same thing. I note you have got a $10 million level, approximately, now. You want to go up to $25 million?

Dr. BOUDJOUK. Yes.

Senator STEVENS. Is that money shared with other universities?

Dr. BOUDJOUK. Yes, it is.

Senator STEVENS. How much do you share of that? Of the $10 million, how much are you sharing?

Dr. BOUDJOUK. The sharing among the universities is done on a competitive basis. The investigators from all universities in DEPSCoR States are invited to compete for this funding. So the funding is done on a peer-review basis that takes into account the DOD mission statement and the excellence of the proposers.

Senator STEVENS. Who does that? Do you do that or does DOD do that?

Dr. BOUDJOUK. The States first select the best proposals within the State, and then the Department of Defense screens and evaluates and makes the final decision on who gets funded.

Senator STEVENS. The $25 million you are asking for is nationwide or just for your university?

Dr. BOUDJOUK. Nationwide, for the Coalition of EPSCoR States, Senator.

Senator STEVENS. I do think this is a very important area, and I am delighted to hear some of the smaller universities are getting involved. We look forward to working with you on this, Senator Dorgan.

Senator DORGAN. It is impressive. And, frankly, I think we need to do much, much more in this area. There is so much talent out there and so many resources available. And yet, we all know what happens with the research dollars—they just go to a few clusters of big institutions.

Senator STEVENS. That is why I asked the question, because normally we get into this peer review, and the peers are the people from the universities that have gotten the research in the past. I am delighted to see some of this spreading out so that we get other areas of the country involved. I told a group this morning at one of those major universities that if they want to increase the research budget, they have got to get greater popular support, greater support from the people of the country. And you cannot get that by keeping it in three or four well-known institutions that have really monopolized the money in the past.

We were severely criticized when we used to have a university program. Do you remember that, Senator? And this is a good way to do it. I appreciate what you are doing and we want to work with you.

I think nanoscience is the answer for small universities, if they can get involved. Do you have a small cyclotron?

Dr. BOUDJOUK. No, we do not, Mr. Chairman. We do not have that. And in areas such as that, with help from DEPSCoR and programs like it, they will allow us to get the basic funding to get that.

Senator STEVENS. You know that there is a small cyclotron now for universities?

Dr. BOUDJOUK. No, I did not know that.

Senator STEVENS. Well, I urge you to go to the University of California-Los Angeles (UCLA) and see that, because we miniaturized them with defense money as a matter of fact. So there are cyclotrons now available that are of a size that even the smallest university ought to be able to afford. I think this is essential, as we get into the nanoscience area, that we have the full capability to pursue nuclear science at the same time.

I appreciate your statement, and I thank you, Senator Dorgan, for urging that we listen. This is an area that we want to pursue. We want the smaller universities involved in this future research, too.

Dr. BOUDJOUK. Thank you, Mr. Chairman and members of the subcommittee. Thank you once again.

Senator STEVENS. Our next witness is Betty Gallo, the Director of the University of Medicine and Dentistry.

STATEMENT OF BETTY GALLO, DIRECTOR, ADVOCACY AND FUND-RAISING, THE CANCER INSTITUTE OF NEW JERSEY

Ms. GALLO. Good morning. I would like to thank the chairman and the committee for allowing me to testify before you today. But

I want to especially thank you for your support of prostate cancer and the Gallo Prostate Cancer Center.

I am here on behalf of a priority project at the University of Medicine and Dentistry of New Jersey. That project is the Dean and Betty Gallo Prostate Cancer Center at the Cancer Institute of New Jersey. The Cancer Institute is a partnership of the University of Medicine and Dentistry, which is part of the Robert Wood Johnson Medical School and hospital affiliates, and the only NCI-designated center in New Jersey. The Gallo Prostate Cancer Center was named in honor of my husband, and your colleague in the House, Congressman Dean Gallo, of New Jersey, who died of prostate cancer at the age of 58.

With the funding the Gallo Prostate Cancer Center has received, we have been able to focus on the strength of the Cancer Institute as to the devastating problems of prostate cancer in New Jersey, its surrounding region, and in the Nation as a whole, through treatment and research. Since obtaining this funding, we have been able to fund five seed grants to scientists interested in pursuing prostate cancer research. The Gallo Prostate Cancer Center will eventually be able to provide the resources to effectively recruit additional nationally recognized leaders in research to study prostate cancer.

In order to bring together scientists of this caliber, all focused on prostate cancer, it is imperative to have a strong, focused prostate cancer center. My position, as Director of Public Outreach for the Gallo Center, has allowed me to become involved directly in the community. Nationally, with regard to prostate cancer incidence rates, New Jersey is number 10 in the general population and number eight in the African-American community.

The Gallo Prostate Cancer Center is in the process of providing education, screening, prevention, and research. We have begun our programs by partnering with 100 black men statewide. Together we have started a prostate cancer initiative which will screen the underserved community. We hope to have all 21 counties in the State of New Jersey on board by the year 2003.

With continued funding, we foresee expanding the Gallo Prostate Cancer Center to the north and south in New Jersey. When people are ill, they do not want to travel. And this would help to lessen that concern.

In the short time that the Gallo Prostate Cancer Center has been in existence, we have made some major accomplishments. But there is much more we need to do to make the Gallo Prostate Cancer Center a premier center nationally. This year, we respectfully ask for the continuing support from the Department of Defense subcommittee so we can continue to create a state-of-the-art prostate cancer center in memory of Congressman Dean Gallo to promote research, education, and treatment for people diagnosed with prostate cancer. This is so other men and their families do not have to suffer as Dean and his family did, from this terrible disease.

I am also here on behalf of Biosecurity, which is another university project. This was initiated by Senator Lautenberg. Due to the intense witness schedule, we were asked to have one person give some points on this project.

New Jersey has a dense population, a concentration of professional pharmaceutical and biotech companies and is located near major transportation hubs. It is vulnerable as a possible target for biological threats. The Nation's largest public health science university, with statewide campuses, is well positioned to respond to potential biological threats by providing a statewide program, ranging from our training ability in public health to our expertise in infectious disease basic research.

The University is currently increasing preparedness in the event of the introduction of a dangerous pathogen. Funding recommended last year from the Department of Defense will help us coordinate hospital emergency services with other State and Federal agencies. We have formed a blue ribbon panel on biosecurity, comprised of health representatives of the pharmaceutical industry. Our faculty serve on the State Bioterrorism Surveillance Advisory Group and as members of Federal panels. The University will increase the education and training of individuals involved with biological threats. Funding will be used to set up our emergency response plans and will involve our level 1 and level 2 trauma centers and our helicopter trauma service.

Another area of emphasis is basic scientific research. We recently opened a new facility that has a center for applied genetics and biosafety level 3 laboratory, which would allow for the growth and isolation of targeted organisms. The Center for Emerging Pathogens, the national Centers for Disease Control and Prevention (CDC) Tuberculosis Center and the Public Health Research Institute are all participating entities in the new facility.

With funding obtained from several Federal agencies, the University of Medicine and Dentistry has state-of-the-art instrumentation, including gene chip technology, that can be tailored for detection of target organisms. We can also provide a strategy for the detection of unknown pathogens. Our vast scientific expertise in molecule biology, gene chip technology and deoxyribonucleic acid (DNA) sequencing allows us to identify and treat potential disasters resulting from biological warfare.

Finally, with your continued support, we would develop a statewide center for biosecurity, concentrating on emergency response plans and basic scientific research into the detection, intervention and generation of agents in response to biological threats.

I want to thank the committee.

[The statement follows:]

PREPARED STATEMENT OF BETTY GALLO

Mr. Chairman and members of the Committee, we appreciate this opportunity to bring to your attention two priority projects of the University of Medicine and Dentistry of New Jersey (UMDNJ) that are consistent with the mission of this committee.

UMDNJ is the largest public health sciences university in the nation. Our statewide system is located on five academic campuses and consists of 3 medical schools and schools of dentistry, nursing, health related professions, public health and graduate biomedical sciences. UMDNJ also comprises a University-owned acute care hospital, three core teaching hospitals, an integrated behavioral health care delivery system, a statewide system for managed care and affiliations with more than 200 health care and educational institutions statewide. No other institution in the nation possesses the resources which match our scope in higher education, health care delivery, research and community service initiatives with federal, state and local entities.

Our first priority is the development of a statewide Center for BioSecurity. Last year, with the strong support of this committee, UMDNJ was recommended to receive $1.5 million toward its initiatives in biodefense and biosecurity. The Department of Defense is currently considering our proposal for training, education and research to counter threats of bioterrorism. That funding will help us to develop a comprehensive plan that will include coordination of hospital emergency services, basic science research in detection methods, and participation by various agencies of State and Federal Government, as well as the pharmaceutical industry in New Jersey.

New Jersey is the nation's most densely populated state. Newark, its largest city, is in close proximity to New York City and is closely linked with this metropolis by extensive commuter services. Newark Airport, the 12th largest in the United States, is a transportation hub for the Northeast and ranks third in the level of international travel. More than 30 million passengers traveled through Newark in the first half of 1998, making the region a prime area for the possible introduction of biological weapons. UMDNJ, is well positioned to address the threat of biological terrorism through our expertise in the following programs:

Emergency response:

The Center for Education and Training (CET) of the Environmental and Occupational Health Sciences Institute, a joint venture of UMDNJ and Rutgers University, is the nation's foremost program in education and training concerning chemical and physical threats. The Center has provided hazardous materials training to more than 175,000 individuals (police, firefighters, municipal and state employees as well as to physicians, nurses and other healthcare personnel). Preparing emergency response personnel for chemical and biological incidents is an extension of the Center's existing infrastructure and expertise.

UMDNJ has several Level I and Level II Trauma Centers within its statewide system. A crucial component of the trauma network is the helicopter trauma service, NorthSTAR and SouthSTAR, linking the northern and southern regions of the state. Members of the UMDNJ Emergency Response Team participated in a federally sponsored "Weapons of Mass Destruction" education program last year.

Identification of agents:

A number of laboratories within the UMDNJ system are engaged in developing rapid methods of detection of virulent agents with particular emphasis on the most dangerous multi-drug resistant species. The molecular basis of drug resistance is the focus of a number of these laboratories, as well as the establishment of large libraries of clinical strains available for epidemiological studies. State-of-the-art Biosafety Level III (BSLIII) clinical laboratories for the isolation and culture of certain clinical strains are available at University Hospital in Newark and the Robert Wood Johnson University Hospital in New Brunswick. The International Center for Public Health, a world-class public health complex at University Heights in Newark and part of the UMDNJ system, will also contain several thousand square feet of BSLIII space.

Basic Research:

Many UMDNJ faculty are advisors to the U.S. Government and have served on committees such as the U.S. Government Blue Ribbon Panel on Biologicals; the Program and Technical Review Committee of the U.S. Chemical and Biological Defense Command, the Committee on Toxicology, and the New Jersey State Department of Health Bioterrorism Surveillance Advisory Group. Our scientific experts are studying the effects of exposure to a variety of chemical agents and organic chemicals. We have considerable expertise in the analysis of the effects of radiation, and toxic chemicals. Early markers of disease or infection may be shared by more than one infectious agent. Basic research in the immunopathology of infection may led to the identification of markers useful for screening potential victims in a biological attack.

Newark is an internationally renowned center for the identification, treatment and basic research in tuberculosis and other emerging and re-emerging pathogens. The New Jersey Medical School National Tuberculosis Center at UMDNJ and the Public Health Research Institute will join the Department of Microbiology and Molecular Genetics at the UMDNJ-New Jersey Medical School to form a core group of researchers at the International Center for Public Health. In addition, the recent establishment of the Center for Emerging Pathogens at NJMS will introduce expertise in analysis of a number of pathogens.

Gene Chip Technology:

Gene chip technology is a recent, cutting edge technology enabling the simultaneous analysis of thousands of DNA sequences. State funding has led to the forma-

tion of the Center for Applied Genetics at UMDNJ and the International Center for Public Health. The Center will provide the equipment and personnel necessary for the application of existing gene technology and for the development of novel applications. In the context of chemical and biological weapons, new chips will be designed that can display sequences representing a panel of potential agents for rapid screening and positive identification.

UMDNJ is well positioned to respond to the possibility of biological and chemical threats. We can provide a comprehensive statewide program ranging from our nationally acclaimed training ability in the public health arena to internationally recognized expertise in infectious disease basic research. This year, we seek $2.5 million to establish a statewide Center for BioSecurity that will coordinate first responder training programs; develop methods of rapid detection and identification of biological agents; conduct research to enhance identification; and design new gene and protein chip technology for the rapid identification of biological agents in response to threats of bioterrorism.

Our second priority is the Dean and Betty Gallo Prostate Cancer Center which was established at the Cancer Institute of New Jersey (CINJ) with the goal of eradicating prostate cancer and improving the lives of men at risk for the disease through research, treatment, education and prevention. GPCC was founded in memory of Rep. Dean Gallo, a New Jersey Congressman who died of prostate cancer diagnosed at an advanced stage. The purpose of the GPCC is to establish a multidisciplinary center to study all aspects of prostate cancer and its prevention.

GPCC unites a team of outstanding researchers and clinicians who are committed to high quality basic research, translation of innovative research to the clinic, exceptional patient care, and improving public education and awareness of prostate cancer. GPCC is a center of excellence of the Cancer Institute of New Jersey, a partnership of the UMDNJ-Robert Wood Johnson Medical School and hospital affiliates and the only NCI-designated cancer center in the state. GPCC efforts will be focused in four major areas: (1) Basic, Clinical and Translational Research; (2) Comprehensive Patient Care; (3) Epidemiology and Cancer Control; and (4) Education and Outreach.

Basic, Clinical and Translational Research.—GPCC scientists will investigate the molecular, genetic and environmental factors that are responsible for prostate cancer initiation and progression. Our researchers will develop appropriate model systems that will facilitate the design and implementation of novel strategies for prevention and treatment. GPCC will foster multi-disciplinary efforts that will lead to the effective translation of basic research to improved patient care and novel clinical trials.

Comprehensive Patient Care.—It is the goal of the GPCC to provide exceptional patient care through a multi-disciplinary patient care team in the areas of urological oncology, radiation oncology and medical oncology for each patient during all stages of the disease. The patient care team will develop novel clinical approaches for treating all stages of prostate cancer.

Epidemiology and Cancer Control.—Another goal of the GPCC is to understand the etiology of prostate cancer susceptibility and to find effective modalities for prevention of prostate cancer.

Education and Outreach.—GPCC will continue its efforts to education the public throughout the State of New Jersey about the importance of early detection of prostate cancer, particularly in underserved communities where there is a population at high risk for the disease.

The Cancer Institute of New Jersey has received $5 million in federal funding over the last two years for the Dean and Betty Gallo Prostate Cancer Center. This important funding has enabled us to establish a world-class program in prostate cancer research that includes publications in prestigious journals such as the New England Journal of Medicine and Genes and Development. CINJ has used its findings to leverage additional research dollars for individual investigators from such agencies as CapCure, the Department of Defense and several private foundations. Top investigators have been recruited to initiate programs in prostate cancer research through our education and pilot grant programs. We have also established education and outreach programs that will enhance the visibility of our clinical programs, including a partnership with the 100 Black Men organization.

This year we seek to build on our basic research in prostate cancer and to support the development of technological approaches including: The use of microarray technology to survey gene expression patterns in prostate tumors; The use of mouse models for prostate cancer that can be used to test new methods of prevention and treatment; The development of monoclonal antibodies that may be used for prognosis and diagnosis.

We will bring basic research directly to the clinic by fostering interactions among basic and clinical researchers through our education programs supported by this funding. Additional funding will allow us to enhance our treatment of patients with prostate cancer through several new clinical trials for patients at all stages of the disease. To increase the number of additional clinical trials, we will utilize funding to develop a support team that will assist our physicians to design and implement new clinical trials.

We seek $2 million in federal funding to enhance the research, education and cancer care programs of the Dean and Betty Gallo Prostate Cancer Center at our New Brunswick facility, and to expand these programs statewide.

We thank this committee for its strong support in past years of these initiatives.

Senator STEVENS. We congratulate you for what you have done to establish this Center in memory of Dean and want to work with you. But I notice in your statement that you have indicated that the funding you request would be used for treatment of patients with past prostate cancers. We are dealing with basic research money. Can you tell us how this is basic research money if we give this $2 million to you for this request?

Ms. GALLO. What it does is we have 22 laboratories at the Cancer Institute as part of the Gallo Center, and what they are doing is taking the research from the labs and bringing them into the clinics to help treat the patients. So any research we do, we hope will be translational, to be able to eventually become useful for the patients.

Senator STEVENS. Well, is this money to be used in operation of the Center?

Ms. GALLO. No.

Senator STEVENS. You know I am a prostate cancer survivor.

Ms. GALLO. I understand that.

Senator STEVENS. And your husband unfortunately passed away. We do want to help you maintain that Institute on a research basis, but we cannot get into treatment centers. We do not give anybody money for treatment centers.

Ms. GALLO. I should probably just say that basically we are more involved in research, education and prevention and not so much the treatment aspect. I maybe misconstrued it and made you think that we are doing it for treatment. But that was not the main reason of what this Center is about. A good portion of it is research.

Senator STEVENS. You are part of that Center, too. If we make that money available, will you assure us the money is going to be used for research and not for just routine treatment of prostate cancer?

Ms. GALLO. Yes, it will be used for research. We have a scientific committee already in place. We have two scientists that are doing research on prostate cancer, who are heading the Gallo Prostate Cancer Center.

[The information follows:]

THE DEAN AND BETTY GALLO PROSTATE CANCER CENTER,
AT THE CANCER INSTITUTE OF NEW JERSEY,
MAY 12, 2000.

Honorable TED STEVENS,
522 Hart Senate Building,
Washington, DC 20510.

DEAR CHAIRMAN STEVENS: I want to thank you for allowing me to testify before the Senate Department of Defense sub-committee on May 3, 2000. I want to also thank you for your kind words about my husband, Dean Gallo and the work I am

doing for The Dean and Betty Gallo Prostate Cancer Center (GPCC) at The Cancer Institute of New Jersey.

I want to give you some information with regard to the research being done at the Gallo Prostate Cancer Center.

The GPCC scientists will investigate the molecular, genetic and environmental factors that are responsible for prostate cancer initiation and progression. Our researchers will develop appropriate model systems that will facilitate the design and implementation of novel strategies for prevention and treatment. GPCC will foster multi-disciplinary efforts that will lead to the effective translation of basic research to improve patient care and novel clinical trials.

I want to assure you that the funding we receive from the Department of Defense is used ONLY for research and programs.

Thank you again for all your support.

Sincerely,

BETTY I. GALLO,
Director of Public Outreach and Government Relations.

Senator STEVENS. Thank you.

Questions, Senator?

Senator INOUYE. No, Mr. Chairman.

Senator STEVENS. Thank you very much, Ms. Gallo. Nice to see you.

Ms. GALLO. Thank you.

Senator STEVENS. Our next witness is Dr. Peter Lennie, Dean for Science and Professor of Neural Sciences at New York University. Good morning, Doctor.

STATEMENT OF PETER LENNIE, PH.D., DEAN FOR SCIENCE AND PROFESSOR OF NEURAL SCIENCE, NEW YORK UNIVERSITY, ON BEHALF OF COGNITION, LEARNING, EMOTION, AND MEMORY STUDIES AT NEW YORK UNIVERSITY

Dr. LENNIE. Thank you, Mr. Chairman. Thank you for the opportunity to appear before you today. I am speaking on behalf of New York University (NYU), as its Dean for Science. I thank the committee for its recognition that university research is a cornerstone of national security efforts. And I appreciate being able to discuss a project that will enhance national security by enhancing the scientific understanding of the brain and its role in learning and memory.

In line with the committee's interests, NYU has undertaken a major initiative to advance studies in cognition, learning, emotion, and memory. Our research efforts received a major boost in 1999, when we successfully competed for an Office of Naval Research (ONR) grant to study emotional influences on information processing and biological and computational mechanisms of visual recognition. This is an area of exceptional significance and, indeed, one in which NYU has great strengths. NYU now aims to further advance its program by exploiting new technologies, particularly functional magnetic resonance imaging, which allows us to explore directly and non-invasively the link between cognitive processes and the architecture of the brain.

Concentrated investment in this research is needed to increase our understanding of how the brain controls behavior. Our initiative focuses on what happens in the brain when we learn and remember things, and distinguish and identify visual objects, particularly under stressful conditions. Understanding brain function allows us to improve the human capacity to learn, remember, recog-

nize objects, and perform better under stress, and to design intelligent machines that mimic and improve upon human performance.

The extent to which brain research is important for national security objectives is clear in the following examples, all areas in which NYU has substantial strength. On condition and perception, understanding how humans analyze and distinguish different sensory signals and how they allocate attention among the range of objects in their environment is crucial to the design of information display systems. Speedy and appropriate responses to visual or auditory information, whether displayed by instruments or in direct viewing of targets or potential threats, it is essential for effective performance.

On machine vision, many of the perceptual and cognitive tasks that human beings perform effortlessly, such as recognizing visual objects and events and anticipating changes in the environment or understanding speech and acoustical signals, are in fact tasks of great complexity. We appreciate this only when we try to construct intelligent machines that have similar capabilities, an enterprise that has so far had limited success.

We can design more intelligent machines if we understand the principles the brain uses to solve these complex problems. Studies of biological vision can help address machine vision problems that relate to vehicle recognition in complex scenes, human activity recognition, and autonomous vehicle navigation.

On learning and memory, understanding the changes that occur in the brain when people attend to things and require and retain skills will make it easier for us to design intelligent training systems that can respond to individual differences among personnel in cognitive and psychomotor abilities.

On stress and performance, understanding the brain systems that control emotional memories and affect learning, memory and cognitive skills is crucial in optimizing performance under the high stress conditions that characterize military operations.

NYU has outstanding researchers and strengths in the disciplines that need to be brought together to tackle these complex problems and to successfully meet our national goals and this committee's priorities. Your support to continue our efforts, particularly in the area of brain imaging, is greatly appreciated.

Mr. Chairman, this concludes my testimony.

[The statement follows:]

PREPARED STATEMENT OF PETER LENNIE

On behalf of New York University (NYU), I appreciate the opportunity to discuss a project of scientific research which is not only an important priority for NYU, but which we believe will advance national security interests through enhanced scientific understanding of brain function and brain development.

Our project addresses the programmatic interests of this subcommittee in enlisting fundamental, university-based scientific research to catalyze technological innovation with applications for defense purposes as well as for the industrial, medical, and educational sectors. This initiative is congruent with Department of Defense research priorities and application areas, including its interest in sophisticated techniques that involve measurement of brain function and computational modeling. Our project will substantially expand what we know about: the neural mechanisms of learning and memory; the perception, acquisition and storage of information in the nervous system; the neurobiology of fear and its impact on learning and performance; and the implications of neural vision systems for their machine analog, computer vision.

In line with the Subcommittee's interests, New York University has undertaken a major initiative to concentrate and advance studies in cognition, learning, emotion, and memory. This enterprise draws on the University's strengths in the fields of neural science, computer science, biology, chemistry, and psychology to push the frontiers of our understanding of how the brain develops, functions, and malfunctions, and to prepare the next generation of interdisciplinary brain scientists.

We thank this committee for taking the time to consider and give its support to the important research being conducted in this area—an area of great strength at New York University. We at NYU firmly believe that in the coming decades, a federal investment in mind and brain studies will repay itself many times over.

Our initiative at NYU received a major boost in September 1999 when, in response to a new multi-disciplinary University Research Initiative from the Office of Naval Research, New York University successfully competed for a $1.9 million grant to study "Emotional influences on information processing, and biological and computational mechanisms of visual recognition." New York University is using the ONR award to support and expand the research programs of existing faculty, attract additional faculty and trainees, and provide the technical resources and personnel support that result in a world class scientific enterprise.

A major thrust of our work is research on the learning process, including the underlying cognitive processes and architecture that affect attention, memory, information processing, skills acquisition, and retention, as well as their implications for strategies that can rationalize and optimize training and learning—for example, computer-aided or "intelligent" tutoring—and ultimately, human task performance. Of special interest to those studying learning and memory systems is neural plasticity, which is the nature of the underlying change in the nervous system. At NYU, ongoing investigations into the neurobiology of fear are especially revealing in this regard, and are helping to explain how the neural emotional memory system, functioning normally and abnormally—in phobias, panic attacks, and anxiety—affects performance. Central to the neural science enterprise at NYU are fundamental studies in neural systems, particularly vision—including studies of visual processing pathways, perception, and information processing; and audition—including studies of auditory regions of the nervous system, behavioral studies, and studies of auditory psychophysical ability. These various studies of mind and brain employ a full range of techniques; they coordinate anatomical, neurophysiological, biochemical, and behavioral experiments; and they are conducted in various model systems up through humans, and computer modeling and simulations. Additional studies examine biological systems, e.g., the neural bases of vision perception and information processing, to engineer their computer analogs in data imaging, processing, and retrieval.

New York University is now seeking support to capitalize on the momentum generated by the award from the Office of Naval Research, and to advance to the next level of technical development to maintain research and training excellence with state-of-the-art resources. Specifically, NYU is seeking $3,000,000 to continue anatomical, neurophysiological, and behavioral studies, and to enhance these by exploiting new technologies in a new Brain Imaging Center—a university-wide resource for multidisciplinary research in the neurosciences and cognitive sciences, particularly learning and memory and their underlying neural mechanisms.

The recent development of imaging technologies has made it possible to better understand the link between cognitive processes and the architecture of the brain. Previously, it was not possible to subject the learning process to traditional scientific methods of experiments, controls, hypotheses, and objective observation. Using functional Magnetic Resonance Imaging (fMRI), it is now possible to anatomically locate, noninvasively, the parts of the brain that are involved in brain functions (e.g., learning) and dysfunctions (e.g., memory loss), map out the interactions that occur between individual neurons, and localize brain areas involved in specific tasks. An investment in functional neuroimaging at NYU is an essential step in meeting the growing needs of our investigators for study of normal and abnormal brain function during the performance of perceptual and cognitive tasks.

Individual researchers in the science programs at NYU compete very effectively for federal funds for investigational support through traditional routes. However, these traditional funding sources do not provide the extensive funding necessary to support purchase multi-use instrumentation, and provide the necessary technical and support infrastructure for a coordinated large-scale initiative. Support from the Department of Defense would enable us to meet these needs, and to fully develop the potential New York University has to produce a new understanding of the brain, and new ways of using that knowledge for improving the national welfare.

Research Applications for National Security

The principal thrust of our initiative is to understand what happens in the brain when we learn and remember things, retrieve information from memory, and distinguish and identify visual objects, particularly under conditions of emotional stress. Through understanding these aspects of brain function we become able to do two things: first, we can improve the human capacity to learn, remember, recognize objects, and perform better under stress; second, we can design intelligent machines that mimic and improve upon human performance in many of the complex perceptual and cognitive tasks now undertaken by military personnel. The great extent to which brain research can meet Defense objectives is clear in the following examples, all areas in which NYU has substantial strength:

Cognition and perception.—Understanding how humans analyze and distinguish different sensory signals, and how they allocate attention among the range of objects in their environment, is crucial to the design of information display systems. Speedy and appropriate responses to visual or auditory information, whether arising in complex signals displayed by instruments, or from direct viewing of targets or potential threats, is essential for effective military performance. Researchers at NYU study how the brain analyses visual and auditory information, both at the level of operation of nerve cells, and at the level of the performance of the man or woman engaged in tasks. These studies provide important information about how the brain distinguishes and analyzes different sensory stimuli, about which parts of it are most involved in different perceptual and cognitive tasks, and about the characteristics of visual and auditory patterns that maximize their distinguishability and legibility.

Biomimetic machine vision.—Many of the perceptual and cognitive tasks that human beings perform effortlessly, such as recognizing visual objects and events and anticipating changes in the environment, or understanding speech and acoustical signals, are in fact tasks of great difficulty. We appreciate this only when we try to construct intelligent machines that have similar capabilities—an enterprise that has so far had limited success. We can design more intelligent machines if we understand the principles the brain uses to solve these complex problems. Researchers at NYU are studying these principles by developing theories about the computational operations that the brain performs, particularly in the vision system. These biomimetic vision studies bear directly on challenging machine vision problems that relate to vehicle recognition in complex scenes, human activity recognition, and autonomous vehicle navigation.

Learning and memory.—A major part of our effort is devoted to research on the learning process, with a focus on understanding the neuronal changes in the brain when people attend to things, and acquire and retain skills. Neuroscientists are now close to understanding the nature of the changes that occur in the brain when we learn new things. Very important changes involve alterations in the strength of the synapses—the connections between individual nerve cells. These connections become stronger or weaker in ways that we do not yet fully understand. When we understand how, when, and under what conditions experience changes these connections in the brain we will be able to improve the speed and flexibility with which people learn complex tasks, and the reliability and longevity of their memories. Such studies are an essential prerequisite for designing "intelligent" training programs that can respond to individual differences among military recruits in cognitive and psychomotor abilities, attention, and concentration.

Stress and performance.—Emotional memories, particularly those involving fear, have a profound impact on people's lives, often interfering with the normal execution of a person's duties. The brain systems that control emotional memories and behavior are now being charted by neuroscientists, and the pathways that control fear, and its influence on a wide range of behaviors, are beginning to be well understood. A fuller understanding of the unconscious circuitry of fear will make it possible to control fear and its potentially destructive effects on human performance. Understanding the mechanisms by which neural circuits involved in emotion affect learning, memory, and cognitive skills is crucial in optimizing performance under the high-stress conditions that characterize military operations. NYU scientists have already made some of the most notable contributions to our understanding of fear and anxiety disorders, and are especially well-placed to advance our understanding of this important phenomenon.

NYU's program of research on these problems draws on a range of contributing disciplines—neuroscience, behavioral science, computer science and applied mathematics—and encompasses work ranging from the investigation of the activity of single nerve cells, through large scale modeling of brain function, to the careful measurement of human performance on perceptual and cognitive tasks. The marriage of these disciplines and levels of study is essential to understanding the complexities

of human performance and the operations underlying it. When we understand these operations better we will be able to devise ways to improve the quality and reliability of human performance, and to design better and more intelligent machines.

While research at NYU will have these direct applications for national security, there will be important spin-offs in other areas, including biomedical therapeutics and diagnostics, early childhood learning and intervention, and job training. As examples, research conducted in these areas will necessarily address the loss of memory through aging or injury, the acquisition of language, and windows of learning opportunity in brain development, among others.

Feasibility: Institutional Strengths

New York University has the resources necessary to conduct broad ranging multidisciplinary research and training. Beyond the intellectual resources and talents of our faculty, there are established frameworks for interdisciplinary and interschool collaboration and a commitment to brain studies at the highest level of the University administration. The nation's largest private university, with 13 schools and over 49,000 students, NYU is a leading center of scholarship, teaching and research. It is one of 29 private institutions constituting the distinguished Association of American Universities, and is consistently among the top U.S. universities in funds received from foundations and federal sources.

As the core of a decade-long multi-million dollar science development plan, NYU created a premier neuroscience program that encompasses a pre-eminent faculty and generates substantial external funding from federal and state agencies as well as the private sector. These investigations have attracted millions of federal dollars from the NIH, NSF, ONR, and EPA. In addition, NYU has received major funding from the most prestigious private foundations supporting the sciences, including the Howard Hughes Medical Institute, the W.M. Keck Foundation, the Alfred M. Sloan Foundation, and the Beatrice and Samuel A. Seaver Foundation. Neural science faculty have, as individuals, won prestigious awards, including HHMI Investigator, NSF Presidential Faculty Fellow, NIH Merit Awardee, McKnight Foundation Scholar in Neuroscience, and MacArthur "Genius" Fellow.

While other academic institutions are also conducting brain studies, NYU has special strengths in important emerging research directions that are central to the Defense mission. Neural science at NYU is particularly well known for research in the neural basis of visual processing and perception, theoretical/computational neurobiology, the linkage of sensation and perception with action, emotional memory, plasticity in the visual and auditory system, and molecular and developmental neurobiology. NYU scientists have made important contributions to visual processing, deriving the most successful methods available for studying nonlinear interactions in neuronal information processing; emotion, giving the first real glimpse into the neuroanatomy of fear; neural development, with landmark work on the vision system; and the neural bases for auditory function, including neural sensitivity to auditory motion stimuli.

NYU is strategically placed to conduct studies in cognition, learning, emotion, and memory that capitalize on expertise in physiology, neuroanatomy, and behavioral studies and build on active studies that range from the molecular foundations of development and learning to the mental coding and representations of memory. Research in these areas will encompass diverse research approaches, including mathematical and computational modeling, human subject psychological testing, use of experimental models, and electro-physiological, histological, and neuroanatomical techniques.

Support from the Department of Defense will help us move rapidly forward with a research effort that should yield knowledge of great importance for the priorities of the Department of Defense.

Senator STEVENS. We do thank you, Doctor.

I note that you said you competed for a grant from the Office of Naval Research. Have you competed for grants from the Institute of Brain Disorders, of NIH? We have doubled the amount available to that Institute over the last 10 years. It has now reached the level of $3.7 plus billion, much more money than we have in this bill for research. Did you compete for money from that Institute?

Dr. LENNIE. We have not sought support from the programs of the National Institute of Mental Health (NIMH), Mr. Chairman. We sought support from ONR because we believe that the work we

proposed to do was more closely allied with the objectives of the ONR program through the university research initiatives.

Senator STEVENS. I understand that. You want additional money now, right?

Dr. LENNIE. Yes, sir.

Senator STEVENS. From ONR, when we are increasing it over at the Institute of Brain Disorders.

Dr. LENNIE. There will be parts of the enterprise at New York University that would be competing for these funds at NIMH, but the initiative that I am discussing now is one that we believed was very closely in line with the objectives of ONR, which is why we had in fact applied for the funds.

Senator STEVENS. Did ONR request the money that you are asking for?

Dr. LENNIE. Last year.

Senator STEVENS. Is it in the budget now?

Dr. LENNIE. I do not know, sir.

Senator STEVENS. We will look. But one of our problems is that these two lines of funding are duplicating the application of money for research when we are trying to maintain a Department of Defense. We have supported the decade of the brain at NIH tremendously, and they have a tremendous amount of money. I would urge you to look to them if you have got some new initiatives that you want to pursue in brain research.

Dr. LENNIE. Thank you.

Senator STEVENS. Senator.

Senator INOUYE. I have nothing for this witness, Mr. Chairman.

Senator STEVENS. Thank you very much.

Our next witness is Rogene Henderson, Senior Scientist from the Lovelace Respiratory Research Institute.

We have a statement to be put in the record prior to your testimony from Senator Domenici. He had to go to his committee meeting and has asked us to put this in here. It has two questions that he has asked you to answer for the record. And, Dr. Henderson, I hope you will agree to do that.

We will give this to you, but I ask you to answer it for the record and mail it to us, please.

[The statement follows:]

PREPARED STATEMENT OF SENATOR PETE V. DOMENICI

I would like to briefly bring to the attention of this Committee and persons in attendance at this hearing the important work of a collaborative effort between the Lovelace Respiratory Research Institute and the University of Alabama. These two institutions are tackling the critical problem of acute lung injury in our effort to ensure better healthcare and maximize survivability on the battlefield.

Exposure to smokes, obscurants, aerosols, or noxious substances have long presented a potential hazard to our men and women in uniform. At the same time, possible exposure to chemical and biological agents or nuclear materials presents an increasing risk in battlefield operations. No cure exists for the trauma or possible respiratory brought on by such exposures.

I believe these two institutions bring some of the best medical and technical knowledge to the fore in addressing this increasing risk. For a small investment we can ensure that accidental exposures in the course of day-to-day operations or the ever-increasing possibility of biological, chemical or nuclear agents on the battlefield do not unnecessarily threaten our military personnel.

STATEMENT OF ROGENE HENDERSON, PH.D., SENIOR SCIENTIST, LOVELACE RESPIRATORY RESEARCH INSTITUTE

Dr. HENDERSON. Thank you. I will answer it and mail it to you.

Senator STEVENS. Thank you very much.

Dr. HENDERSON. Thank you, Mr. Chairman. And I also would like to thank you for your prior support of medical research to meet military needs. I am testifying on behalf of a joint project on acute lung injury proposed by the Lovelace Respiratory Research Institute and the University of Alabama at Birmingham (UAB). Dr. Loring Rue, from UAB, is here with me to answer questions regarding that institution.

Senators, there is a deadly lung disease that thwarts the efforts of our military field medical personnel to care for our wounded. Trauma, burns, infection, and blood loss can develop into a condition that leads to rapid accumulation of fluid in the lungs. If not reversed, this condition leads to lack of oxygen, multiple organ failure and death.

In the Vietnam conflict, this condition affected over 90 percent of those injured personnel who were initially evacuated alive from the battlefield but who later died. There is still no specific treatment for this condition.

Permanent lung disability is common among those who survive. There are about 150,000 cases a year in injured civilians, where the condition is called acute respiratory distress syndrome (ARDS). Nationwide, the survival rate is only about 50 percent. There are actually more fatalities from ARDS than from breast cancer or prostate cancer or acquired immune deficiency syndrome (AIDS).

NIH sponsors research on ARDS, but does not focus on injury and treatment scenarios of special concern to defense operations. Extensive bullet wounds, burns or blood loss often lead to ARDS.

Field treatment is problematic, especially during the first critical hour after injury. Understanding these issues, Lovelace and UAB developed a plan to combine their complementary resources to conduct research to improve the management of acute lung injury of defense significance.

Lovelace is recognized worldwide for its research on lung damage from inhaled chemicals and radioactive materials. This unique, federally owned, privatized inhalation laboratory operates as a national resource for all agencies. The laboratory has a long history of studying the toxicity of inhaled pollutants, developing and using animal models of human lung conditions and studying the causes and treatments of lung disease.

However, Lovelace needed a partner with complementary research and clinical skills. The UAB was also reaching out for complementary expertise. Dr. Matalon's group is world renown for its work on cellular and molecular mechanisms of acute lung injury, and especially ARDS.

Working with the Office of Naval Research, Dr. Matalon's group has begun to identify potential new treatments. The University Medical Center treated over 250 cases of ARDS in the past 2 years. The unusually close collaboration between the UAB clinicians and laboratory scientists facilitates testing emerging therapies for civilian ARDS patients.

Together, Lovelace and the UAB have designed a carefully targeted program that focuses on defense-related acute lung injury. Several interrelated tests with high potential for payoff in a limited time are proposed. These projects are listed in the written testimonies.

Several administer stakeholder organizations within the Department of Defense would benefit from the results of this research. Of particular relevance for this work is the issue of military preparedness, which can be improved by the medical technologies to be developed at this proposed center for acute lung injury.

Mr. Chairman, we now seek the resources required to implement this effort. We respectfully request recognition of this need in the defense appropriations. Thank you.

[The statement follows:]

PREPARED STATEMENT OF ROGENE HENDERSON

It is proposed that the Department of Defense support two new multi-institutional efforts developed specifically to address issues important to the Department's mission. Support is sought for the Center for Acute Lung Injury, a collaborative effort between the Lovelace Respiratory Research Institute and the University of Alabama aimed at improving the management of lung injury and enhancing lung repair, a critical battlefield injury in need of scientific and medical pursuit to improve the survivor-ability under battlefield conditions.

CENTER FOR ACUTE LUNG INJURY

The Problem

Acute lung injury is a major problem to the military because of the unique work situations encountered by Department of Defense (DOD) personnel. Training or actual battlefield situations can involve potential exposure of troops to smokes and obscurants, respirable aerosols that will deposit in the lung. Detonations of military weapons produce shock waves that injure the lung. Confined spaces, such as on nuclear submarines, the holds of aircraft carriers and the interior of tanks provide the potential for exposures to noxious substances where increased ventilation may be difficult to achieve. In actual battlefield operations, exposures to chemical and biological warfare agents as well as nuclear materials, all pose a threat to the pulmonary system if inhaled. Systemic sepsis and severe trauma encountered from battlefield wounds can eventually develop into a condition known as Adult Respiratory Distress Syndrome (ARDS), in which all vessels within the body become leaky resulting in respiratory insufficiency, tissue hypoxemia and multi-organ failure.

There is at present no cure for this condition. A scientific center devoted to the study of the prevention and treatment of acute lung injury would serve to focus the research efforts of the military in this area and would be an effective research arm for military institutions devoted to protecting the health of military personnel and their families. This effort would significantly add to the military preparedness of our Armed Forces.

Two Institutions Join to Respond to the Need

To meet the needs of the DOD, two outstanding national institutions have joined in a collaborative effort to establish the Center for Acute Lung Injury. Lovelace Respiratory Research Institute (LRRI) is an internationally recognized inhalation toxicology laboratory, which was originally founded by DOE and its predecessors to study the health effects of inhaled radionuclides. LRRI is fully equipped to handle highly toxic agents, such as plutonium, depleted uranium, biological warfare agents and nerve gases. The excellent aerosol scientists at LRRI are also known for their ability to monitor and characterize atmospheres under field conditions. Thus, LRRI cannot only test for pulmonary toxicity, but can determine the nature and amount of noxious material in exposure atmospheres. The University of Alabama at Birmingham (UAB) has, under the outstanding leadership of Dr. Sadis Matalon, established a world-renowned laboratory studying the cellular and molecular mechanism of acute lung injury, and in particular, the mechanism of the development of ARDS. During the last six years, scientists and clinicians at UAB have been performing a variety of biochemical, molecular biology and physiological studies to understand the

basic mechanisms by which reactive oxygen species damage the lungs and to identify the physiological consequences of this injury.

Both LRRI and UAB have a past history of high quality research performed for the DOD. Both institutions have clinical research centers for clinical trials and extensive contacts and collaborations with biotechnology and pharmaceutical companies aimed at designing and testing new therapeutic agents. The combination of these two outstanding groups from a state-of-the-art team for addressing the problems of the DOD related to acute lung injury. It is the intention of the two collaborating organizations that the Center for Acute Lung Injury should be the first place the DOD turns to when a problem regarding inhalation toxicology and acute lung injury arises.

In summary, LRRI and UAB propose to establish a center for Acute Lung Injury to support the DOD with all problems related to inhalation toxicology and acute lung injury.

Roles of the Collaborating Institutions

Lovelace Respiratory Research Institute.—LRRI is recognized world-wide for its inhalation toxicology research, for its use of laboratory research to determine human health risks from inhaled materials, and for the federally-owned privatized inhalation laboratory it operates as a national resource. The unique laboratory is fully equipped to handle highly toxic agents, such as strategic chemical, biological and radiological agents, and has a long history of doing so safely. LRRI aerosol scientists are also known for their ability to monitor and characterize atmospheres under field conditions, and to reproduce those atmospheres under controlled laboratory conditions.

The University of Alabama.—UAB has, under the outstanding leadership of Dr. Sadis Matalon, established a world-renowned laboratory studying the cellular and molecular mechanism of acute lung injury, and in particular, the mechanism of the development of ARDS. During the past six years, scientists and clinicians at UAB have conducted several key biochemical, molecular biology and physiological studies advancing our understanding of the basic mechanisms by which reactive oxygen species damage the lungs and identifying the pathological and physiological consequences and prognosis of this injury.

Both LRRI and UAB have a solid track record of performing high quality research for DOD. In addition, both institutions have clinical research centers for clinical trials and extensive contacts and collaborations with biotechnology and pharmaceutical companies aimed at designing and testing new therapeutic agents. The combination of these two outstanding groups form a state-of-the-art team for addressing the problems of the DOD related to acute lung injury. It is the specific intention of the two collaborating organizations that the Center for Acute Lung Injury would be a much-needed first-line source of information and assistance for DOD when a problem regarding inhalation toxicology and acute lung injury arises.

The Center's Research Strategy

The two partner institutions have identified and prioritized a set of interrelated key issues that target current knowledge barriers, are amenable to research by their coordinated efforts in a constrained time frame, and have high potential for pay-off. Through the Center, they will conduct integrated research specifically targeting lung injury, repair, and treatment issues pertaining to DOD problems. The research will include basic studies on induction and repair of acute lung injury, applied inhalation toxicity studies to address specific DOD problems, and atmosphere monitoring and characterization to meet DOD needs. Basic research will be conducted to determine the key defense mechanisms of the lung with emphasis on enhancing the defenses that kill pathogens, and studies to assess the ability of drugs (retinoids and growth factors) to promote wound healing and tissue repair.

This carefully-targeted body of research will consist of the following five project areas supported by core activities at both institutions. A key feature of the work is that both LRRI and UAB will be represented among the chief investigators of each project.

Research Project Areas:

—Mechanisms of Pathogen Killing by Normal and Injured Lungs
—Mechanisms and Prevention of Acute Lung Injury Following Systemic Trauma
—Role of Oxidant Stress During Acute Lung Injury
—Role of Altered Immune Function on Mortality in Acute Lung Injury
—Development of New Models of ARDS that More accurately Predict New Effective Human Medical Interventions

Addressing the DOD Needs for Military Preparedness

Our Armed Forces must be prepared to face medical assaults both on the battlefield and within the military population and those civilian populations that are dependent upon DOD logistical and direct support. It is noted that there has been a significant increase in adenovirus respiratory infection within the military population in recent years. Other respiratory diseases are on the increase and can markedly reduce the preparedness of our Armed Forces to accomplish all of their numerous missions. The work of the Center will result in new interventions to reduce these disease risks for military and related civilian populations in all aspects of their lives. Much of the functionality of the Armed Forces requires a healthy military and civilian population, and any degradation of the respiratory health of the support forces of the DOD also reduces the ability of the military to accomplish their missions.

More effective anticipation, prevention, diagnosis, and treatment of acute lung Injury will enhance the effectiveness of DOD programs at all levels from battlefield protection of troops from chemical and biological warfare agents or blast damage to routine protection of service personnel from toxic chemicals during peacetime duties. With emerging threats from weapons of mass destruction, state of the art information from the Center for Acute Lung Injury will be of interest to many DOD organizations and could have critical significance for U.S. tactical and strategic postures. There are many major DOD stakeholders in the issues addressed by this program. These include:

—The Office of Naval Research (ONR) with broad responsibilities for improving technology to protect personnel;

—The U.S. Army Medical Research Institute of Infectious Disease (USAMRIID) with lead responsibilities for research to advance the medical prevention and treatment of biological diseases and biological warfare casualties;

—The U.S. Army Medical Research Institute for Chemical Defense (USAMRICD) which is the nation's lead laboratory for research to advance the medical prevention and treatment of chemical warfare casualties;

—The Defense Threat Reduction Agency (DTRA) which is dedicated to reducing the threat to the United States and its allies from nuclear, chemical, biological, conventional, and special weapons;

—The Air Force Nuclear Weapons and Counterproliferation Agency (NWCA) with responsibility for ensuring an effective deterrence posture for weapons of mass destruction; and

—The Defense Advanced Research Program Agency (DARPA) which is DOD's central research and development organization for pursuing high risk/high payoff research and technology.

In addition, improved knowledge of the opportunities and limitations for preventing and treating acute lung injury will be of interest to many special purpose organizations such as the Marine Corps Chemical and Biological Incident Response Force (CBIRF) which is a self-contained, task-oriented unit with the ability to detect hazardous materials, perform decontamination, and offer medical treatment and security.

Funding Is Sought to Conduct These Key Studies

A total of $6 million ($3 million each to LRRI and UAB) is sought to provide salaries, purchase equipment, provide core support services, facilitate travel for collaborating scientists between the two institutions as necessary to conduct the five specific, carefully-targeted and coordinated studies listed above.

Senator STEVENS. Doctor, Senator Domenici has some questions and I will not duplicate them here. But tell me, can you assure me that if we open this new line of research that it really is military related?

Dr. HENDERSON. Yes, it is, because the condition is caused by trauma and blood loss and infections. This is of special significance to the military, because the battlefield injuries are just those types of injuries that tend to lead to this condition.

Senator STEVENS. I understand that, and we are familiar with the terrible problem of invasion of blood into the lungs and other problems that develop when a person is injured in military activity. That is a terrible thing. Are you going to concentrate, however, on the military side of this or on the side that deals with accidents on

the civilian side? I know that the medical result may be the same, but it is two different problems.

There is lots of money at NIH dealing with the problems of those people who are injured on the highways. We are interested in the acute problems of people who are injured in military actions. Is that what you are going to be interested in?

Dr. HENDERSON. Yes, that is the whole plan for this center. And Lovelace has in the past done a great deal of work for the military. We are familiar with their problems, and it is their needs that we are trying to address. As you say, there are other people who are funding research to address the civilian needs. The condition that develops, as you say, is similar. And some of the work that we do for the military will benefit the civilian population.

Senator STEVENS. I imagine it will, but we are very acutely interested in the result of concussion and the new bullets and mechanisms that cause such an enormous impact on the body when they hit them.

Dr. HENDERSON. Yes. And that is what we will emphasize, and that is where Lovelace, as I say, has emphasized work on these types of scenarios in the past. And we are fully prepared to do that in the future.

Senator STEVENS. Senator, do you have any questions?

Senator INOUYE. No, Mr. Chairman.

Senator STEVENS. Thank you very much. It is a very interesting thing. I was exposed to a briefing on some of these events that took place in past conflicts, and we are very interested in that. We are very interested in finding a way to deal with it on the battlefield, Doctor.

Dr. HENDERSON. Yes, we are, too. And it is an important thing to be able to deal with it immediately, before the condition develops. And that is what we want to do.

Senator STEVENS. Thank you very much.

The questions that Senator Domenici referred to earlier that he was going to submit will be inserted in the record at this point along with your responses.

[The information follows:]

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

ACUTE LUNG INJURY

Question. Mr. Henderson, I appreciate your appearance here today on behalf of the Center for Acute Lung Injury. I have read your testimony and would merely request clarification on one point.

1. I understand that the $6 million to the Lovelace Respiratory Institute and the University of Alabama will be divided equally. However, I would ask that for the record you provide us with full accounting of how the $6 million will be allocated between salaries, procurement, services, and studies as indicated in your testimony.

2. After initial establishment of the Center, what level of continued support would be required to sustain your research operations?

Answer.

LOVELACE RESPIRATORY RESEARCH INSTITUTE,
ALBUQUERQUE, NEW MEXICO, MAY 9, 2000.

The Honorable TED STEVENS,
522 Hart Senate Office Building,
Washington, DC 20510.

DEAR SENATOR STEVENS: I would like to take this opportunity to thank you for the opportunity to appear before your subcommittee on May 8 and to present you with a detailed explanation of our collaborative initiative at the New Mexico based

Lovelace Respiratory Research Institute and the University of Alabama for an Acute Lung Injury Center Project to explicitly serve DOD and military operational and medical technology. Respectfully, I will use this letter as a means of answering the questions posed to you, Mr. Chairman, as well as those submitted by Senator Domenici.

First and foremost, this project is a focused Department of Defense (DOD)-specific endeavor directed at the unique and extreme risks associated with the medical emergencies encountered by DOD personnel on the battlefield and related situations. Military men and women all face acute trauma, which frequently and rapidly develops into what is called Acute Lung Injury. I want to reassure you and reiterate that this joint Lovelace-Alabama project is designed and intended to focus specifically on military needs, preparedness objectives and to military technical development.

Acute Lung Injury can result from toxic exposures to inhaled materials or extreme trauma to the chest or other vital body regions that results in rapid hypoxemia, pulmonary edema, extreme lung inflammation and multiple organ failure. Death is the frequent result. These are injuries most likely to be expected in DOD operations to DOD personnel. The lessons learned from the proposed studies can be directly implemented by DOD medical personnel to reduce and mitigate these combat related clinical emergencies on the battlefield or immediately after triage to a field hospital. The project envisions a series of directed studies that will lead to the development of practical interventions to be employed by military medical personnel upon the affected DOD soldiers, sailors and related workers in unique extreme military situations.

We were asked to provide a full accounting of how the requested $6 million would be spent. Attached is a specific breakdown of the budget, and an explanation of the breakdown of funds dedicated to research, research institutes and equipment and to related costs that support that research. The funds will be expensed equally between the two institutions.

Approximately two-thirds of all expenditures will be devoted to critical research personnel, support of highly skilled investigators, and over 15 bachelor and masters level technical support staff, along with numerous animal care workers, computer service personnel and aerosol exposure technicians. They will undertake the actual work of developing and expanding the unique animal models of Acute Lung Injury described in the proposal proper and developing interventions designed to reduce, mitigate or eliminate the fatalities associated with the syndrome. For example, the scientists, lab technicians and animal care workers will develop two new animal models of Acute Lung Injury focusing on differing aspects of the disease and subsequent treatments (lung edema and hemorrhage). All of these workers will be working 100 percent on the research proposed including the development of new technologies to be implemented later as effective medical interventions.

The other core area of expenditure is the critical research equipment, materials and supplies (approximately one-fifth of the total costs). These too represent costs that are 100 percent dedicated to the actual scientific experiments—paying for animals, chemicals, some exposure equipment and tissue culture and related supplies. The remaining costs include minor expenses for clinical samples from victims of Acute Lung Injury, consulting costs and travel to scientific meetings. The indirect costs for both institutes are approved by federal audit and go toward many of the categories described above including support personnel for exposure suits, animal care personnel and facilities and upkeep, as well as the development of the necessary computer support services and facility upgrades necessary to carry out the goals of the project. Less than 20 percent of the indirect costs (less than 10 percent of the total) will be devoted to peripheral but necessary expenses such as clerical and peripheral administrative costs.

The final question is related to the need for continued support after the initial establishment of the Center. We anticipate that this program of research and technology development will take approximately 12 to 24 months to accomplish. Thereafter, the successes of the work will be identified and only those directly, exclusively and specifically related to the Defense Department medical mission would be explored through a continuing smaller relationship with the DOD. It is anticipated that peripheral to this core of discoveries will be a number of outcomes that will be of interest to other agencies such as the EPA, DOE, CDC and NIH. Funds will be sought from other sources to support these other on-going activities of the Center as well. We anticipate that this project will lead to a permanent Center of Excellence between LRRI and UAB organizations focusing on the development of enhancements and exploitation of the discoveries that come from the R&D activities of the projects.

We hope that this explanation adequately answers the questions posed at the hearing, and we at Lovelace again thank you for that opportunity. We understand your concerns about the utilization of limited resources within the Defense budget, and wanted to take every effort to assure you of our military focus and commitment. We want to thank you as well for your leadership on defense and research issues and stand ready to respond to any additional questions you might have.

Sincerely,

ROGENE HENDERSON, PH.D.,
Senior Scientist/NERC Deputy Director.

UNIVERSITY OF ALABAMA 2 YEAR STUDY

	Project 1 M. Sadis	Project 2 C. Irshad	Project 3 K. Randall	Project 4 J. Thompson	Project 5 S. Matalon	CATEGORY TOTAL
PERSONNEL	$348,390	$320,880	$302,448	$373,054	$194,896	$1,539,668
CONSULTANT COSTS	.....	.....	.....	.....	11,200	11,200
MAJOR EQUIPMENT	75,000	.....	11,568	72,000	37,132	195,700
MATERIALS & SUPPLIES	78,060	100,000	16,000	90,000	9,000	293,060
TRAVEL COSTS	6,000	6,000	6,000	6,000	19,200	43,200
PATIENT COSTS	16,000	.....	64,000	.....	.....	80,000
OTHER COSTS	.....	4,000	.....	14,000	26,000	44,000
INDIRECT COSTS	213,346	187,432	141,136	210,128	113,228	865,270
PROJECT TOTALS	736,796	618,312	541,152	765,182	410,656	.....
COMBINED PROJECT TOTALS	.....	.....	.....	.....	.....	3,072,098

LBERI 2 YEAR STUDY

PERSONNEL	$920,056
MATERIALS & SUPPLIES	385,310
TRAVEL COSTS	10,000
COMPUTER SERVICE	51,496
DOE FACILITY USE COST	102,292
INDIRECT COSTS	1,366,862
SUBTOTAL	2,836,016
6 PERCENT FEE	163,984
TOTAL	3,000,000

TOTAL COMBINED COST—YEAR 1

	UAB	LBERI	CATEGORY TOTALS
PERSONNEL	$1,539,668	$920,056	$2,459,724
CONSULTANT COSTS	11,200	.....	11,200
MAJOR EQUIPMENT	195,700	.....	195,700
MATERIALS & SUPPLIES	293,060	385,310	678,370
TRAVEL COSTS	43,200	10,000	53,200
CLINICAL COSTS	80,000	.....	80,000
COMPUTER SERVICE	.....	51,496	51,496
DOE FACILITY USE COST	.....	102,292	102,292
OTHER COSTS	44,000	.....	44,000
INDIRECT COSTS	865,270	1,366,862	2,232,132
6 PERCENT FEE	.....	163,984	163,984
PROJECT SUBTOTALS	3,072,098	3,000,000	.....
PROJECT TOTAL	6,072,098		

Senator STEVENS. Our next witness is Joe Flynn, Vice President of the Fourth District of the American Federation of Government Employees (AFGE). Good morning.

STATEMENT OF JOE FLYNN, NATIONAL VICE PRESIDENT, FOURTH DISTRICT, AMERICAN FEDERATION OF GOVERNMENT EMPLOYEES, AFL–CIO

Mr. FLYNN. Good morning, sir. Good morning, Senator Inouye.

Mr. Chairman, AFGE is the largest Federal employee union, representing more than 600,000 public employees across the country, including more than 200,000 in the Department of Defense. I thank you for this opportunity to discuss the issue of most concern to Federal employees, and especially those in DOD, and that is contracting out.

We certainly appreciate the bipartisan support we have received from this subcommittee on this issue. And in particular, Mr. Chairman, we would like to recognize yourself as being one of our strongest supporters in this area.

A March 10 report from the DOD Inspector General gave the Department's service contracting out efforts the worst grade ever. The Inspector General (I.G.) looked at 105 DOD contracts worth $6.7 billion. Every single one of them had some type of problem. The I.G. confessed that he and his staff were startled by the audit results, because they found problems with every one of the 105 actions. In nearly 10 years of managing the audit office of the I.G., I do not ever recall finding problems on every item in that large a sample of transactions, programs or data.

Mr. Chairman, the subcommittee and other folks should be convinced that there needs to be a brake put on DOD contracting out pending further review. And in particular, we would like to address your attention to the Navy's ill-considered privatization of its entire communications system. As the General Accounting Office (GAO) reported, the Navy's acquisition approach and implementation plan for developing an Internet have a number of weaknesses that make the effort unnecessarily risky. The GAO also pointed out that the extraordinary rush to bestow this multi-billion dollar contract on one lucky contractor was not driven by specific mission needs.

Navy officials insist that public/private competition is not required because the Internet contract somehow constitutes new work. Any objective examination of this contract, which also includes an oversight contract, suggest that this claim is nothing more than an attempt to avoid serious scrutiny.

GAO has also raised questions about the financing for this privatization scheme, as well as the impact of entrusting the Navy's entire communications system to a contractor, potentially one that could be foreign owned.

This subcommittee should force the Navy to subject the Internet work to private/public competition. The thousands of Federal employees currently performing the Navy's communication work deserve the chance to defend their jobs. And any contractor must be required to prove in advance that outsourcing is in the best interests of our warfighters and taxpayers.

Senator, once again, thank you for the opportunity for allowing us to appear. If there are any follow-up questions or additional information we can provide you, we are certainly at your service.

[The statement follows:]

PREPARED STATEMENT OF JOE FLYNN

My name is Joe Flynn and I am the National Vice President for AFGE's Fourth District, which includes Maryland, Virginia, West Virginia, and North Carolina. AFGE is the largest federal employee union, representing more than 600,000 public employees serving across the nation and around the world, including more than 200,000 in the Department of Defense (DOD). I appreciate this opportunity to discuss the issue of most concern to federal employees: contracting out and privatization. I thank you, Mr. Chairman, for your very strong support for federal employees generally as well as in the context of defense appropriations legislation. I must also single out in particular three Senators who have striven to reduce the obvious inequities in the Administration's outsourcing agenda: Senators Durbin, Lautenberg, and Harkin.

The Failure to Monitor the Costs and Consequences of Contracting Out

Those lawmakers most familiar with contracting out understand, in the words of the House Defense Appropriations Subcommittee, that there is "no clear evidence that (contracting out and privatization) is reducing the cost of support functions . . . with high cost contractors simply replacing government employees." The General Accounting Office (GAO) agrees, reporting that the Department of Defense (DOD), the agency that does the most contracting out, has no way of determining if savings from all of its contracting out efforts are actually being realized.

And the situation is getting worse, not better. A March 10 report from the DOD Inspector General (IG) gave the department's service contracting crusade the worst grade ever. The IG looked at 105 Department of Defense (DOD) contracts worth $6.7 billion. Every single one of them had some type of oversight problem. During his recent testimony before the House Government Management Subcommittee, Mr. Robert J. Lieberman, the Assistant Inspector General for Auditing, confessed that he and his experienced staff were "startled by the audit results, because we found problems with every one of the 105 actions. In nearly ten years of managing the audit office of the IG, I do not ever recall finding problems on every item in that large a sample of transactions, programs or data." (Mr. Lieberman later said that he had signed 2,000 different audits during his tenure.) The report states that the collective dereliction of duty on the part of DOD with respect to service contracting "clearly left the government vulnerable—and sometimes at the mercy of the contractor."

Here are some of the general findings about problems in tracking costs and savings from contracting out and privatization:

—77 percent—inadequate government cost estimates;
—69 percent—inadequate use of prior history to define requirements;
—68 percent—inadequate price negotiation memoranda;
—67 percent—inadequate contract surveillance;
—60 percent—inadequate competition;
—57 percent—cursory technical reviews; and
—25 percent—lack of cost control.

And here are some of the specific findings:

—The Army contracted with Raytheon for 39 years to service HAWK missile system but it never bothered to establish a fixed price for the contract. Instead, the Army awarded Raytheon a cost-plus-fixed-fee deal, which allows the contract to go above the expected price.
—A government contracting office had $8 million worth of taxpayer dollars to spend on a contract but only found $5.8 million in costs. The Pentagon decided to put the extra $2.2 million in the contract anyway.
—A National Guard contract was estimated at $2.2 million, a figure that copied the $2.1 million application from a contractor. A review discovered that the real costs only totaled $1.2 million.

The DOD official on the same panel admitted that the Pentagon could not take issue with the IG's findings.

Surely it's not too much to ask that the Administration and agency managers be required to prove that A–76 competitions and contracting out and privatization generally will actually achieve real and significant savings before throwing public employees and their families out on the street. Moreover, it is imperative that these real and significant savings persist over the long-term. There is considerable anecdotal evidence to suggest that whatever initial savings are generated from contracting out dissipate by the time the contract is renewed since there is no public-

private competition and precious little private-private competition, thus leaving taxpayers at the mercy of sole-source contractors.

In 1998, the Administration agreed to require agencies to develop tracking systems to monitor the costs and savings of contracting out. As a senior OMB official admitted, it is "indefensible" that there should be an inventory of work performed by public employees through the FAIR Act but no similar inventory for work performed by contractor employees, even though two-thirds of the federal government is already contracted out. Although more than a year has passed, no progress whatsoever has been made towards establishing contractor inventories.

The Failure to Subject Contractors to the Same Level of Competition as Public Employees

Agencies should be required to contract in work for performance if in-house staff will be more effective, more efficient, and more reliable than contractors. Virtually no work is ever contracted in so it can once again be performed by experienced and reliable public employees. If public-private competition is appropriate for work performed by public employees, then it is just as appropriate for work performed by contractors. If only work performed by public employees is subjected to public-private competition, then the Administration and agency management are simply replacing public employees with contractor employees, rather than trying to make government more efficient.

Last year, the Administration "agree(d) with (AFGE) that we should ask federal managers to . . . consider the potential benefits of converting work from contract to in-house performance . . . OMB will encourage agencies to identify opportunities for the conversion of work from contract to in-house performance . . ." Unfortunately, the Administration has failed to provide agencies with this guidance. In response, this Subcommittee required DOD to document just how infrequently work has been contracted in, identify barriers to contracting in, and provide recommendations for maximizing the possibility of effective competition for work that has already been contracted out.

The Failure to Shine the Light of Truth on the Shadow Workforce

Despite the Administration's stated intention to document the size of the contractor workforce—often referred to as the "shadow workforce" because it has historically been enshrouded in such mystery—no progress has been made. The House and Senate Armed Services Committees agreed, over the Pentagon's strenuous objections, to require a count of DOD's contractor workforce in last year's defense authorization conference report. A similar requirement was included in report language in last year's Senate defense appropriations bill.

Failure to Prevent Work from Being Contracted Out Without Public-Private Competition

Although generating much attention, OMB Circular A–76 is really a sideshow. Most government work that is performed by contractors is never subject to public-private competition. Either the work has never been performed by public employees and was simply given to contractors from the very beginning ("new starts") or it was started in-house and then transferred to the private sector without giving public employees any opportunity to compete in defense of their jobs. That is, despite all of the talk from Administration officials about the importance of public-private competition, most contractors obtain their lucrative deals without ever having to compete against public employees. Last year's Senate Defense Appropriations Bill included report language that would enable lawmakers to finally at least get a handle on the problem in DOD, directing Pentagon bosses to provide "an analysis of the amount and value of contracts that were awarded to private contractors through OMB Circular A–76 versus other mechanisms."

For the last several years, taxpayers have paid contractors at least $45 billion annually for services provided to agencies other than DOD. Yet, during that time, there have been virtually no OMB Circular A–76 competitions outside of DOD, by the admission of the Administration, which means that public employees have not been allowed to compete for billions of dollars of work. Currently, most work is contracted out without public-private competition by even DOD—the agency often held out as the champion of OMB Circular A–76. Although DOD contracts out in excess of $60 billion annually, public employees have no chance of competing for almost all of that work—even with the Pentagon's supposed increased reliance on the circular. For example, according to an Army study, only 16,000 contractor jobs out of the service's entire contractor workforce of 269,000 were competed through OMB Circular A–76.

Various rationales are offered for not allowing public employees to compete. Work is arbitrarily defined by Pentagon officials as "new" or "reconfigured", thus negating

rules that require public-private competition. As is happening on DOD base after DOD base, work is arbitrarily split up into functions of less than ten employees in order to fall below the threshold that normally mandates A–76 competitions. Sometimes, the work is not deemed subject to public-private competition because it is being "privatized"—on the pretext that the government "is getting out of the business". However, that misses the point. DOD may decide that it will no longer perform work in-house, but that doesn't mean it no longer needs the work. In fact, the work will continue to be done for DOD—but by contractors, not public employees. Since the taxpayers will still be paying for that work to be done for DOD, whether the work is contracted out or privatized, why shouldn't they at least have the security of knowing contractors have to prove that they can perform the work more efficiently, more effectively, and more reliably than public employees? As GAO reported last year, DOD managers have been told to look for waivers and exceptions to the use of A–76 whenever possible.

This very subcommittee could close off an option that Air Force managers are using to contract out work without any public-private competition. Using an obscure loophole in a perennial general provision in the defense appropriations bill, the Air Force is contracting out more than 600 jobs without any public-private competitions, in at least two different locations (Kirtland, NM, and Eglin, FL), to a Native American firm that has no experience at performing the work in question. The general provision to which I refer allows such contracting out to any firm that claims to be "under 51 percent Native American ownership." Although DOD is ostensibly striving to reduce infrastructure costs, the installation has scrapped an OMB Circular A–76 competition in favor of a non-competitive, sole-source arrangement with a firm from out-of-state. Is a sole-source arrangement likely to generate higher savings than an A–76 competition or a strategic sourcing initiative? Of course not. Is it fair to prevent the hard-working employees at Kirtland and Eglin from even defending their jobs? Of course not. Is the Air Force required to use the Native American set-aside provision? Of course not. Meanwhile, unless the Air Force reverses its decision, hundreds of hard-working Air Force employees will soon lose their jobs without any demonstration that the contractor is a better service provider.

Another example of contracting out without public-private competition is the Navy's ill-considered privatization of its entire communications system. As the GAO reported, "the Navy's acquisition approach and implementation plan for developing an Intranet have a number of weaknesses that make the effort unnecessarily risky." The GAO also pointed out that the extraordinary rush to bestow this multi-billion dollar contract on one lucky contractor was "not driven by specific mission needs." Navy officials insist that public-private competition is not required because the Intranet contract somehow constitutes "new" work. Any objective examination of this contract, which even involves oversight of the contract, suggests that this claim is nothing more than an attempt to avoid serious scrutiny.

GAO has also raised questions about the financing for this privatization scheme as well as the impact of entrusting the Navy's entire communications system to a contractor, potentially one that could even be foreign-owned. This subcommittee should force the Navy to subject the Intranet work to public-private competition. The thousands of federal employees currently performing the Navy's communications work deserve the chance to defend their jobs—and any contractor must be required to prove in advance that outsourcing is in the best interests of warfighters and taxpayers.

The Failure to Account for the Extent the Federal Government's Contracting Out Undercuts Public Employees on their Wages and Benefits

If there is little information about the size of the contractor workforce, there is virtually no information about how contractors treat their workforce. It is commonly accepted in the private sector and elsewhere in the public sector that to the extent savings are generated in certain circumstances through contracting out such savings essentially come from contractors short-changing their employees on wages, benefits, and job security. A survey conducted by GAO in 1985 of public employees who were involuntarily separated after their jobs were contracted out revealed that over half "said that they had received lower wages, and most reported that contractor benefits were not as good as their government benefits". When GAO attempted to obtain more recent date about the wages and benefits of contractor workers, contractors refused to cooperate. It is outrageous that Administration officials and more than a few lawmakers—despite their words of support for working Americans—continue to allow contractors to take work away from public employees simply because, in many cases, they pay their workers less and provide them with inferior benefits. When the budget is in surplus, the economy's booming, and the stock market is

soaring, how can anyone justify replacing working and middle class Americans with contingent workers who are forced to scrape by with so much less?

AFGE has worked diligently with the Administration and the Congress to attempt to correct those problems and right those wrongs. However, there is still no contractor inventory to track the costs and consequences of contracting out. Agencies are still not subjecting work performed by contractors to the same scrutiny as work performed by public employees. Work is still being contracted out without giving public employees opportunities to defend their jobs through public-private competition. And arbitrary personnel ceilings still prevent public employees from competing for work in all too many instances. Clearly, public employees and their families have been left with no choice but to insist that there be a suspension of federal service contracting until those matters have been satisfactorily resolved. It is time we stopped wasting America's money on privatization.

AFGE thanks the subcommittee for allowing us this opportunity to discuss our concerns about contracting out and privatization.

Senator STEVENS. We would be glad to contact you. Thank you very much, Joe. We appreciate your coming.

Mr. FLYNN. Yes, sir. Thank you.

Senator STEVENS. Do you have any questions?

Senator INOUYE. No, Mr. Chairman.

Senator STEVENS. Thank you very much.

Our next witness is Cyrus Jollivette, Vice President for Government Relations, the University of Miami.

STATEMENT OF CYRUS M. JOLLIVETTE, VICE PRESIDENT FOR GOVERNMENT RELATIONS, UNIVERSITY OF MIAMI

Mr. JOLLIVETTE. Good morning, Mr. Chairman, Senator Inouye. I appreciate the opportunity to testify today on behalf of my colleagues at the University of Miami and its Rosenstiel School of Marine and Atmospheric Science. The Rosenstiel School has special expertise in the area of remote sensing and it is for this reason that I appear before you today.

First, though, I would like to say thank you to you for your support. We are already engaged in this project because of your support, provided last year, through the URI and through the drug interdiction accounts. The Rosenstiel School is a partner of DOD in many ways, and it is for that reason, too, that I am here.

This project is one that was brought to the attention of the University of Miami by the Office of Naval Intelligence (ONI) and it is one that we are carrying through with very, very close involvement of people at Southern Command (SOUTHCOM) in Miami. What we are proposing is continuation of funding for our remote sensing facility.

Senator STEVENS. How much?

Mr. JOLLIVETTE. $5 million, sir, for the remote sensing facility at the University of Miami, the National Center for Tropical Remote Sensing Applications and Resources. We believe it would be a small investment that would provide vast return to the Nation. This facility uses synthetic aperture radar (SAR). It is able to operate in all weather, day or night. Space-based satellite SAR systems are able to monitor the movement of targets on land or ocean in near real-time. It can map topography with unprecedented accuracy. It can assess storm and flood damage. It can localize forests and wildfires. It can assess soil properties. It can do many things, including forecast major volcanic eruptions and help understand the earthquake process.

Senator STEVENS. Mr. Jollivette, let me interrupt you.

Mr. JOLLIVETTE. Yes, sir.

Senator STEVENS. Can you assure us that you are going to continue to work on this concept of detecting the small targets, particularly those that are involved in the war against drugs and in terms of this problem of wake imaging.

Mr. JOLLIVETTE. Yes, we will, sir.

Senator STEVENS. I took two trips last month, down to Key West and out to California, to talk to people who are involved in that detection system. That is the key right now to our success in the war against drugs for these small boats that are coming very fast up both the east and west coast. And if you will continue that, we will assure you we will put up the $5 million.

Mr. JOLLIVETTE. That is my primary reason for being here. We will continue that, sir. And that is why we are working very closely with SOUTHCOM. General Wilhelm is supportive of this project and has indicated that to Senator Mack.

Senator STEVENS. Your full statement is in the record and you have got the $5 million.

Mr. JOLLIVETTE. Thank you, sir.

[The statement follows:]

PREPARED STATEMENT OF CYRUS M. JOLLIVETTE

Mr. Chairman, I thank you and the Members of the Subcommittee for this opportunity to present testimony today on behalf of my colleagues at the University of Miami and its Rosenstiel School of Marine and Atmospheric Science.

Founded in 1925, the University of Miami is the largest private research university in the Southeastern United States and the youngest of 23 private research universities in the nation that operate both law and medical schools. Through its 14 colleges and schools, 1,915 faculty instruct 13,715 students in more than 110 areas of undergraduate study and 162 disciplines for graduate study.

The Rosenstiel School is recognized as one of the premier academic oceanographic research facilities in the world and ranked among the top six nationally. The more than 100 recognized scientists, researchers, and educators at the Rosenstiel School collaborate closely with other institutions in addressing critical national and regional issues. The Rosenstiel School has special expertise in remote sensing and it is for this reason that I appear before you today.

Last year you provided support to launch the National Center for Tropical Remote Sensing Applications and Resources. In fiscal year 2001 we hope to continue our partnership with the Department of Defense in moving this vital project forward. A small investment in this project will provide vast return to the nation.

Synthetic Aperture Radar (SAR) is a powerful remote sensing system, able to operate in all weather, day or night. Space-based satellite SAR systems are able to monitor the movement of targets on land or ocean in near real-time, map topography with unprecedented accuracy, assess storm and flood damage to urban and rural infrastructure, localize forest and wildfires, and assess the soil properties of farm land (soil moisture) and health of vegetation. SARs provide data that can be used to forecast major volcanic eruptions and understand the earthquake process, and a host of other military, civilian, and scientific applications. SAR can make a major contribution to Southcom's various missions, especially in the area of drug interdiction, civil defense (e.g., storm damage assessment) and natural hazard mitigation (e.g., volcano forecasting).

The University of Miami uses SAR data for a variety of terrestrial and oceanographic applications, and has a large amount of experience in the analysis and use of SAR data, and expertise in the operation of satellite downlink facilities.

The SAR receiving facility currently under construction by the University of Miami will provide a unique capability for the Caribbean and southeastern U.S. region Applications of this ground receiving station will be extremely diverse. They will include a wide range of scientific applications in earth, atmosphere and ocean sciences, as well as more practical applications in the fields of environmental monitoring, natural hazard assessment, civil defense and defense tactical applications. The station will initially operate at X-band, and will be capable of receiving data from a wide variety of low-Earth orbiting satellite systems. Our initial operational

capability will focus on SAR and visible and infrared imagery. The combination of these sensor and imaging types will provide an unprecedented wealth of information of the earth's surface. Future upgrades of the Center's system should include the capability to collect L- and S-band downlinks, as well. In all cases a high priority will be placed on high reliability data reception to low elevation angles (~2 degrees above the local horizon). A heavy launch schedule over the next few years will place numerous new satellites with SAR and other radiometric sensors in space that requires at least two antennas to enable data recovery in the case of simultaneous satellite passes or situations with a blocked line-of-sight. The voluminous flow of data associated with high-resolution satellite sensors such as SAR will require high reliability data archiving with rapid retrieval, rapid dissemination of data (both raw and analyzed to some specified level) to selected users, full data analysis capability, and higher level software products to aid in data interpretation.

For purposes of illustration, I provide three example applications of how SAR data can be utilized for drug interdiction, rapid storm damage assessment, and natural hazard mitigation.

Drug Interdiction

Small, fast moving boats are one of the major vectors for drug delivery to coastal regions of the southeastern United States. These boats have small radar cross-sections, and travel exclusively at night without running lights, and thus are very difficult to detect by standard techniques. Their low radar cross sections mean that the P3 Orion surveillance aircraft equipped with standard ocean surface radar only rarely detect them (the targets have to be fairly close to the aircraft). Given the large area of ocean used by traffickers, and the relatively small numbers of surveillance flights, detection success rate is low.

SAR can easily detect such targets. It does so not by direct detection of the boat, but rather by wake imaging. The center line wake of a small fast moving boat is typically 100–200 meters long, and is relatively smooth compared to adjacent ocean surface, thus is easily detected by standard civilian SAR and standard pattern recognition analysis. A recent test coordinated by the Office of Naval Intelligence had virtually 100 percent success rate at detecting this class of target during night time passes of RADASAT. The test target was a fiberglass boat operated by the University of Miami, cruising at high speed off Key Biscayne, Florida. Research efforts at the University include efforts to understand and quantify the interaction of the radar signal and the ocean surface. These efforts will be crucial to fully exploiting SARs potential for wake detection in all sea states.

At the present time, there are two civilian SAR satellites that a South Florida ground station could access, RADARSAT (operated by the Canadian Space Agency) and ERS–2, operated by ESA. On average, we can expect to image a given "patch" of ocean every few days with one or both of these systems. Thus, we would probably not detect and track all targets. On the other hand, we could expect to track a much larger number of targets than are currently possible, and could generate, with "postdiction" analysis, an accurate picture of where most illegal traffic is originating and landing. This information would be invaluable to the larger drug interdiction program. Over the several day transit period of these small craft from Colombia, Venezuela, Haiti, Dominican Republic and Puerto Rico to the southeastern U.S., approximately 30 percent to 40 percent of targets would be detected in "real time" by this approach with available satellite coverage, enabling direct at sea interdiction by the Coast Guard. This assumes of course that the data can be made available quickly to the responsible agency. The South Florida SAR facility would make this possible.

SAR is also excellent at mapping changing land use, deforestation, and new drug growing areas. Again, this data could form a key part of drug surveillance operations. Here the need for real time is less critical, and therefore it is possible to build up 100 percent coverage of a given region over several months, by combining data from various passes.

In summary, satellite SAR data could make a major impact on the drug interdiction program. However, realizing its full potential requires a dedicated facility in South Florida, integrated into the chain of command of the drug interdiction effort, and integrated into academic efforts in the area of rapid data processing and rapid image analysis, including pattern recognition algorithms for wake detection. The proposed University of Miami SAR ground station is an excellent vehicle for this type of collaborative activity.

Natural Hazard Mitigation and Civil Defense

Part of Southcom's mission includes civil defense and natural hazard mitigation in Central America, South America and the Caribbean region. The reason is that

the nation's long term security interests are best satisfied by having prosperous, politically stable democracies in this hemisphere, and thus Southcom has a role to play in promoting the economic and political "health" of the region. Even if we ignore strictly humanitarian considerations, problems such as extreme poverty and civil unrest can negatively impact the U.S. both directly and indirectly. Examples include illegal immigration, reliance on a drug economy, and lost market opportunity for U.S. business.

The poverty and poor infrastructure that is endemic in much of the hemisphere is exacerbated by natural disasters. In fact there is a negative feedback, with poor countries having weak infrastructure that is easily damaged by natural disasters (witness the recent devastation in Honduras during passage of tropical storm Mitch), followed by a period of increased poverty after the damage has occurred, precluding the necessary infrastructure investments. Also much of the region is especially amenable to severe natural disasters. The Caribbean and Central America are commonly hit by hurricanes, while the Caribbean, Central America, and the west coast of South America (Colombia, Ecuador, Peru and Chile) are frequently the location of devastating earthquakes and volcanic eruptions. Clearly, any techniques we can use to mitigate the effects of these natural disasters can be a big help to the region.

Role of SAR in Volcano and Earthquake Hazard Mitigation

Urban areas throughout the world are usually concentrated in coastal areas. For much of Central and South America and the Caribbean, coastal areas are frequently the sites of large earthquakes and volcanic eruptions. There is much that geologists do not know about these events, in terms of predicting the timing of onset, the magnitude and frequency of events, and the detailed impact on individual urban areas. One thing we do know is that much more data is required before we can answer these complex questions. SAR is turning out to be crucial for many studies of both earthquakes and volcanoes. For volcanoes, SAR interferometry allows construction of precise DEM's, enabling accurate prediction of the direction and speed of lahars, a type of volcanic mudslide. These would seem to be less dangerous than lava flows or large explosions, but in fact lahars are often the major "killer" from volcanoes, claiming more than 20,000 souls at Nevado del Ruiz in Colombia earlier in the decade. A mudslide from a dormant volcano was also responsible for most of the casualties in Honduras during the recent passage of tropical storm Mitch.

Differential SAR interferometry on volcanoes also allows detection of pre-eruption swelling of the volcano, which many volcanologists believe can be used to help predict eruption. Such studies are of academic interest only at the present time, because it takes so long acquire imagery from the few available ground receiving stations that can routinely acquire SAR data (six month or longer waits are typical for U.S. investigators requesting data from the European Space Agency or the Canadian Space Agency). A South Florida ground station dedicated to rapid data processing and monitoring of all dangerous targets could expect to provide at least several weeks warning of major eruption to civil authorities. Also, a dedicated mapping program could provide lahar danger maps for all major targets within the Western Hemisphere within about 18 months of initiating a program.

Earthquakes are an incredible hazard for much of the Western Hemisphere, capable of causing much death and destruction. A relatively small earthquake in Los Angeles several years ago caused $20 billion in damages. An earthquake in the 1970's in Managua, the capital of Nicaragua, so severely damaged the city that parts of it have never been rebuilt. The economic devastation caused by this event is believed by many social scientists to have been an important contributing cause to two decades of civil war in this country.

Understanding earthquakes is more difficult than understanding volcanoes, and at the present time most researchers in the field do not feel it is feasible to predict earthquakes. Nevertheless, SAR can play a critical role in understanding the earthquake process and reducing hazard. Earthquakes cause characteristic ground displacement that can be mapped with differential SAR interferometry. By comparing the observed displacement pattern to patterns calculated from theory, seismologists can refine their models for this type of earth movement, in the process gaining much better understanding of the earthquake process. It turns out that SAR is probably the best tool available for this type of study, because of its complete coverage, and all weather, day/night operations. In some cases, SAR is the only way to get this kind of data, especially for the inaccessible areas of South America.

Role of SAR in Storm Damage Assessment and Civil Defense

As more people and societal infrastructure concentrate along coastal areas, the United States is becoming more vulnerable to the impact of tropical cyclones. Fur-

thermore, it is not surprising that hurricanes are the costliest natural disasters because of the changes in the population and the national wealth density or revenue. The States most affected by the cost of hurricanes (e.g. Florida, Texas, North Carolina and Maryland) have also a high total common tax revenue, which is an indicator of wealth for the state. The impact of hurricanes along the East Coast is further amplified because the people moving into these coastal areas represent the higher wealth segment of our society. Early and accurate warnings can save millions in dollars and reduce the detrimental impact of storms upon making landfall. Quick look SAR imagery can be used to assess the damage of storms after landfall and assist in directing resources to areas of immediate need.

SAR images can provide multi-faceted information on the characteristics and properties of storms. Since SAR measures the electromagnetic radiation scattered back from small ocean waves it can be used to extract information not only of the sea state, but also of the surface wind speed. The later information is very important to weather forecasters, civil defense planners and the population, because it represents the actual measure of the wind speed at heights of houses and structures. Sea state information such as the directional properties of ocean waves and their associated heights and periods are needed to predict the potential threat to coastlines. Waves impact the coastal areas in two ways: (1) coastal structures such as jetties, piers, walls, houses can easily succumb to the huge forces associated with waves; and (2) an additional storm surge is induced by the waves in elevating the nearshore water level. Radar frequencies are also sensitive to the intensity of rain and can better locate concentrations of strong rainfall within tropical storms. Such real time observations can provide better estimates of the strength and fury of tropical storms and their potential threat to people and societal infrastructure along coastal areas.

After landfall it is critical to obtain timely and accurate information on the damage of tropical storms. Because SAR imaging can occur at day and night and during inclement weather, quick looks can be available to assess the extent of beach erosion, breaches in barrier islands and destruction of housing and vegetation. Destroyed houses and structures as well as broken vegetation appears much rougher in SAR images than in their normal condition. Flooded streets and land will appear as a smooth surface because water movement will be slow.

Education: K–12, Undergraduate, Graduate Level

The Florida Space Grant Consortium (FSGC) is a voluntary association of seventeen public and private Florida Universities and Colleges, all the community colleges in the state, Kennedy Space Center Astronaut Memorial Foundation, Higher Education Consortium for Science and Mathematics, and Spaceport Florida Authority. Collectively, it serves more than 230,000 university students (100 percent of the public enrollment and approximately 75 percent of total Florida enrollments). FSGC represents the State of Florida in NASA's Space Grant College and Fellowship Program. As one of the sixteen founding Space Grant Consortia, it was formed in 1989 when the federal Space Grant program was implemented. With programs now in place in fifty states plus Puerto Rico and the District of Columbia, Space Grant now joins the Land Grant and Sea Grant Programs to form a triad of federally mandated programs addressing critical national needs in education, research and service. The FSGC is dedicated to helping Florida assume its appropriate leadership role in developing the nation's technological and scientific aerospace-related enterprises, increasing opportunities for all of Florida's citizens to contribute their energies and creativity to such enterprises thereby enabling them to share in the economic rewards and satisfactions derived from contributing to the success of these enterprises, and capitalizing upon the motivational power of space-related activities to help a new generation of children to develop the knowledge and skills necessary to lead productive lives in the context of the rapidly evolving demands of today's technological society.

The new National Center for Tropical Remote Sensing at the University of Miami would provide a unique opportunity for FSGC to achieve these goals and begin dedicated education and training of the use of space-based remote sensing and imagery. The research and education activities here would complement the concentration of expertise, businesses and industries around the Kennedy Space Center complex and provide new opportunities and infrastructure for communities and businesses in South Florida.

Furthermore, opportunities also exist to broaden the educational use of the Tropical Remote Sensing site through a K–12 education partnership with Miami-Dade County Public Schools. In particular, we envision the development of a Magnet Studies Program in Space Science that would modeled after a very successful existing program in marine science and technology in collaboration with the University

of Miami. Such a magnet program would entrain and challenge young students at an early age and help to develop their skills and learning in the field of science and mathematics. This partnership would educate first-rate students and help produce the next generation of scientists, engineers, and technology experts for the nation.

Mr. Chairman, last year you provided support to launch this vital remote sensing initiative. We hope to continue our partnership in fiscal year 2001 with the Department of Defense and seek $5 million for the Defense Applications Center of the National Center for Tropical Remote Sensing Applications and Resources. We understand what a difficult year this will be as you allocate the limited funds available. However, we believe firmly that this project is vitally important and can make a major contribution to the various missions of the Department of Defense.

Thank you for allowing me to appear before you today.

Senator STEVENS. Dr. Knobbe, Oklahoma State University and the University of Tulsa.

STATEMENT OF EDWARD T. KNOBBE, PH.D., ASSOCIATE DEAN, GRADUATE COLLEGE, OKLAHOMA STATE UNIVERSITY AND DIRECTOR, CENTER FOR AIRCRAFT AND SYSTEMS SUPPORTING INFRASTRUCTURE (CASI), ON BEHALF OF THE COALITION OF OKLAHOMA INSTITUTIONS OF HIGHER EDUCATION

Dr. KNOBBE. Mr. Chairman and members of the subcommittee, I thank you for the opportunity to submit this testimony regarding Oklahoma's distributive Center for Aircraft and Systems Supporting Infrastructure, commonly known by the CASI acronym.

I am Edward Knobbe, Associate Dean of the Graduate College at Oklahoma State University, and Director of CASI, Oklahoma's statewide research and technology consortium. I am here today representing the CASI coalition, which includes not only academics from Oklahoma's system of higher education, but also State government and members of the industry/military aerospace sector. The institutions responsible for CASI's primary operations are the University of Oklahoma system, the University of Tulsa, and Oklahoma State University and the A&M system.

I would like to speak today on behalf of the three campus request for incremental funding to the Department of Defense in order to support the $5 million CASI infrastructure enhancement initiative. CASI is a revolutionary, multi-institutional organization, combining engineering, business and science faculty from Oklahoma's institutions of higher education into focused, multi-disciplinary, project-oriented support teams. The Center's faculty and extensive research facilities serve as a reservoir of applied research capabilities and emerging technologies.

This vast infrastructure has been organized under the aegis of the Oklahoma State Regents for Higher Education to provide innovative support of the Defense Department's capital-intensive aircraft inventories. CASI's charter is to develop strategies aimed at the integration of promising new technologies with economics-based management methods. The goal is to help aircraft fleet owners substantially lower maintenance costs, promote environmental compliance, increase fleet readiness, and improve safety.

CASI seeks to serve in the role of an applied research and emerging technology insertion partner for DOD maintenance depots, especially the Oklahoma City Air Logistics Center located at Tinker Air Force Base in Oklahoma City, Oklahoma.

I wish to note, however, that CASI faculty have already begun to enter into strategic relationships and to provide technology support for DOD systems at other facilities, including the Ogden Air

Logistics Center at Utah and Warner Robins Air Logistics Center in Georgia.

Senator STEVENS. What makes you think this money is not in the budget already, this $5 million?

Dr. KNOBBE. We have not requested congressional award for this particular consortium. In fact, the State of Oklahoma does not have an award for this amount.

Senator STEVENS. You are dealing with the DOD that has just general money for this basic concept, do they not?

Dr. KNOBBE. The Air Force Office of Scientific Research has 6.1 type monies that they use to support basic research. Tinker Air Force Base has what they call 6.4 money for production programs. If you visit the Office of Scientific Research, they feel that programs that are directly supporting the near-term needs of the logistics centers are too near term and do not qualify for funding under the 6.1 program. Tinker, on the other hand, when you approach from the universities, they regard the universities as research oriented and not production oriented.

Senator STEVENS. Well, Dean, I suggest you get a letter from DOD, stating that they wish to fund this research, and we would be glad to give it to you. You want $5 million more added to their budget, as I understand it.

Dr. KNOBBE. That is correct.

Senator STEVENS. Have they approved your request?

Dr. KNOBBE. There is a lot of support from the Oklahoma City Air Logistics Center for this.

Senator STEVENS. A lot of support is not really a request. I want you to document their support saying they want this money. If you get that, we will be glad to fund it. I understand what you are doing, and I think it is a very good thing. But they have a lot of money out there in this general area, and I do not know why they cannot fund it out of what they have already got. But if they say they cannot, you get us a letter and we will be glad to work with the Senators from Oklahoma and see that you get the money.

Dr. KNOBBE. All right, very good.

Senator STEVENS. Thank you very much.

Dr. KNOBBE. Thank you very much.

[The statement follows:]

PREPARED STATEMENT OF DR. EDWARD T. KNOBBE

Mr. Chairman and members of the Subcommittee, I thank you for the opportunity to submit this testimony regarding Oklahoma's distributed Center for Aircraft and Systems/Supporting Infrastructure, commonly known by the CASI acronym.

I am Edward Knobbe, Assoc. Dean of the Graduate College at Oklahoma State University and Director of CASI, Oklahoma's statewide research and technology consortium. I am here today representing the CASI partnership, which includes not only academics from Oklahoma's system of higher education, but also state government, and the industry-military aerospace sector. The institutions responsible for CASI's primary operations are the University of Oklahoma System, the University of Tulsa, and Oklahoma State University and the A&M System. I am here today to speak on behalf of the core institutional stakeholders requesting incremental funding to the Department of Defense to support the $5 million CASI infrastructure enhancement initiative. Funding of this request will serve to substantially improve and integrate University of Tulsa, the University of Oklahoma System, and Oklahoma State University and the A&M System faculty and research facilities for the purpose of supporting the Department of Defense's aircraft logistics centers and maintenance depots.

The Center for Aircraft and Systems/Supporting Infrastructure is a revolutionary, multi-institutional organization, combining engineering, business, and science faculty from Oklahoma's institutions of higher education into focused multidisciplinary project-oriented support teams. The Center's faculty and extensive research facilities serve as a reservoir of applied research capabilities and emerging technologies. This vast infrastructure has been organized, under the aegis of the Oklahoma State Regents for Higher Education, to provide innovative support of the Defense Department's capital-intensive aircraft inventories. CASI's charter is to develop strategies aimed at the integration of promising new technologies with economics-based management methods, with a goal of assisting aircraft fleet owners to substantially lower maintenance costs, promote environmental compliance, increase fleet readiness, and improve safety. The Center has positioned itself to support aircraft logistics centers and maintenance depots across the nation. In particular, CASI, seeks to serve in the role of an applied research and emerging technology insertion partner for the Oklahoma City Air Logistics Center (OC–ALC), located at Tinker Air Force Base in Oklahoma City, Oklahoma. I wish to note, however, that CASI faculty have already begun to enter into strategic relationships and to provide technology support for DOD systems maintained at sites outside of Oklahoma, including the Ogden Air Logistics Center located at Hill Air Force Base in Utah and the Warner Robins Air Logistics Center, located at Robins Air Force Base in Georgia.

Summary of the Problem:

Modern aircraft fleets, both civilian and military, have become increasingly expensive to develop, maintain, and operate. Two pressing issues related to aircraft maintenance costs are in need of immediate attention. The first issue is that of aging aircraft inventories, where fewer new aircraft are presently being built and the existing fleets must be retained in service periods that, in some cases, dramatically exceed the original design lifetime. In the 1997 National Research Council report entitled Aging of U.S. Air Force Aircraft, the reporting committee indicated that "The U.S. Air Force has many old (20 to 35+ years) aircraft that continue to function as the backbone of the total operational force. . . ". The C/KC–135, DOD's primary air-to-air refueling platform, is an example of an aging aircraft fleet. While the original design lifetime of this aircraft was reportedly less than 20 years, the average age of the fleet today is more than 38 years. According to recent reports, the C/KC–135 fleet is scheduled to be retained in the operational inventory until the year 2040, when the average aircraft age will approach 80 years. Although maintenance costs of these aircraft are rapidly increasing, the total cost of fleet replacement (estimated to exceed $40 billion for the existing fleet of more than 600 aircraft) prohibits serious consideration of this alternative.

The second issue relates to aircraft maintenance and logistics centers is the need to comply with increasingly stringent environmental regulations. DOD needs to decrease or eliminating hazardous materials, especially those derived from painting/depainting operations in order to meet EPA and OSHA regulatory requirements. The Oklahoma City Air Logistics Center, for example, is located in an air-quality non-attainment county. To date, the base has not had to comply with the provisions in the appropriate Control Techniques Guidelines (CTG) is that the basis for the non-attainment rating is being challenged in the courts and the court has ruled that the standard is not measurable and thus not enforceable. EPA is expected to appeal this decision and, if EPA wins, the base will be forced to comply with the provisions of the CTG. In addition, the National Emission Standards for Hazardous Air Pollutants (NESHAP) provision has recently been enacted. This, coupled with the CTG issues, places Tinker Air Force Base in serious danger of being unable to comply with future VOC restrictions. As a result, Tinker Air Force Base has inserted a large budgetary request for the procurement, installation and maintenance of VOC abatement equipment over the next several years. The environmental management groups at most logistics centers, including the OC–ALC, strongly prefer the development of alternate non-chemical processes to reduce VOC emissions and, importantly, to reduce the volume and expense associated with hazardous waste stream handling and disposal. The OC–ALC needs to substantially reduce emissions to expand operations and gain workload without increasing total emissions for the base.

The Solution:

Military aircraft program offices and logistics facilities, such as the Oklahoma City Air Logistics Center, rely extensively on aircraft original equipment manufacturers (OEMs) and secondary support industries to establish and update aircraft maintenance practices. While continuing secondary and OEM industrial support is a critical aspect of fleet sustainment, an independent source of alternative approaches and new technology insertion is essential to ensure the continued develop-

ment of optimal, integrated maintenance methodologies. Oklahoma's research universities can provide the technology infusion and assist in the development of economics-based management strategies that are needed to substantially augment today's aircraft and support systems infrastructure.

Beginning in 1999 with seed funding provided by the Oklahoma State Regents for Higher Education, Oklahoma's statewide consortium of research institutions, lead by Oklahoma State University and the A&M System, the University of Oklahoma System, and Tulsa University, formed the Center for Aircraft and Systems/Support Infrastructure. CASI is the first academic entity of its type in the nation, focusing on the development of a state-wide, multidisciplinary approach for conducting applied research, modeling, technology insertion, and engineering support activities for the aircraft maintenance and sustainment communities. Working in close collaboration with its partner affiliates, CASI institutions have begun to provide the stakeholder community, especially the OC–ALC, with integrated solutions to some of the most challenging problems currently facing the military/industrial aerospace complex. The statewide CASI consortium is prepared to provide substantially expanded service to the OC–ALC and to all other DOD logistics centers and maintenance depots. In order to facilitate the extension of new technologies into maintenance facility operations, however, appropriations are needed to enhance our existing infrastructure.

There are numerous examples of relevant expertise areas throughout Oklahoma's Higher Education System. Among them are included:

—High performance materials, aircraft coatings, and ultra-precision surface finishing methods.
—Specializations in mechanical & aerospace engineering in areas such as cyclic fatigue analysis and stress-corrosion cracking.
—Simulation, advanced forecasting and modeling, especially in areas such as system reliability, logistics, and physics of failure.
—Economic best-practices for maintaining aircraft fleets, including life-cycle cost benefit analysis, optimal repair vs. replacement strategies, and enhanced readiness.
—Hazardous waste stream abatement, remediation, advanced environmental monitoring methods, and pollution prevention technologies. Evolving technologies include chromate replacement and VOC/HAP reduction from aircraft paint/depaint operations.
—Occupational health and bioengineering.
—Environmental monitoring, environmental management, and multi-dimensional visualization methods using geographic information systems.
—Industrial engineering (e.g., man-machine studies, resource allocation, process management).
—Real-time aircraft health assessment.

Example CASI Project Summaries

During the past fiscal year, the statewide CASI consortium established a cost-share program designed to stimulate the establishment of new collaborative relations between the Oklahoma City Air Logistics Center and Oklahoma researchers. A unique state sponsorship program, underwritten by the Oklahoma Experimental Program to Stimulate Competitive Research office, the Oklahoma State Regents for Higher Education, and the research institutions of Oklahoma, has recently resulted in the establishment of several new multidisciplinary program areas. The state cost share program, with substantial funding provided by Oklahoma EPSCoR, has fostered several new technology insertion activities with collaborating entities at the OC–ALC. I provide hereinafter a summary of a few of these projects:

—The Integration of GIS, Remote Sensing, and Weather Technologies to Develop a 4D Real-time Air Pollution Management System.

The immediate objective of this 1-year project is to provide a tool for 4D [real-time] visualization and analysis of Tinker Air Force Base [TAFB] air emission units, controls, emission points, and pollutant plumes released from those emission units using real-time weather information and user-defined emission rates. The overall, multi-year objective is to provide a truly real-time system that allows for near continuous monitoring and analysis of emissions and their dispersions dictated by highly localized weather conditions and thus allow for daily management of pollution emissions. Such real-time capabilities will enable proactive scheduling [and increase] of installation workload while insuring emission compliance with federal, state, and local air quality standards.

—Operation and Validation of Fourier Transform Infrared Spectrometer and Spectral Data

In production and maintenance operations at Tinker AFB, industrial wastewater streams are generated which contain hazardous air pollutants (HAPs). These HAP-containing wastewater streams result from both direct and indirect contact with chemical compounds via chemical depainting operations, chemical cleaning processes, and electroplating operations. The HAPs in the wastewater are treated at the industrial wastewater treatment facility in open surface impoundments and collection systems. Some of these collection and treatment steps result in the release of HAPs to the ambient air. Assessment (identification and quantification) of hazardous air pollutant emissions to the ambient atmosphere is necessary to ensure regulatory [federal, state, and local] environmental compliance.

—Metals Treatment Optimization at the OC–ALC Industrial Wastewater Treatment Plant

The objective of this project is to optimize the metals treatment process at the industrial wastewater treatment plant [IWTP]. The Oklahoma City Air Logistics Center produces a wide variety of aqueous waste streams which require significant treatment prior to discharge. These waste streams include oils and greases, heavy metals, volatile organic chemicals, and biodegradable organics. Much of this treatment is performed at the sites industrial waste treatment plant, which includes primary clarification, oil-water separation, flow equalization/stabilization, heavy metals treatment/removal, etc. The need to improve the performance of metals treatment system has been identified as an important need at the OC–ALC. The primary problem to be addressed is the infrequent exceedance by molybdenum [including chromium, cadmium, nickel, and zinc] in the IWTP effluent, although other opportunities for improvement of the IWTP will also be considered.

—Topcoat Delamination in C/KC–135 Wing Fuel Cells

The C/KC–135 aircraft has been experiencing delamination of topcoat materials over the past few years resulting in premature blockage of fuel filters and, in some cases, engine flameout. Topcoat failure is particularly problematic, as the delamination mechanism is not currently understood. Presently, the C/KC–135 system program office has adopted the lowest short-term risk solution, e.g., removal of all topcoat materials within the wing fuel cells, leaving the surfaces with only a chromate-based surface pretreatment to prevent corrosion initiation and growth. The long-term effectiveness of this approach, however, is not known. Certain paint-stripping methods, such as those employing high pressure water, may compromise the long-term service lifetime of the affected skin sections by causing extensive water intrusion into cracks, seams and joints. The topcoat delamination project will focus on: (1) an understanding of the mechanism of topcoat peeling in C/KC–135 wing fuel cells; (2) assessment of factors that could initiate or accelerate corrosion in the wing cells; and (3) materials and process recommendations for topcoat and sealant treatment and/or replacement.

Summary

It is clear that the types of projects being developed through CASI do not fall into the traditional university basic research areas funded by so-called 6.1 monies. Instead, CASI tends to focus on the technology insertion and demonstration/validation activities normally associated with 6.2- and 6.3-type funding. The statewide CASI consortium is prepared to provide substantially expanded service to the OC–ALC and, by extension, to all other DOD logistics centers and maintenance depots. In order to facilitate the insertion of new technologies into maintenance facility operations, however, appropriations are needed to enhance our existing infrastructure. We respectfully request funds to promote continuation and expansion of the services CASI presently provides to this nationally important community.

Thank you for your consideration of this request.

OKLAHOMA STATE UNIVERSITY,
Stillwater, Oklahoma, May 12, 2000.

The Honorable TED STEVENS,
Chairman, Subcommittee on Defense Appropriations, U.S. Senate, 522 Hart Senate Office Building, Washington, D.C. 20510.

DEAR SENATOR STEVENS: I would like to thank you once again for the opportunity to testify before the Senate Subcommittee on Defense Appropriations this past May 3. It was truly an honor to appear in that setting, and to have a chance to participant in the legislative process.

As you may recall, I appeared before your Committee to provide testimony regarding the CASI consortium, which seeks to leverage in-house research facilities and engineering support expertise from within Oklahoma Universities in support of DOD logistics and maintenance center operations. CASI is presently targeting the near-term needs of the Oklahoma City Air Logistics Center (OC–ALC), located at Tinker Air Force Base in Oklahoma City. Ultimately, our goal is to develop collaborative technology support and engineering activities across all of DOD's maintenance and logistics centers.

During my testimony, you suggested that it would be helpful if the Committee could receive a DOD letter of advocacy for a congressional award to CASI. It is my information that Mr. Wayne Jones, Technology Center Chief Engineer at OC–ALC, is preparing such a letter at this time. I anticipate that a copy of Mr. Jones letter will be available by 17 May. Please do not hesitate to contact me if additional materials are needed. Thank you once again for your time and consideration in this matter.

Sincerely,

EDWARD T. KNOBBE,
Assoc. Dean, Graduate College and Director of the Environmental Institute.

DEPARTMENT OF THE AIR FORCE,
HEADQUARTERS, OKLAHOMA CITY AIR LOGISTICS CENTER (AFMC),
Tinker Air Force Base, Oklahoma, May 15, 2000.

EDWARD T. KNOBBE,
Assoc. Dean of the OSU Graduate College and Director, Center for Aircraft and Systems/Support Infrastructure, 003 Life Sciences East, Oklahoma State University, Stillwater, OK 74078.

OC–ALC/TIE
3001 Staff Drive, Ste T67,
Tinker AFB, OK 73145–3038.

SUBJECT: CASI's Request for Congressional Appropriation Fiscal Year 2001

The Oklahoma City Air Logistics Center (OC–ALC), at Tinker AFB, OK, provides depot-level repair, overhaul, and maintenance for a variety of Air Force weapons systems, including aircraft, cruise missiles, jet engines, and related commodities. We understand the multi-institutional consortium Center for Aircraft and Systems/Supporting Infrastructure (CASI) has requested a congressional appropriation of $5,000,000 in fiscal year 2001. This appropriation would be used for CASI to work cooperatively with OC–ALC in technology areas related to our mission.

Past discussions concerning collaborative government—education efforts make it clear CASI is well positioned to support the various missions of the OC–ALC, especially in the areas pertaining to weapons system sustainability, reliability, and maintainability. Other areas related to safety, occupational health, and environmental compliance assurance will also benefit from the expertise CASI can bring to the table.

For the record, let it be known that we strongly support continued development of the partnership between CASI and OC–ALC and enthusiastically advocate the requested congressional award.

WAYNE JONES,
Center Chief Systems Engineer.

Senator STEVENS. We will now turn to Harry Armen, Senior Vice President, American Society of Mechanical Engineers.

STATEMENT OF HARRY ARMEN, SENIOR VICE PRESIDENT, AMERICAN SOCIETY OF MECHANICAL ENGINEERS

Mr. ARMEN. Good morning, Mr. Chairman.

Senator STEVENS. Good morning.

Mr. ARMEN. My name is Harry Armen, and I serve as Senior Vice President for Public Affairs at the American Society of Mechanical Engineers. I have 35 years of industrial experience in defense aerospace engineering, research and development. Much of my work has been supported by DOD.

Our written testimony cites all the facts and figures regarding the President's budget request and what Congress appropriated last year, so I will not go into those details. My oral testimony represents an early warning system associated with the most important resource the defense and civilian aerospace infrastructure of this Nation has. And that is the talents of its engineers and scientists.

Last year, your subcommittee displayed great leadership and foresight in providing increased funding for DOD's science, engineering and technology programs by $1 billion—a move that we very much applaud—and one called for by the fiscal year 2000 Authorization Act. However, your leadership will once again be needed this year. Also, last year, a bipartisan group of 76 Members of Congress and 20 Senators warned the President, and I quote: The continued long-term erosion of defense science, engineering and technology funding will have a devastating impact on the future capabilities of the armed forces of the United States. Closed quote.

Despite that warning, the administration once again has refused to request increases for defense science, engineering and technology, with the exception of a modest increase this year for basic research. In the 1998 report, the Defense Science Board concluded that ideally, about 3.5 percent of the total defense budget should consistently be invested in science, engineering and technology. Thanks to strong support by your subcommittee and the rest of Congress, the fiscal year 2000 level is nearly 3 percent of the total DOD spending. We urge Congress to continue this positive trend in fiscal year 2001.

What are the consequences of neglect? Consistent declines in defense-funded research and development over the past 7 years have resulted in the disruption of the process that generates highly skilled, highly motivated scientists and engineers essential for today's and tomorrow's high-tech defense industry. These people have been the mainstay of our military strength and have contributed significantly to our current economic prosperity.

As defense research and development budgets are reduced, the job market for highly skilled scientists and engineers in the defense industry shrinks, leaving little incentive for college students to choose careers in these fields. Simply put, reduced R&D funding equals fewer employed graduate students who are the future DOD research and development (R&D) work force both in the private sector as well as for the defense agencies.

The long-term difficulty that I worry about, and that you should be concerned about, is how are we to attract and retain the best and brightest young people to work in the defense industry. It requires excitement. That means planning and thinking about the future, about building systems that push the edge of the envelope, systems that have never been done before, systems that make a difference.

What I am imploring you to do is to invest in research and development to generate that excitement. You must have teams of people thinking about the future, about doing new things. Maybe you do not put all the new ideas into production, but that ought to be a part of your strategy. If you do not design and build new systems, then someday, when you need something new, there will be nobody

there who knows how to do it. There will be no one to develop tomorrow's technologies, like advanced radars, new avionics systems and advanced composite materials.

Why? Because as DOD cuts back its research, the talented men and women who do have the knowledge and who do have the ability and the drive are headed to the dot com companies, to the start-ups, where they can be excited about the possibilities of using cutting-edge technologies to make a difference while making far more money. We are literally experiencing a brain drain from the defense industry to the commercial sector. Reversing this trend will be a very difficult task in the midst of a future national security crisis.

I hope the concerns I have conveyed to you, concerns from an industrial point of view, from a perspective where the science, engineering and technology funds are put to use in the labs, and on the systems we build for the services will resonate with you. If you on the subcommittee and this Congress continue to realize the importance of R&D to the future health of our military, the concerns I spoke about earlier can be appropriately addressed. Thank you very much.

[The statement follows:]

PREPARED STATEMENT OF HARRY ARMEN

Mr. Chairman and Members of the Subcommittee: Thank you for the opportunity to appear before your Subcommittee to present our views on the importance of the science and technology accounts at the Department of Defense. Out of all of the engineering disciplines, mechanical engineering claims the largest share of DOD engineering research funding, at 23 percent.

ASME International was very pleased with the support that your Subcommittee provided for defense research and development in the fiscal year 2000 budget, and would like to take this opportunity to express our appreciation for your efforts.

The 125,000-member ASME is an international engineering society focused on technical, educational, and research issues. It conducts one of the world's largest technical publishing operations, holds over 30 technical conferences and 200 professional development courses each year, and guides the setting of many industrial and manufacturing standards and codes. Our Inter-Council Committee on Federal Research and Development assesses federal investment in R&D, examines the President's budget request, and to presents views to the Congress on agency R&D budgets.

Role of Research at the Department of Defense

Over the past decade or so, an increasing number of peacekeeping deployments to various parts of the globe, and steadily declining budgets, have combined to put a severe strain on the ability of the Department of Defense to appropriately plan for its future technology needs through investments in basic and applied research. This situation is viewed by the DOD Task Force as extremely serious, one that could jeopardize the ability of the United States to maintain air and ground superiority over adversaries in the coming decades of the 21st Century.

As engineers know well, the research of today, particularly the basic research of today, largely determines the technological advancements of a decade or more from now. Research takes a lot of time to bear fruit. Take, for example, technological advancements of such military equipment as the F–117A Stealth Fighter, or the B–2 Bomber, or the "smart" bombs, all of which were used so successfully in the Gulf War and in Kosovo. The research that led to such technological wonders was funded by the Department of Defense in the 1960s and the 1970s, yet bore fruit only in the early 1990s.

The repercussions of a shortsighted research policy today will inevitably extend in the future to the private sector as well. Without question, America's civilian aviation industry has benefited greatly from the strength and technological advancement of the U.S. military. In short, the situation facing the United States in 2020 could be a technologically deficient military that resulted in a sub-par civil aviation industry. Neither scenario is obviously in the interest of Congress or the nation.

Our testimony today will focus primarily on the Technology Base program at the Department of Defense, which is comprised of the Basic Research account and the Applied Research account, known to you as the 6.1 and 6.2 accounts. This program is widely referred to as the "seed corn" for our nation's future military capabilities. We come before you today gravely concerned that the administration and the Department of Defense are nibbling at that seed corn, at the expense of our nation's future military preparedness.

An Air Force Example

In a report released earlier this year, the White House laid out its "National Security Strategy for a New Century." While the report did not include a specific section on science and technology, several areas of the report refer to the ability of the future military to be technologically prepared. In the section of the report entitled "Advancing U.S. National Interests," under the heading "Military Activities," the administration states, "We will maintain our technological superiority in space systems, and sustain a robust U.S. space industry and a strong, forward-looking research base." The same section also states that, "Investment in research and development while closely monitoring trends in likely future threats are important elements of our transformation efforts."

We are concerned that the administration's budget this year does not reflect the noble goals outlined in that report. For example, the Air Force S&T program would be reduced in 6.1, 6.2, and 6.3, by a total of $97 million from current funding levels. This reduction continues an unfortunate trend that has seen the Air Force S&T budget decline 53 percent in real terms over the past decade. That rate is far greater than the overall decline in defense spending (30 percent). Included in this reduction is advanced aeronautics R&D with the Air Force Office of Scientific Research, whose budget would decline from $216 million in fiscal year 2000 to $206 million next year, if the budget request were followed.

The Air Force and NASA are responsible for ensuring that the United States "maintains—technological superiority in space systems," as stated in the White House National Security Strategy. Unfortunately, NASA's budget has been reduced over the past several years, and the Air Force's S&T budget is constantly under attack, not only from the administration, but also within the Department of Defense and within the Air Force itself.

The U.S. aerospace industry, which is largely DOD funded, has dramatically declined just in the past decade. Where there once were eight prime airframe contractors, now there are barely three. The companies that built the majority of our military aircraft have gone, and with them much of the spirit of innovation that led the U.S. to technological prominence in aerospace. The shortsighted approach that has been apparent in the Air Force S&T budget requests since 1993—and those of the other services—must not be allowed to continue if the U.S. intends to continue its technological preeminence into this century.

Congress Calls for Increases

We are not alone in this view. Congress itself, in the Fiscal Year 2000 National Defense Authorization Act, reiterated the call made in fiscal year 1999 for annual defense science and technology budget increases of at least 2 percent above inflation. In a 1999 letter to the President, a bi-partisan group of 76 Members of Congress and 20 Senators warned that the "projected levels of spending are insufficient to ensure that the defense technology base remains strong and capable of providing the necessary foundation for the national defense." They went on to state that the "continued long-term erosion of defense science and technology funding will have a devastating impact on the future capabilities of the armed forces of the United States." The lawmakers urged the President to increase spending on defense research by the target amount set in the fiscal year 1999 authorization.

Furthermore, in a 1998 report, DOD's well-respected independent advisory group, the Defense Science Board, concluded that ideally about 3.5 percent of the total defense budget should consistently be invested in science and technology. Thanks to strong support by the Congress, the fiscal year 2000 S&T level is nearly 3 percent of total DOD spending. We urge Congress to continue this positive trend in fiscal year 2001.

The Technology Base Budget Request for Fiscal Year 2001

The Defense Basic Research Account, the so-called 6.1 account, received its first increase in seven years in fiscal year 2000, and that was only because of the leadership displayed by your Subcommittee in dramatically increasing the President's request. We are heartened that the administration has decided to build upon that increase for fiscal year 2001, requesting an increase of $56 million. Not dramatic, but certainly an improvement from previous years. We urge the Subcommittee to, at the

least, honor the President's request for this program and, ideally, to increase that amount. After nearly a 10 percent decline, in real terms, over the past seven years, we have a lot of catching up to do in this area. It is only through a robust 6.1 program that innovative, cutting-edge 6.2 programs can occur in the future, as one account naturally follows another.

The situation with the Defense Applied Research account, the so-called 6.2 account, is not nearly as promising, due in large measure to many years of neglect in the 6.1 account. After your Subcommittee wisely increased the 6.2 account nearly $500 million over the administration's request in fiscal year 2000, the administration has once again made applied research an also-ran in its defense research priorities, proposing a decrease of $266 million from the fiscal year 2000 level. These decreases will not be made up by industry, as some have erroneously assumed in the past. No, Congress must again step forward to make the statement that applied research in the Department of Defense is a priority to maintain the future superiority of our nation's armed forces.

The benefits of research, and the consequences of neglect

The benefits of defense-funded research extend far beyond simply maintaining U.S. military superiority, as vital as that is. Research within the Department of the Air Force on highly efficient gas turbine engines has, for example, been transferred successfully for use in U.S.-built commercial aircraft, in U.S.-built commercial ships, and for emergency electric generation in critical buildings.

It is important to note that serious declines in defense-funded research and development have resulted in a disruption of the cycle of highly skilled, highly motivated scientists and engineers who have been the mainstay of our military strength, and who also have contributed significantly to our current economic prosperity. As research and development budgets are reduced, the job market for these highly skilled scientists and engineers shrinks, leaving little incentive for college students to choose careers in these fields. Simply put, reduced R&D funding equals fewer employed graduate students, who are the future DOD R&D workforce. The unmistakable result is already being manifested in the dramatic increases in foreign high-skilled worker visas being requested by business in the past couple of years, and being granted by the Congress. Add to the mix the fact that irreplaceable facilities are being destroyed to reduce corporate overhead costs, and it is easy to see where we are headed if we don't take steps now to reverse the trend.

Furthermore, the defense agencies have been the single largest source of federal funding for engineering research at the nation's universities. The decline in this support has led many engineering departments to seek other sources of support, thereby threatening the historically important contributions of the nation's universities to the U.S. defense technology base. A severe enough disruption, such as could conceivably occur if defense R&D funding continues to be neglected, could result in the U.S. losing its formidable technological edge.

Thank you for the opportunity to offer testimony regarding the science and technology budget request of the Department of Defense. ASME's DOD Task Force will be pleased to respond to requests for additional information on this or other aspects of our nation's defense posture.

Senator STEVENS. Thank you very much. We will do our best to continue what we have started in the past, but I do not know how successful it will be. We have got a $4 billion increase in the budget, but it has already been absorbed by health care and by the problems of overseas deployments. So we will be hard pressed to continue that billion dollars, but we will do our best.

Mr. ARMEN. As a manager of R&D activity, I am living this experience where the young people are literally leaving the industry.

Senator STEVENS. They are leaving us, too. Those dot com's are hiring all our people, too, Doctor.

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

Senator STEVENS. Thank you very much.

Our next witness is Mike Duggan, Deputy Director, National Security-Foreign Relations Commission, The American Legion. Good morning, Mike.

STATEMENT OF MIKE DUGGAN, DEPUTY DIRECTOR, NATIONAL SECURITY-FOREIGN RELATIONS COMMISSION, THE AMERICAN LEGION

Mr. DUGGAN. Good morning, Mr. Chairman. Good to see you again. Thank you very much for the opportunity to allow us to appear. And thank you for scheduling this hearing, sir. We are extremely grateful to you and your subcommittee for your continuing efforts on behalf of the men and women of the armed forces to improve their quality of life, readiness and modernization.

As National Commander Alan Lance has noted in his letter to you, he has travelled extensively and has visited with young service members as well as military retiree veterans stateside, overseas and, frankly, at sea. In his view, no issue has a greater priority among these patriotic Americans than maintaining a strong national defense. But they are also deeply concerned about the well-being of their families as well as the pace of the operations tempo.

Frankly, Mr. Chairman, the Legion has believed for years that the armed forces have been under-resourced. We have recommended that defense budgets be more on the order of 3 to 4 percent of the gross domestic product rather than about the 2.9 or 3 percent of the gross domestic product, as is now the case, which is basically at the same levels that this country experienced just before Pearl Harbor was attacked.

As mentioned, despite last year's pay raises, the military pay continues to lag behind the private sector during this period of a robust economy. The basic allowance for housing (BAH) rates, as we mentioned, have to be fixed, we believe they will be fixed, so as to reduce and perhaps eliminate out-of-pocket housing expenses. With nearly 60 percent of our military being married, with families, a lot different than it used to be, health care continues to be a major concern for active duty personnel, as well.

For many, the promise of receiving health care while on active duty continues to be a major reason for entering into and serving in the armed forces today. As we know, TRICARE requires considerable improvement. And as you noted, sir, it is experiencing severe cost overruns. I think that is the phrase, "cost overruns."

This budget proposes to eliminate TRICARE co-payments made by military dependents. And, frankly, we are very grateful for that. But there are no provisions addressing health care for military retirees, and I will not go into that in much detail except to mention that military retirees have been the armed forces most effective recruiters over the years. And many of these have believed, at least the perception, that lifetime health care was promised in exchange for decades of service to the Nation.

The Legion is in support of extending the pharmacy benefit to all Medicare-eligible military retirees. But we also believe that all military retirees including Medicare-eligible retirees and their dependents, should have access to not only military health care, but also, to a larger extent, to the Veterans Administration (VA) medical centers and pharmacies. And recognizably, that is a different side and we are approaching that through the VA committees, as well. So basically we are talking about perhaps trying to expand access to military retirees, perhaps using their TRICARE benefits in the VA medical centers.

Mr. Chairman, this concludes the American Legion's statement. Thank you very much.

[The statement follows:]

LETTER FROM ALAN G. LANCE, SR., NATIONAL COMMANDER

THE AMERICAN LEGION,
1608 K STREET, N.W.,
Washington. D C., May 3, 2000.

Honorable TED STEVENS,
Chairman, Senate Appropriations Committee,
S–128, The Capitol, Washington, DC.

DEAR CHAIRMAN STEVENS: I regret I am unable to attend the hearing today to personally express The American Legion's views on the Department of Defense appropriations for fiscal year 2001. While my travel schedule precludes my appearance before you, my resolve to put forth The American Legion's adopted positions in support of a strong national defense is, in no way, diminished.

The American Legion's written statement on fiscal year 2001 Defense Appropriations is included with this letter. It expresses The American Legion's positions on national security, which were unanimously adopted by delegates to our National Conventions in 1998 and 1999. Foremost among these positions is our advocacy of devoting between three and four percent of the Gross Domestic Product on national defense. Although a fiscal year 2000 supplement with defense funds was not adopted in the Senate, the increased funding added to the fiscal year 2001 defense authorizations bill is certainly appreciated.

As you and your colleagues deliberate Defense Appropriations for fiscal year 2001, I strongly urge you to substantially increase military spending, and military readiness. The Administration's request of $291.1 billion is clearly and wholly inadequate. It does not effectively address military readiness, modernization or personnel issues, nor adequately improves quality of life concerns. This is especially true with respect to health care for military men and women, their families as well as Medicare-eligible military retirees and their dependents.

In my first seven months at the helm of The American Legion, I have traveled over 100,000 miles and visited with the young service members serving in Kosovo, Hungary, Germany and Bosnia. I have spent time at sea aboard the U.S.S. *George Washington* visiting with sailors and airmen, mechanics, cooks and pilots. I have spoken with service members, as well as veterans, throughout the United States. No issue has a greater priority among those patriotic Americans than maintaining a strong national defense. However, they are also deeply concerned about the wellbeing of their families and the pace of the operations tempo.

One of the alarming aspects of having deployed our forces thirty-six (36) times in the last seven (7) years, and having troops in one hundred thirty-two (132) nations around the world is the fact that we are destroying our National Guard and Reserve components in the process.

Our experts advise that we need a total of 1.8 million military personnel on active duty to fulfill the mission requirements for our present foreign policy/national defense imperatives. We presently have approximately 1.37 million active duty enlisted personnel available at any given time. We are making up the difference by increasing operations tempo resulting in recruitment and retention complications and by over-utilizing our National Guard and Reserve components. In time, these deployments will result in a significant and substantial undermining of our National Guard forces, as well as the Reserves. I have spoken with many Active Duty, Guard and Reserve forces and I am conveying to you the unvarnished distillation of hundreds of hours of conversations.

Mr. Chairman, if America is to continue as the world's remaining superpower, it must operate from a position of strength. This strength can only be sustained through the adequate funding of the armed forces. Thank you for your continued leadership and support of America's military and their families.

When I am in Washington, DC I would welcome the opportunity to meet with you to share my thoughts on America's national defense.

Sincerely,

ALAN G. LANCE, SR.,
National Commander.

PREPARED STATEMENT OF D. MICHAEL DUGGAN

Mr. Chairman, The American Legion is grateful for the opportunity to present its views regarding the Department of Defense (DOD) fiscal year 2001 defense appropriations. The American Legion values your leadership in assessing and appropriating adequate funding for quality of life, readiness and modernization of the Armed Forces. As history has demonstrated, it is important for the President and Congress to continue to uphold their constitutional responsibilities to provide for the "common defense" of the American people in a highly uncertain world.

Mr. Chairman, The American Legion and the Armed Forces owe you and this Subcommittee a debt of gratitude for the strong support of military quality of life issues. Nevertheless, this assistance is needed now more than ever. Positive Congressional action is needed in this budget to overcome old and new threats to retaining the finest military in the world. Servicemembers and their families have endured physical risks to their well-being and livelihood, substandard living conditions, and forfeiture of personal freedoms that most American civilians would find unacceptable. Worldwide deployments have increased significantly, and a smaller force has had to pick up the tempo with longer work hours and increased family separations.

With the end of the Cold War, the clear and identifiable threat posed by communism and the Soviet Union no longer exists. Instead, the United States has been faced with a myriad of threats and challenges which appear more perplexing, complex and difficult. Serious regional threats continued to include those in the Balkans, North Korea and the ever-growing threat of the People's Republic of China. A vehemently defiant Iraq and Iran pose continuing threats to vital oil reserves in the Persian Gulf. Additionally, the United States faces the non-traditional threats of increasing nuclear proliferation, development of chemical and biological warfare weapons by rogue nations or groups and the challenges posed by international terrorism.

The President's defense budget request for fiscal year 2001 is $291.1 billion, and reflects a small real spending growth and does not appear to be built on a foundation of assumed savings and economic assumptions as was the administration's fiscal year 2000 budget. Unfortunately, serious mismatches between strategy, forces and resources are not improving. The consequent budgetary shortfalls, estimated at $15.5 billion for fiscal year 2001 by the Joint Chiefs of Staff, are being reflected in debilitating quality of life, readiness and modernization problems that the military forces continue to confront. After years of decline, the administration has under-resourced its defense budgets which, according to House Armed Services Committee Chairman Floyd Spence, "will take a decade or more of real growth in defense spending to catch up."

The President's budget request for fiscal year 2001 totals over $1.80 trillion and allocates 15 percent for defense and well over 50 percent for social programs and entitlement spending. The fiscal year 2001 Defense budget represents an increase in defense spending, but it is still 40 percent below the 1985 Reagan budget which eventually led to the end of the Cold War. In 1990, the United States was spending 5.1 percent of the gross domestic product on defense.

According to Chairman Spence, the nation is going to need to spend a lot more money than the Administration is requesting and projecting to spend in the future in order to maintain even current military capabilities. Whatever the level of annual operational shortfalls, annual modernization shortfalls will be significantly greater. In this regard, it is important to note that while the Administration's fiscal year 2001 procurement request has been advertised as finally reaching the five-year old $60 billion target, it was only with the help of some new accounting such as the inclusion of submarine overhaul funds in the procurement accounts for the first time.

American Legion National Commander Alan Lance recently visited American troops in Europe, Bosnia and Kosovo. He also visited sailors aboard the aircraft carrier U.S.S. *George Washington*. High operational tempo, manning shortages and inadequate health care head the list of complaints. The American Legion receives numerous letters and emails from military retirees and their dependents citing the string of "broken promises"—mainly access to military health care. Medicare-eligible military retirees are prohibited from enrolling in the TRICARE program. The TRICARE system requires considerable improvement. The American Legion is supportive of a pharmacy benefit and extending the two pilot programs for Medicare-eligible retirees and dependents, namely, TRICARE Senior Prime and FEHBP 65. The American Legion believes that all military retirees including Medicare-eligible retirees and their dependents, should have access to both military and VA medical facilities and pharmacies.

The American Legion believes that operational tempo and continued deployments must be reduced, and military pay must be on par with the civilian sector. Military retirees and their dependents are the Armed Forces' most effective recruiters. Recently, The American Legion held a meeting of its Policy Coordination and Action Group (PCAG). This PCAG meeting was prompted by DOD and media reports that the Armed Forces had been showing signs of difficulty in attracting qualified individuals to volunteer for military service and for seasoned servicemembers to reenlist. Allied to these issues are perceptions of declining military quality of life features to include military health care and readiness, as well as the impact of increased operating tempos and underresourced defense budgets on recruiting, retention and readiness.

What needs to be done? The American Legion recommends that the following steps be implemented immediately:

—Continued quality of life improvements to include military pay raises; equitable increases in Basic Allowances for Housing and Subsistence; improved military health care, improved benefits under the Montgomery G.I. Bill and other quality of life features.

—Defense spending as a percentage of Gross Domestic Product should be maintained between 3 and 4 percent annually.

—The Quadrennial Defense Review (QDR) must be reevaluated. It does not provide the forces or the defense budgets to fight two nearly simultaneous major regional conflicts while conducting peacekeeping operations.

—Force modernization for the Services must be realistically. The strategy-resources mismatch needs to be eliminated.

—The National Guard and Reserves must be realistically manned, structured, equipped and trained, fully deployable and maintained at high readiness levels. These forces are indispensable to America's national defense.

QUADRENNIAL DEFENSE REVIEW

Since the collapse of the Soviet Union in 1991, the United States has conducted three substantial assessments of the strategy and force structures of the Armed Forces necessary to meet the national defense requirements of this Country. The assessment by the Bush Administration ("Base Force" assessment) and the assessment by the Clinton Administration ("Bottom-Up Review") were intended to reassess the force structure of the armed forces in light of the changing realities of the post-Cold War world. Both assessments served an important purpose: to reevaluate the military posture of the United States. The pace of global change requires a new, comprehensive assessment of the current defense strategy for the 21st century.

The American Legion continues to support the force structure proposed by the Base Force strategy. The United States must maintain 12 active Army combat divisions, 12 Navy aircraft carrier battle groups, 15 active Air Force fighter wings and three Marine Corps divisions and a total manpower strength of at least 1.6 million. The American Legion supports the two-war strategy. If America is drawn into a war with one regional aggressor, another could be tempted to attack its neighbor. The American Legion believes such a strategy should be threat-based rather than budget-driven. This strategy must employ a robust force structure and reflect increased budgeting for quality of life, readiness and modernization than recommended in the Bottom-Up Review or its follow-on Quadrennial Defense Review. The two-war strategy, in our view, has never been adequately resourced. The American Legion believes the "win-win" two-war Bottom-Up Review strategy is delusional. The U.S. currently has a "win-hold" strategy at best with growing worldwide commitments, and only 10 Army combat divisions and three Marine divisions.

The American Legion also believes the U.S. can no longer afford to become the world peace enforcer by dispatching forces on unbudgeted operations every time the United Nations passes a resolution to do so or the President so orders. The American Legion believes Congress, as the representatives of the American people, needs to become more involved in the decision-making process regarding the commitment of United States military forces. U.S. forces should be committed when the vital national interests of this country are at stake and only when such deployments are supported by the will of the American people and the Congress and with a clear exit strategy. The Congress, in our view, needs to become involved in the policy of committing U.S. troops before troops are committed not after. The United States is not only over-committed in peacekeeping operations, it remains committed for extended periods.

CONTINGENCY OPERATIONS

The Administration has expressed its preference for multilateral operations. United States forces have responded to United Nations resolutions on numerous occasions in the past six years. The American Legion believes the United States should not allow its stated preference for multinational action to become an excuse for continued U.S. military action when clearly the national interests may not be at stake; nor should American unilateral action be delayed when the national interests are at stake. Clearly, the continuance of military peace operations will detract from military readiness and its declining combat capabilities. These operations may also inhibit the ability of the United States to respond to real emergencies that threaten the vital national interests. As General MacArthur stated in 1962: "The purpose of a military is to fight and win wars."

The American Legion believes the following principles should be an integral part of the United States national security and foreign policy decision-making process when considering the commitment of U.S. military forces:

—Americans need a clear definition of its vital national interests as they relate to all military operations to include peacekeeping and humanitarian operations;
—On a case-by-case basis, Congress needs to be more directly involved in the approval and funding process of such operations before the commitment of troops;
—United States forces should not be placed under foreign or United Nations control except in exceptional circumstances where Congress grants special approval; and
—American servicemen or women who are captured during peace operations should be granted full POW status and afforded all the protections of the Geneva Conventions.

America's national security framework provides the umbrella that allows Americans to work and prosper without fear. A strong national defense does not inhibit a strong economy, it complements it.

ACTIVE FORCE PERSONNEL ISSUES

The American Legion is concerned that a number of influences, to include the military drawdown, pose significant—and often underestimated—retention and readiness risks for the remainder of the decade.

The depth of the defense drawdown has significantly undermined one of the major historical selling features of a military career—employment security. In the history of the All-Volunteer Force, qualified young enlisted members and officers were actively recruited for extended terms of service or full military careers, but the situation has radically changed within the past six years.

Now is the time to look to the force recruiting and retention needs. Positive congressional action is needed now to begin overcoming past years of negative career messages and begin countering the renewed attacks on military benefits.

Continued Military Pay Raises.—The Chairman of the Joint Chiefs of Staff stated last year that the area of greatest need for additional defense spending is "taking care of our most important resource, the uniformed members of the armed forces." To meet this need, he enjoined the (Congressional) committee members to "close the substantial gap between what we pay our men and women in uniform and what their civilian counterparts with similar skills, training and education are earning." But 11 pay caps in the past 15 years has taken its toll and military pay continues to lag behind the private sector.

Basic Allowance for Housing (BAH).—The New Basic Allowance for Housing rates which took effect on January 1, 2000 resulted in losses or gains of hundreds of dollars per month in different locales throughout the country. Although the 4.8 percent pay raise was unrelated to BAH calculations, there were instances where servicemembers have sustained a net loss in pay and allowances due primarily to the fiscal year 2000 BAH rate change. Mr. Chairman, the BAH rates must be adjusted so as to reduce out-of-pocket expenses and be more closely approximate actual housing costs.

Montgomery G.I. Bill Enhancements (MGIB).—The American Legion is particularly supportive of improvements pertaining to the MGIB. These enhancements include increasing the monthly G.I Bill allowance for servicemembers who serve for more than or less than three years; eliminating the $1,200 contribution ($100 monthly) that each service member must make to participate in the G.I. Bill program; accelerated payments for personnel who served in the reserve components; allowing Select Reservists up to five years from their date of separation to use their G.I. Bill entitlements; and allowing veterans to apply their G.I. Bill benefits for required testing for admission to institutions of higher learning. Mr. Chairman, we

believe these particular improvements to the MGIB offer the incentives and the potential to favorably assist in turning the recruiting trend around.

Commissaries.—Several years ago, DOD had considered closing some 37 commissary stores worldwide and reducing operating hours in order to resolve a $48 million shortfall in the Defense Commissary Agency. Such an effort to reduce or dismantle the integrity of the military commissary system would be seen as a serious breach of faith with a benefit system that serves as a mainstay for the active and reserve components, military retirees, 100 percent service-connected disabled veterans, and others. The American Legion urges the Congress to preserve full federal funding of the military commissary system and to retain this vital non-pay compensation benefit which, we believe, is essential to the morale and readiness of the dedicated men and women who have served, and continue to serve, the national security interests of the United States. Furthermore, The American Legion fully supports the full-time usage of commissary stores by members of the reserve components.

HEALTH CARE FOR MILITARY BENEFICIARIES

Today, there are approximately 8.2 million beneficiaries in the military health care program. Military retirees and their dependents make up nearly one half of that number, and over 500,000 retirees have lost or will lose their access to military health care as a result of the closure of approximately 40 percent of military treatment facilities. Access to affordable health care, regardless of age, status or location, represents the number one concern among military retirees. Military retirees have often served as the most effective recruiters for military service. Until recently, military retirees were always led to believe that they were entitled to free lifetime health care as a major promise made in exchange for meager pay received and after having served 20 or more years in the most demanding and dangerous of professions. The notion that lifetime health care was promised was perpetuated in Service recruiting literature as recently as 1993.

Military retirees are the only group of Federal "employees" who lose their health care benefits when they become 65 and are no longer eligible for CHAMPUS or TRICARE but become Medicare-eligible. Medicare covers much less than TRICARE, and must be supplemented by expensive health care supplement insurance which many military retirees cannot afford. We often tend to forget that the average enlisted military retiree is an E–7 and not a Lieutenant Colonel. Despite its many problems, The American Legion supports full-funding and improvement of the TRICARE program, and it strongly believes that all military retirees, to include Medicare eligibles and their dependents, should continue to have expanded access to military and VA treatment facilities. Furthermore, all military retirees and their dependents regardless of age, status or location should have access to a uniform pharmacy benefit.

The fiscal year 2001 budget was to have been the "Year of Military Health Care Reform." When the defense budget was publicly released on February 7, 2000, it was clear that the ambitious program of military health care upgrades outlined by the Joint Chiefs of Staff, to include improvements in both active duty and retiree health care, were considerably reduced.

The fiscal year 2001 military health care budget proposes an expansion of TRICARE by $30 million to extend TRICARE Remote to active duty families; $50 million to eliminate active duty TRICARE copayments by dependents; and $20 million to implement a new benefit with long-term care needs. But there were no provisions addressing health care for military retirees and their dependents which explains the plethora of health care bills in both chambers of Congress. The American Legion's "GI Bill of Health" proposes that the Veterans Health Administration be authorized to expand its treatment of TRICARE beneficiaries. Such authority would give the military services the ability to enter into direct VA-DOD contracts for the treatment of military beneficiaries.

The American Legion believes there needs to be certain incentives to encourage TRICARE eligible retirees to enroll in VA. Certainly, dependents of TRICARE beneficiaries must be included in a family health insurance plan, and individuals enrolled in TRICARE Prime must have greater inducements to enroll in VA.

The TRICARE program began five years ago and has been fully operational for less than two years. During that period, many unforeseen problems have developed. We believe it is time to take bold and necessary steps to correct TRICARE's serious deficiencies and set a dependable and fiscally stable direction. The American Legion believes the Department of Veterans Affairs can perform a vital function in resolving many of TRICARE's existing difficulties. It is our conviction that this Sub-

committee will enact measured steps to restore the integrity of the TRICARE program to regain the confidence of the beneficiaries it serves.

Mr. Chairman, the nation has an obligation to do better. We believe there is a moral obligation for the government to find a way to provide at least the same level of health coverage to military retirees that it already provides to every other federal retiree.

OTHER MILITARY RETIREE ISSUES

The American Legion believes strongly that quality of life issues for retired military members and families also are important to sustaining military readiness over the long term. If the Government allows retired members' quality of life to erode over time, or if the retirement promises that induced them to serve arduous military careers are not kept, this will undoubtedly inhibit retention in the current active duty force.

Accordingly, The American Legion believes Congress and the administration must place high priority on ensuring that these long-standing commitments are honored.

Military Retired Pay COLAs.—Service members, current and future, need the leadership of this Subcommittee to ensure that Congress remains sensitive to long-standing contracts made with generations of career military personnel. A major difficulty is the tendency of some to portray all so-called "entitlement" programs, including military retirement, as a gratuitous gift from the taxpayer. In truth, military retired pay is earned, deferred compensation for accepting the unique demands and sacrifices of decades of military service. Because most Americans are unwilling to endure those arduous conditions, the retirement system is the services' single most important career incentive.

The American Legion urgently recommends that the Subcommittee oppose any changes to the military retirement system, whether prospective or retroactive, that would undermine readiness or violate contracts made with military retirees.

Social Security Offsets to the Survivors' Benefits Plan (SBP).—The American Legion supports amending Public Law 99–145 to eliminate the provision that calls for the automatic offset at age 62 of the military SBP with Social Security benefits. Military retirees pay into both SBP and Social Security, and their survivors pay income taxes on both. The American Legion believes that military survivors should be entitled to receipt of full social security benefits which they have earned in their own right. It is also strongly recommended that any SBP premium increases be assessed on the effective date, or subsequent to, increases in cost of living adjustments and certainly not before the increase in SBP as has been done previously.

In order to see some increases in SBP benefits, The American Legion would support a gradual improvement of survivor benefits from 35 percent to 45 percent over the next five-year period.

The American Legion also supports initiatives to make the military survivors' benefits plan more attractive. Currently, about 75 percent of officers and 55 percent of enlisted personnel are enrolled in the Plan.

VA Compensation Offset to Military Retired Pay.—A continuing issue of high concern to The American Legion is the VA compensation offset to military retiree pay. The purposes of these two compensation elements are fundamentally different. Longevity retirement pay is designed primarily as a force management tool that will attract large numbers of high-quality members to serve for at least 20 years despite extraordinary and arduous conditions of service, including a forced mid-life career change. Veterans disability compensation is paid to veterans who are disabled by injury or disease incurred or aggravated during active military service in the line of duty. Monetary benefits are related to the residual effects of the injury or disease or for the physical or mental pain and suffering and subsequently reduced employment and earnings potential. Opinions may differ over the extent to which concurrent receipt should be implemented to the offset formula used. But action should be taken to provide more equitable compensation for those who served more than 20 years in uniform and incurred substantial service-connected disabilities that severely inhibit their post-service earning opportunities.

The American Legion believes strongly that the 100 percent offset requirement is an inordinate penalty especially for those disabled retirees who are most severely disabled and whose disabilities have precluded them from pursuing productive post-service employment opportunities. The American Legion led the effort last year to mandate the provisions of H.R. 44 which provided for special compensation pays for severely disabled retirees. This year, we would like to see the law expanded to include severely disabled military disability retirees and early retirement retirees who also qualify for special compensation pays, as well as eliminating the four-year limitation on the awarding of the 70 to 100 percent disability rating.

PROCUREMENT

Under the administration's plan, defense procurement funding, which has declined steadily in real terms since 1985, would finally increase in 2001 to $60 billion.

Only a few major systems currently in production would be funded in the fiscal year 2001 defense budget. The funding level for weapons procurement is the lowest of any administration since 1950 and has been some 71 percent less than that of 1985. Major development programs which The American Legion supports include the Air Force F–22 fighter and C–17, F/A–18Es for the Navy and Joint Strike Fighters for the Air Force and Navy and the CVN–77, LHD–17 Amphibious Assault ship and DDG–51 destroyers. Other items in the research budget include the V–22 Osprey, the hybrid airplane-helicopter, which the Marine Corps is developing as a troop carrier. Unquestionably, the Navy will also need to acquire more submarines.

If left unaddressed, omissions in the Defense Department's modernization budget could have the following implications:

—They will result in the continued deterioration of our defense industrial base;

—The future technological superiority of American forces will be at risk thereby increasing the danger to our service men and women should they be called into combat; and

—The failure to replace and upgrade equipment in a timely manner will create a massive modernization shortfall in each of the military, services and possibly lead to even more serious readiness problems in the long run.

A number of defense consulting firms are predicting that the Armed Forces are heading for a "train wreck" unless annual defense budgets called for procurement accounts in the $118 billion range, rather than in the $45–60 billion range.

The American Legion further urges the Congress to expedite the procurement of improved and sensitive equipment for the detection, identification, characterization and protection against chemical and biological agents. Current alarms are not sensitive enough to detect sub-acute levels of chemical warfare agents. Improved biological detection equipment also needs to be expedited.

The American Legion firmly believes with the continuing threat of nuclear proliferation, that America should retain its edge in nuclear capabilities as represented by the TRIAD system, and that its highest priority should be the deployment of a national missile defense for the United States and its citizens. Although the development and deployment of advanced theater missile defenses to protect U.S. forward-deployed forces is imperative, any dismantling of acquisition programs to defend the American people is imprudent. The United States should focus on developing and deploying by 2003, not by 2005, an anti-ballistic missile detection and interception system that is capable of providing a highly effective defense of the United States against limited attacks of ballistic missiles.

Mr. Chairman, this concludes The American Legion statement.

Senator STEVENS. Thank you. Your full statement is in the record.

I note with interest that you have got both the Distinguished Flying Cross air medals and the Soldier's Medal for Bravery and three Bronze Stars.

Mr. DUGGAN. Yes, sir, in Vietnam.

Senator STEVENS. You were both Air Force and Army apparently?

Mr. DUGGAN. No, sir. I was an infantry operations officer. We directed a lot of air from helicopters.

Senator STEVENS. It is nice to have you here. You all joined Chennault Post on Taiwan?

Mr. DUGGAN. Yes, sir, which belongs to the Department of Alaska.

Senator STEVENS. That is right. And I served under General Chennault. Nice to have you here, Mike. I appreciate it very much.

Mr. DUGGAN. Thank you, sir.

Senator STEVENS. The next witness is Dr. Daryle Busch, Professor of Chemistry, University of Kansas and President of the American Chemical Society.

STATEMENT OF DARYLE BUSCH, PRESIDENT, AMERICAN CHEMICAL SOCIETY

Dr. BUSCH. Thank you, Chairman Stevens.

The American Chemical Society (ACS) is the world's largest scientific society, with 161,000 members, 126 of them in Alaska. In order to sustain our Nation's technological leadership and living standards, we believe that basic research should have a top priority in the Federal budget. Many economists in fact argue that investments in research generate a higher rate of return for the economy and society in general, than any other area of Federal spending.

While we are pleased to see the emphasis given to basic research in this year's budget resolution, we are concerned that constant dollar declines in Federal support for basic research over the past decade, particularly in the physical sciences, have weakened the roots of our Nation's innovative system. Mr. Chairman, the ACS members are most concerned about the science and technology program. This program is clearly the bedrock of the Department's research, development, test, and evaluation activity, and we urge the subcommittee to approve strong funding in this core area.

In particular, ACS urges the committee to increase DOD basic research on 6.1 accounts by at least 7 percent this year. An increase at this level would help make up for the nearly 10 years of decline in real terms of DOD basic research over the last 7 years.

Senator STEVENS. How much would that be, a 7-percent increase?

Dr. BUSCH. Seven percent, I do not have dollars. I am sorry, sir.

Senator STEVENS. We will look it up.

Dr. BUSCH. I probably have it in another book as a matter of fact.

Strong increases in basic research, most of which is conducted by our Nation's universities, is critical to maintaining the technological edge that is so central to our national security. We often hear about stealth technologies, smart bombs, night vision and the like, but we rarely hear about the incredible scientific discoveries that inspire and advance these types of developments. This is what DOD's 6.1 investments are all about—investing in those fundamental areas of research that have the highest potential for advancing our Nation's security.

The academic research supported by DOD not only provides long-term military benefits, but it is crucial to the basic health of many science engineering disciplines, including chemistry, physics, mathematics, computer science and material science, as well as training the next generation of scientists and engineers in disciplines critical to our national security.

In 1998, the Department's own Science Board concluded that approximately 3.5 percent of the total defense budget should be invested in the science and technology (S&T) program to maintain military technological superiority. While Congress funded S&T programs above the Board's recommended level for fiscal year 2000, the administration failed to maintain this level in its fiscal year 2001 budget proposal.

Furthermore, the fiscal year 2000 Defense Authorization Act clearly requires DOD to either increase S&T programs by 2 percent in real growth over the preceding year or verify that the request is adequate to protect the stability of the defense technology base.

We are concerned that the administration's request fell short of this mark.

Given the bipartisan agreement to increase defense spending overall, we remain hopeful that more emphasis will be given to science and technology accounts as this process moves forward. It is no secret that U.S. military operations in the foreseeable future will occur in an increasingly complex world, where threats to our security are more diffuse than during the Cold War. To respond to these new threats, it is essential for DOD to invest in research that increases understanding in key fields and fosters the development of leading-edge technologies, like energetic materials, advanced batteries, materials for extreme environments, and sensors.

Mr. Chairman, we fully recognize that crafting budgets with limited resources means difficult decisions. We also recognize the careful balance that must be struck between current obligations and future opportunities. In our judgment, it is unfortunately true that future opportunities continue to take a back seat. We must realize that a strong investment in basic research is fundamental to protecting the lives of soldiers and maintaining our military's preeminent position during the next century.

Put most simply, we are asking the subcommittee to keep a close eye on the long view of our national security. The Society is concerned that short-range budget questions continue to overshadow the long-term investments needed to safeguard our national security. The negative impacts will not be felt this year or next, but 10 or 20 down the line. To stay several technological steps ahead of future adversaries we simply have no choice but to invest in cutting-edge science today.

Thank you for your attention to this important matter. We look forward to helping in any way we can.

[The statement follows:]

PREPARED STATEMENT OF DARYLE BUSCH

Chairman Stevens, Ranking Member Inouye, and Members of the Subcommittee: Good afternoon. My name is Daryle Busch and I am the President of the American Chemical Society. I am also a professor of chemistry at the University of Kansas. I am pleased to appear before you today on behalf of the Society to share our views on the importance of strengthening the nation's investment in basic defense research.

The American Chemical Society is a nonprofit scientific and educational organization that represents 161,000 chemical scientists and engineers. The world's largest scientific society, ACS advances the chemical enterprise, increases public understanding of chemistry, and brings its expertise to bear on state and national matters.

In order to sustain our nation's technological leadership and living standards, we believe that basic research should be a top priority in the federal budget. It is increasingly clear that investments in research and development (R&D) underlie U.S. economic growth and national security. Many economists, in fact, argue that investments in research generate a higher rate of return for the economy, and society in general, than any other area of federal spending. While we are pleased to see the emphasis given to basic research in this year's budget resolution, we are concerned that constant dollar declines in federal support for basic research over the past decade—particularly in the physical sciences—have weakened the roots of our nation's innovation system.

Mr. Chairman, the Department of Defense (DOD) program that our members are most concerned about is the Science and Technology (S&T) program. This program is clearly the bedrock of the Department's Research, Development, Test and Evaluation (RDT&E) activity and we urge the subcommittee to approve strong funding in this core area.

In particular, ACS urges the committee to increase the DOD basic research, or 6.1 accounts, by at least 7 percent this year. An increase at this level would help make up for the nearly 10 percent decline in real terms of DOD basic research over the last 7 years. Strong increases in DOD basic research, most of which is conducted by our nation's universities, are critical to maintaining the technological edge that has been so central to our national security.

Although we often hear about stealth technologies, smart bombs, night vision and the like, we rarely hear about the incredible scientific discoveries that inspire and advance these types of developments. This is what DOD's 6.1 investments are all about—investing in those fundamental areas of research that have the highest potential for advancing our national security. The academic research supported by DOD not only provides long-term military benefits but is crucial to the basic health of many science and engineering disciplines, including chemistry, physics, mathematics, computer science, and materials science. DOD-supported academic research supplies new knowledge and understanding in these fields as well as training for the next generation of scientists and engineers in disciplines critical to our national security.

In 1998, the Department's own Science Board concluded that approximately 3.5 percent of the total defense budget should be invested in the S&T program to maintain military technological superiority. The Board also urged DOD to devote approximately one-third of the S&T program to revolutionary technology initiatives, such as those contained in the basic research account. While Congress funded defense S&T programs above the Board's recommended level for fiscal year 2000, the administration failed to maintain this level in its fiscal year 2001 budget proposal.

Furthermore, the Fiscal Year 2000 Defense Authorization Act clearly requires DOD to either increase S&T programs by 2 percent in real growth over the proceeding year or verify that the request protects the stability of the defense technology base. We are concerned that the administration's request fell short of this mark. In our view, this budget could indeed have negative impacts in both the short- and long-run. Given the bipartisan agreement to increase defense spending overall, we remain hopeful that more emphasis will be given to the S&T account as this process moves forward.

It's no secret that U.S. military operations in the foreseeable future will occur in an increasingly complex world, where threats to our security are more diffuse than during the Cold War. To respond to these new threats, it is essential for DOD to invest in research that increases understanding in key fields and fosters the development of leading-edge technologies. This type of research had led to advances in global positioning satellite methodologies, energetic materials, advanced batteries, materials for extreme environments, sensors, and signatures.

Mr. Chairman, we fully recognize that crafting budgets with limited resources means difficult decisions. We also recognize the careful balance that must be struck between current obligations and future opportunities. But, in our judgement, it is unfortunately true that future opportunities continue to take a back seat. We must realize that a strong investment in basic research, in which technologies having potential military applications are explored over a long time period, is fundamental to protecting the lives of soldiers and maintaining our military's preeminent position during the next century.

Put most simply, we are asking the subcommittee to keep a close eye on the long view of our national security. The Society is concerned that short-range budget questions continue to overshadow the long-term investments needed to safeguard our national security—not this year or next year, but 10 or 20 years down the line. While I am not an expert on national security, if history is any guide, advances in technology will continue to transform the nature of combat, the safety of our troops, and how aggression is deterred in the future. To stay several technological steps ahead of future adversaries, we simply have no choice but to invest in cutting-edge science today.

Thank you for your attention to this important matter. We look forward to assisting you in any way possible.

Senator STEVENS. Thank you very much. The staff tells me we have got requests for $1.217 Billion for 6.1, and your 7 percent would be a little bit over $85 million. We agree with you in terms of basic emphasis. If we can find our way to continue the initiative we started last year, we will.

We really do need that money. We know it. But I do not know whether we have got the money this year.

Dr. BUSCH. It was 4.8 percent in the President's budget, I guess, which is not quite enough. Yes, I have $85.2 million from my staff. If we can help, please let us. And we sure wish you the very best in this process.

Senator STEVENS. Thank you very much. We will do our best.

John Rogers, Parkinson's Action Network is next, please. Good morning.

STATEMENT OF JOHN C. ROGERS, PARKINSON'S ACTION NETWORK

Mr. ROGERS. Mr. Chairman, good morning. Thank you for the opportunity to testify. I am here today as a volunteer on behalf of the Parkinson's Action Network.

As a former Deputy Assistant Secretary of Defense, I am honored to be able to testify before you today. As the son and grandson of Parkinson's victims, I am proud to be here today. As a person who has lived with Parkinson's in my family for more than 30 years, I feel compelled to be here today. On behalf of the entire Parkinson's community, I am grateful for the subcommittee's interest in finding a cure for this devastating disease.

Parkinson's is a terrible neurological disease. It affects nearly 1 million Americans. It is caused by the degeneration of brain cells that produce dopamine, a neurochemical that controls motor function. Its sufferers have difficulty with most routine movements, like walking or brushing their teeth. It causes uncontrollable tremors and, in its final stages, robs individuals of the ability to speak or move at all.

My father, a World War II veteran, has suffered from Parkinson's for the past 15 years and has experienced all of these symptoms. The 210-pound giant I once knew has dropped to a frail 135 pounds. He shakes uncontrollably and suffers from a loss of movement, slurred and soft speech, and entire body freeze-ups. He has experienced severe dementia from his medication and fights depression daily. He has fallen and broken bones just getting out of bed, and he has suffered what any one of us would consider the most egregious indignities to his body. He is also the bravest man I know to have fought this beast every day. His caretaker, my mom, deserves another kind of medal for her care and support.

The conventional treatment for Parkinson's is a more than 30-year-old drug commonly known as L-dopa. My grandmother took L-dopa, as has my father. It usually restores function to a certain extent, and at first it may seem like a miracle drug. But, overall, it works inefficiently, produces side effects, and eventually does not work at all.

This need not happen. Parkinson's research is at a major crossroads. In fact, many scientists identify Parkinson's as the neurological disorder most likely to produce a breakthrough therapy or cure. To reach that point, however, we need more aggressive research funding.

The acknowledgement of Parkinson's sufferers, like Pope John Paul II, Muhammed Ali, Janet Reno, Billy Graham, and especially Michael J. Fox, who recently established a foundation for Parkinson's research, has raised public interest about this disease to an all-time high. It is imperative that we capitalize on the public con-

sciousness and take advantage of the momentum it has created for finding a cure.

The Department of Defense Neurotoxin Exposure Treatment Research (NETR) Program, which this subcommittee has supported, is a vital component in our Nation's efforts to fight Parkinson's disease and other neurodegenerative diseases that afflict military personnel and civilians alike. The Department of Defense has done an excellent job in administering this program. As a DOD official, I witnessed the beginning of research that continues to link toxins to environmental factors to neurological disorders and diseases—disorders such as the Gulf War Syndrome.

The NETR Program has advanced scientific research identifying toxins that contribute to the inception of Parkinson's disease. The program is critically important for the military because some service men and women work in environments that pose risks to neurodegenerative diseases. By continuing to advance research in this area, the DOD is better able to understand and minimize risk to military personnel and, in doing so, enhance readiness.

The Network urges the subcommittee to continue its very important support of this program and to provide $50 million, for fiscal year 2001, for the NETR Program. The Network also encourages the subcommittee to provide supplemental funds for the current fiscal year to ensure that deserving research grants do not go unfunded. Current fiscal year funding, which is at $10 million, will fund only one-quarter of the research the NETR Program submitted just last year.

As the son and grandson of Parkinson's victims and as a former DOD official, I thank you for your interest, and urge you to promote this very valuable program. We believe the NETR Program richly deserves your continued support. Thank you.

[The statement follows:]

PREPARED STATEMENT OF JOHN C. ROGERS

Mr. Chairman, Senator Inouye, thank you for the opportunity to testify. I am here today on behalf of the Parkinson's Action Network.

As a former Deputy Assistant Secretary of Defense, I am honored to be able to testify before you today. As the son and grandson of Parkinson's victims, I am proud to be here today. As a person who has lived with Parkinson's for more than thirty years, I feel compelled to be here today.

On behalf of the entire Parkinson's community, I commend the Chairman and Subcommittee for their past support in finding a cure for this devastating disease.

As you may know, the Parkinson's Action Network was created in 1991 to give a voice to a community that has been largely invisible, and to increase funding for Parkinson's in an effort to deliver breakthroughs and cure this awful disease.

Parkinson's is a devastating neurological disease; it is caused by the degeneration of brain cells that produce dopamine, a neurochemical that controls motor function. Its sufferers have difficulty with the most routine movements, like walking or brushing teeth. It causes uncontrollable tremors, and its final stages rob individuals of the ability to speak or move at all. Many Parkinson's sufferers retain their cognitive senses and have to watch helplessly as their bodies deteriorate.

My father, a World War II veteran, has suffered from Parkinson's for the past fifteen years and has experienced all of these symptoms. The 210-pound giant I once knew dropped to 120 pounds before rebounding to a frail 135 pounds. He shakes uncontrollably and suffers from a loss of ambulatory movement, slurred and soft speech, frozen face and freeze ups. He has experienced severe dementia from his medication and fights depression daily. He has fallen and broken bones just getting out of bed and he has suffered what any one of us would consider egregious indignities to his body. He is also the bravest man I know to have fought this beast every

day. His caretaker, my mother, deserves another kind of medal for her care and support.

Conventional treatment for Parkinson's is a more than 30-year-old drug commonly known as "L-dopa" that attempts to boost the production of dopamine in existing dopamine cells (by analogy, this process is similar to putting more gas in a car that has gas but now the car can go further). My grandmother took the same L-dopa in the late 60s and early 70s that my father was prescribed in the 80s, 90s, and still takes today. It usually restores function to a certain extent, and at first, it may seem like a miracle drug. But overall, it works inefficiently, produces side effects, and eventually does not work at all. As the dopamine cell degeneration advances, individuals with Parkinson's lose the automatic movements needed to walk, talk, swallow—eventually becoming unable to move at all.

This need not happen. Parkinson's research is at a major crossroads, with important new scientific opportunities for a major leap in treatments for Parkinson's and related disorders. In fact, leading scientists identify Parkinson's as the neurological disorder most likely to produce a breakthrough therapy and/or cure. To reach that point, however, we need a more aggressive research investment.

The acknowledgment of Parkinson's sufferers like Pope John Paul II, Muhammed Ali, Janet Reno, Morton Kondracke's wife and especially Michael J. Fox, who recently established the Michael J. Fox Foundation for Parkinson's Research, has raised public interest about this disease to an all-time high. It is imperative that we capitalize on the public consciousness and take advantage of the momentum it has created for finding a cure.

The Department of Defense Neurotoxin Exposure Treatment Research Program (NETRP), which this Subcommittee had the foresight to establish, is a vital component in our nation's effort to fight Parkinson's disease and other neurodegenerative diseases that afflict military personnel and civilians alike. The Department of Defense has done an excellent job of administering the funds appropriated to them. Their peer review process has ensured quality research for this effort.

The Program focuses on the importance of environmental factors in the onset of Parkinson's and funds research to prevent, detect, and treat environmental toxicity. This is particularly important in light of recent evidence in a major study published last year that narrowed the cause of classic Parkinson's, eliminating inherited genetic factors, and pointing to outside "triggers" such as environmental toxins that result in dopamine cell death and Parkinson's symptoms.

The Program is critically important for the military, because some servicemen and women work in environments that pose risks for neurodegenerative disease, including some Parkinson's symptoms. Our fighting men and women may be at risk from occupational exposures to psychological stress, toxic industrial and agricultural chemicals, chemical threat agents, head injury, and even radio frequency radiation. By continuing to advance research in this area, the DOD is better able to understand and minimize risks to military personnel and in so doing improve military readiness.

The Program also makes an important contribution to basic research on mechanisms of neurodegeneration that will lead to better diagnosis, treatment and prevention. This will help those who already suffer from Parkinson's. The DOD is interested in funding four main categories of research in their program:

1. Mechanisms of damage and protection against neural cell death;
2. Development and validation of new approaches to neuropsychological testing to improve early detection of neurodegenerative diseases;
3. New therapeutic strategies for the treatment of neurodegenerative disease; and
4. Influence of environmental factors.

The Subcommittee has an enormous opportunity to take us closer to winning the fight against Parkinson's and other neurological disorders. Scientists tell us that there is a correlation between an investment in research and improved treatments or finding a cure. But that can't happen if the funding is inadequate to the task—and falls short of the promising research agenda defined by the program.

Last year, NETRP funded $45 million in peer-reviewed and approved research grants. There is tremendous excitement in the scientific community about this Program. But scientists in the field describe immense frustration with the halting pace of research breakthroughs because of inadequate funding for Parkinson's research.

The Network urges the Subcommittee to support this program and to provide $50 million for fiscal year 2001 for the Neurotoxin Exposure Treatment Research Program and its focus on Parkinson's and other neurodegenerative disease research.

We believe that the Neurotoxin Exposure Treatment Research Program richly deserves your continued support.

Thank you.

Senator STEVENS. Did you testify at Senator Specter's hearing on Parkinson's?

Mr. ROGERS. No, sir, I did not. I testified before the House Appropriations Committee on Defense on the same issue.

Senator STEVENS. We have increased NIH funding for Parkinson's. It was at $132 million in 1999, $158 million in 2000, and it is at $165 million this year. That is the area for the initiative on Parkinson's, not defense. You have $10 million from last year. I just do not think you can say that this is a defense-related disease.

Mr. ROGERS. The argument and the discussion that we have been having with Defense is that neurotoxins affect military personnel. If you have chemicals out there, they can affect military personnel in a very similar way that neurotoxins affect Parkinson's victims.

Senator STEVENS. I understand that. And the $10 million is there. But I have got to tell you, we provided $10 million for you last year, and now you have asked for $50 million this year. This is a Defense appropriations bill.

Mr. ROGERS. I understand that, sir.

Senator STEVENS. It is not an NIH subcommittee. I urge you to talk to the Health and Human Services people if you believe there should be an increase in this funding.

Mr. ROGERS. We are, as well, sir.

Senator STEVENS. Thank you very much.

Mr. ROGERS. Thank you.

Senator STEVENS. The next witness is Michael Miller, National Prostate Cancer Coalition. Good morning, Mike. As the only Alaskan, I am sorry to keep you down toward the end, but you have got my attention, Mike.

STATEMENT OF MICHAEL H. MILLER, NATIONAL PROSTATE CANCER COALITION

Mr. MILLER. Mr. Chairman, I would wait all day to have this opportunity to speak before you and your committee. Thank you, Mr. Chairman, and members of this committee for allowing me to present testimony today on a disease that has changed my life. My name is Michael H. Miller, and I am from, as you know, Senator Stevens, your home State of Alaska. I am here today on behalf of the National Prostate Cancer Coalition, to request that you provide at least $150 million for peer review research in the coming fiscal year to the Department of Defense Prostate Cancer Research Program at Fort Detrick, Maryland.

I have had the pleasure of working with you, Mr. Chairman, before many times on prostate cancer awareness and research funding. I want to thank this committee very much for all of its past and continuing support of these important issues. I have advanced prostate cancer. I am a 4-year survivor, and I am a prostate cancer activist. Funding for Federal prostate cancer research is a profoundly personal issue for me.

The only reason I am able to be here today is because I participated in an experimental prostate cancer clinical trial funded in part by the Federal Government. I have travelled all the way from Juneau, Alaska, to put a new face on this deadly disease. Too many people with prostate cancer think this is an old man's disease, but I was only 43 years old when I was diagnosed with prostate cancer,

just one of many American men diagnosed with this disease in the prime of their lives.

While my age was young, my disease was advanced. It had already gone into my bones. My doctors told me that the cancer was very high grade and very aggressive. I was given between 17 and 35 months to live. When I got that news, I was a very active and nationally recognized swim coach, following a very successful career as a competitive swimmer. I had been an eight-time small college all-American and was voted outstanding college athlete of America at Central Washington State. After graduation, I began a 21-year career as a swimming coach, including 14 years in Juneau, Alaska, as a coach at the Glacier Swim Club.

I took my team to the Junior Nationals 10 times. I had a leadership role in Alaska swimming competitions, including serving as a coach for the 1991 Elite Training Camp for the United States Olympic Training Center in Colorado. All of this came to a screeching halt on January 17, 1996, when I learned I had advanced prostate cancer. Faced with very few treatment options, I entered an experimental National Institutes of Health sponsored clinical trial at the Oregon Cancer Center, Oregon Health Sciences university.

I remained in the trial for 8 months, until I was forced to withdraw due to severe side effects that are with me to this day. My adrenal gland system was shut down, and I developed adrenal deficiency syndrome. Trying to cope with that syndrome, as well as prostate cancer in my bones and osteoporosis, I had to quit working and leave a sport and career about which I had always been passionate. I developed sensitivity to light and lost 90 percent of the hearing in my right ear.

In short, the medical treatment prolonged my life, but it greatly diminished my quality of life. However, I must say I do have quality of life. In this I am typical of many prostate cancer patients. Treatment for this disease can bring on a variety of debilitating side effects, ranging from incontinence and impotence to intense bone pain and osteoporosis. In 2000, more than 180,000 American men will be diagnosed with prostate cancer. More than 30,000 men will die this year from this disease. Too many of the rest of the men are undergoing treatment and coping with side effects similar to mine.

And as the population continues to age, more and more men will be diagnosed with prostate cancer unless our country makes a decision to diligently and relentlessly pursue a cure. The statistics on this disease are not an abstraction for me. As I looked at my family, at the boys I have been coaching over the years, and especially at my two sons, I did not want them to face this disease. My sons have up to six times the risk of prostate cancer as other men because of my diagnosis. For their sakes, I have chosen to do what I can to help eradicate this disease.

Shortly after my diagnosis, I made my first speech about prostate cancer to high school students at Juneau Douglas. Since that first talk, I have spoken to more than 3,000 students and 660 teachers in Juneau alone. I began travelling to other States, like California, Oregon, Washington, Wisconsin, and North Dakota, and have spoken about prostate cancer to more than 16,000 people. Echoing your words, Mr. Chairman, I told them to watch their diets, exer-

cise, and begin to receive prostate cancer tests and examinations early.

I also became politically active to advocate for increased Government funding of prostate cancer research. I spearheaded a 1998 effort to pass a resolution in the Alaska Legislature that called for Federal funding for prostate cancer research—the only such legislation in any State. I might add that thanks to the leadership of the chairman and members of the committee, Federal spending for prostate cancer research increased by 55 percent that same year.

I was the first person ever to testify by video to the Food and Drug Administration about suramin, one of the drugs used in my treatment. I have organized petition drives and candlelight vigils, and I have spoken many times as a panelist on prostate cancer issues. I join the American Cancer Society Northwest Division Prostate Cancer Task Force and its public issues committees. I have presented testimony to many legislative bodies, including in support of a bill in the Alaska Legislature, passed this month, which reduced the age at which insurance companies in my State would be required to pay for prostate cancer screening. I recently started a foundation called the Southeast Alaska Cancer and Wellness Foundation.

Senator STEVENS. Mike, you are going to have to get to the bottom line. I have got to be fair to everybody else.

Mr. MILLER. Today, the Senate Subcommittee on Defense Appropriations is discussing DOD prostate cancer research programs, so I am here to let you know that there are many promising areas of research that should be pursued and put into clinical trials, but funding for them is not available. Providing $150 million for peer-reviewed research in the Department of Defense program would allow important and essential clinical research to go forward.

I thank you very, very much.

[The statement follows:]

PREPARED STATEMENT OF MICHAEL H. MILLER

Thank you, Mr. Chairman and members of this committee, for allowing me to present testimony today on a disease that has changed my life.

My name is Michael H. Miller, and I am from Senator Stevens' home state of Alaska. I am here today on behalf of the National Prostate Cancer Coalition to request that you provide at least $150 million for peer review research in the coming fiscal year to the Department of Defense prostate cancer research program at Ft. Detrick, Maryland.

I have had the pleasure of working with Senator Stevens before—many times—on prostate cancer awareness and research funding, and I want to thank this committee very much for all of its past and continued support of these important issues.

I have advanced prostate cancer. I am a survivor, and I am a prostate cancer activist. Funding for federal prostate cancer research is a profoundly personal issue for me. The only reason I am able to be here today is because I participated in an experimental prostate cancer clinical trial, funded, in part, by the federal government.

I have traveled all the way from Juneau, Alaska, to put a new face on this deadly disease. Too many people think of prostate cancer as an "old man's disease." But, I was only 43 years old when I was diagnosed with prostate cancer, just one of many American men diagnosed with this disease in the prime of their lives. While my age was young, my disease was advanced. It had already gone into my bones. My doctors told me that the cancer was very high grade—and very aggressive. I was given between 18 and 36 months to live.

When I got that news, I was a very active—and a nationally recognized—swim coach, following a very successful career as a competitive swimmer. I had been an eight-time, small college "All American," and was voted an "Outstanding College

Athlete of America" at Central Washington State. After graduation, I moved to Juneau and began a 14-year stint coaching the Glacier Swim Club. I took my team to the Junior Nationals 10 times. I had a leadership role in Alaska swimming competitions, including serving as a coach for the 1991 Elite Training Camp for the United States Olympic Training Center in Colorado.

All of this came to a screeching halt on January 17, 1996, when I learned I had serious prostate cancer. Faced with very few treatment options, I entered an experimental, National Institutes of Health-sponsored clinical trial at the Oregon Cancer Center, Oregon Health Sciences University. I remained in the trial for 8 months, until I was forced to withdraw due to severe side effects that are with me to this day.

My adrenal gland shut down, and I developed adrenal deficiency syndrome. Trying to cope with that syndrome—as well as prostate cancer in my bones, I had to quit working and leave a sport and career about which I had always been passionate. I developed sensitivity to light, and I lost 90 percent of the hearing in my left ear. In short, the medical treatment prolonged my life, but it greatly diminished its quality.

In this, I am typical of many prostate cancer patients. Treatment for this disease can bring on a variety of debilitating side effects, ranging from incontinence and impotence to intense bone pain and osteoporosis. In 2000, more than 180,000 American men will be diagnosed with prostate cancer. More than 30,000 men will die this year from this disease. Too many of the rest are undergoing treatment and coping with side effects similar to mine.

And, as the population continues to age, more and more men will be diagnosed with prostate cancer, unless our country makes a decision to diligently and relentlessly pursue a cure.

The statistics on this disease are not an abstraction for me. As I looked at my family, at the boys I have been coaching over the years, and especially at my two sons, I did not want them to face this disease. My sons have six times the risk of prostate cancer as other men because of my diagnosis. For their sakes, I have chosen to do what I can to help eradicate this disease.

Shortly after my diagnosis, I made my first speech about prostate cancer to young men at a local high school. Since that first talk, I have spoken to more than 3,000 students and 660 teachers in Juneau alone. I began traveling to other states, like California, Oregon, Washington, Wisconsin and North Dakota, and have spoken about prostate cancer to more than 16,000 people. Echoing words I have heard from Senator Stevens, I told them to watch their diets, exercise and begin to receive prostate cancer tests and examinations early.

I also became politically active to advocate for increased government funding of prostate cancer research. I spearheaded a 1997 effort to pass a resolution in the Alaska legislature that called for increased federal funding for prostate cancer research, the only such legislation in any state. I might add that, thanks to the leadership of the chairman and members of the committee, federal spending for prostate cancer research increased by 55 percent that same year.

I was the first person ever to testify by video to the Food and Drug Administration about suramin, one of the drugs used in my treatment. I have organized petition drives and candlelight vigils, and I have spoken many times as a panelist on prostate cancer issues. I joined the American Cancer Society Northwest Division Prostate Cancer Task Force and its public issues committees. I have presented testimony to many legislative bodies, including in support of a bill in the Alaska legislature, passed this month, which reduced the age at which insurance companies in my state would be required to pay for prostate cancer screening. I recently started a foundation called the "Southeast Alaska Cancer and Wellness Coalition," an organization to bring together health and wellness resources for people residing in that part of Alaska.

Along with other prostate cancer activists, I do a lot more than argue in favor of more federal funding for research. We are teaching others about prostate cancer, urging men to get early screening, forming support networks and survivor networks—doing whatever we can to beat this disease.

Today, the Senate Subcommittee on Defense Appropriations is discussing funding for the DOD prostate cancer research program. So I am here. I am here to let you know that there are many promising area of research that should be pursued and put into clinical trials, but funding for them is not available. Providing $150 million for peer reviewed research in the DOD program would allow important—and essential—clinical research to go forward.

Many more lives could be saved. Many more families could be spared the agony of prostate cancer. Unless we invest now to cure prostate cancer, this disease will

strike down more men like me. I am here now so that my children will not have to be. I am fighting for my sons' futures.

On their behalf—and on behalf of countless other sons and their fathers and the people who love them—please appropriate the necessary funding this year for the DOD Prostate Cancer Research Program.

Thank you.

Senator STEVENS. Thanks for all you do. I know that you have done a tremendous amount on your own, just tirelessly, to educate people about this disease. And as a fellow who has also suffered from the disease, I thank you for my sons, too. We will do our very best, Mike. And I thank you for taking the time to come.

Mr. MILLER. Thank you, Mr. Chairman.

Senator STEVENS. Our next witness is Mr. William Schwartz, from CaP CURE. Nice to see you.

STATEMENT OF WILLIAM A. SCHWARTZ, MEMBER, BOARD OF DIRECTORS, ASSOCIATION FOR THE CURE OF CANCER OF THE PROSTATE

Mr. SCHWARTZ. Good morning, Mr. Chairman. Good to see you again. And I am testifying on behalf of CaP CURE, as a Member of the Board of Directors. CaP CURE is also know as the Association for the Cure of Cancer of the Prostate. It is a public charity, dedicated to the rapid discovery of cures or controls for prostate cancer, which has been the Nation's number one, most commonly diagnosed non-skin cancer. It was founded in 1993 by financier/philanthropist Michael Milken, shortly after his own diagnosis of advanced prostate cancer.

CaP CURE, since that time, has awarded more than $80 million to over 600 innovative research projects in more than 25 States and five countries. I am here to talk about the importance of prostate cancer research, Mr. Chairman. And like Mike Miller, my statistics are not very good. I was diagnosed with metastatic prostate cancer 5½ years ago and, statistically, should not be alive today. Only 30 percent of the men so diagnosed survive 5 years. But those statistics notwithstanding, I am delighted to be with you again. My cancer is under reasonable control and, God willing, I look forward to watching my first grandchild, who was born just a couple of months ago, grow into a young man, and maybe even get to his wedding.

It is crucial that we develop treatments and therapies that can extend lives that are now lost to this dreaded disease. Accordingly, Mr. Chairman, I am pleased to provide testimony today in support of our partner in prostate cancer research, the U.S. Army Medical Research and Materiel Command at Fort Detrick. Mike has given you the figures: almost 200,000 men diagnosed last year, and nearly 40,000 died. That means every day 500 men learn they have prostate cancer. Some are famous, like General Schwartzkopf and Senator Dole and Joe Torre, but most are out of the public spotlight. All have families and friends who bear the burden with them. And every day, more than 100 of these men die.

In fact, one in six, or 300,000 men of the nearly 2 million men in active and military Reserve military service will be diagnosed with prostate cancer at some time during their lives. The need for the DOD Prostate Cancer Research Program is underlined by the fact that, on average, 15 percent of all cancer cases are prostate

cancer, and 15 percent of all male cancer deaths are prostate cancer. Over the past 5 years, an average of only 5 cents of every Federal prostate cancer dollar has been allocated to find a cure for this disease.

Senator STEVENS. You said 5 percent of what?

Mr. SCHWARTZ. Five percent of Federal cancer research dollars has been allocated to the disease.

Congress, and particularly with your leadership, Senator, has assured that the funding is getting better. And this committee's $75 million appropriation last year is helping to narrow the gap. But given where we are and the opportunities that surround us, we have got a long way to go.

That is why CaP CURE, as a partner in the National Prostate Cancer Coalition (NPCC), is asking you to commit $150 million to the program for fiscal year 2001. And here are some of the reasons why:

The Prostate Cancer Research Program at the DOD does unique work. We know that because we have worked closely with them since the program's inception. In addition, the DOD program representatives were core participants at an historic and precedent-setting conference sponsored just last week by CaP CURE, the NPCC and the National Cancer Institute. That conference brought together private and public sector funders of prostate cancer research to discuss opportunities, synergies and collaborations. And we are trying to ensure that all funds spent on prostate cancer research are spent productively.

Every single funder in both the public and private sector now knows how important the DOD program is, because it is really additive and non-duplicative of other work in the private and public sectors, and it really is the only place in the public sector where a research can focus his or her energies specifically on prostate cancer.

In its April 1998 investment strategy for prostate cancer, the Army medical research program pointed out that it could not undertake appropriate and crucial clinical trials with less than $100 million net. And we must guarantee that treatment opportunities are converted from the bench to the bedside. And the only way they get there is going through a clinical trial.

The program loses just under 20 percent per year to a host of DOD set-asides and program and command overhead. So last year's $75 million, Mr. Chairman, only netted the peer review program $60 million. So, again, I just want to reiterate that in order for clinical trials to commence, the Department requires a net after all these overhead expenses of at least $100 million.

Last year the program only funded 19 percent of the worthwhile projects and proposals that were presented to them. And to retain the pool of talented researchers who have committed themselves to solving the problem of prostate cancer, we must improve that statistic dramatically.

So, Mr. Chairman, given these daunting facts, I ask you and your colleagues to be mindful of the impact of this terrible cancer on the country, as a whole, and especially on the 8 million Department of Defense staff and retirees and their families whose well-being is in the care of the Department's worldwide health program.

Again, I thank you for this opportunity to speak to you.

[The statement follows:]

PREPARED STATEMENT OF WILLIAM A. SCHWARTZ

Mr. Chairman and members of the Subcommittee on Defense Appropriations, my name is Bill Schwartz. I am with you today in my capacity as a member of the board of directors of CaP CURE.

CaP CURE, also known as the Association for the Cure of Cancer of the Prostate, is a public charity dedicated to the rapid discovery of cures or controls for prostate cancer, which has been the nation's most commonly diagnosed non-skin cancer. Founded in 1993 by financier-philanthropist Michael Milken shortly after his own diagnosis of advanced prostate cancer, CaP CURE has awarded more than $80 million to over 600 venture research projects in more than 25 states and five countries.

Mr. Chairman, I am here to talk about the importance of prostate cancer research. I was diagnosed with metastasized prostate cancer 5½ years ago. Statistics show that I should not be alive today, since only 30 percent of men diagnosed with metastatic prostate cancer survive five years. Statistics notwithstanding, I am delighted to be with you. My cancer is under reasonable control, and God willing, I look forward to watching my first grandchild, who was born just a few months ago, grow into a young man.

I am here today because I want to ensure that we develop treatments and therapies that can extend and save lives that are now lost to this dread disease. Accordingly, Mr. Chairman, I am pleased to provide testimony today in support of our partner in prostate cancer research, the extramural program conducted by the U.S. Army Medical Research and Materiel Command at Ft. Detrick, MD.

Last year, almost 200,000 men were diagnosed with prostate cancer and nearly 40,000 died from this disease. That means that every day more than 500 men learned they had prostate cancer.

Some are famous, like General Schwarzkopf, Senator Dole, and Joe Torre.

Most are out of the public spotlight.

All have families and friends who bear the burden with them.

And every day more than 100 men died.

In fact, one in six—or 300,000 men—of the nearly 2 million men in active and reserve military service will be diagnosed with prostate cancer at some time in their life.

The need for the Department of Defense Prostate Cancer Research Program is underlined by the fact that prostate cancer has been the number one diagnosed non-skin cancer in the country. It has accounted, on average, for 15 percent of all cancer cases and 15 percent of cancer deaths among men. Over the past few years, an average of only 5 cents of every federal cancer research dollar has been allocated to find a cure for this disease.

Congress has assured that funding is getting better and this Committee's $75 million appropriation last year is helping to narrow the gap. But, given where we are, and the opportunities that surround us, there is a long way to go.

That is why CaP CURE, as a partner in the National Prostate Cancer Coalition, is asking you to commit $150 million to the program in fiscal year 2001, and here are some of the reasons why:

—The DOD program is a model federal program. For example, while NIH has many wonderful programs that could impact prostate cancer, only DOD has a program whose sole focus is prostate cancer-specific research, which is designed to compliment and not duplicate research at other federal agencies.

—We also believe strongly in the DOD research program because it emphasizes innovative public/private partnerships, involving biotech and pharmaceutical companies, which help federal dollars go further and yield quicker results.

—Additionally, the DOD program has distinguished itself by focusing on unique research opportunities and including consumer advocates in the scientific review process. As a survivor, I have the honor, for the first time, of sitting on this year's Prostate Cancer Integration Panel, which oversees the DOD research projects.

—In its April 1998 business plan, the Army's medical research program defined its investment strategy for prostate cancer. The program can only become fully operational if funded annually at no less than $200 million net, a goal the NPCC has said must be reached by fiscal year 2002.

—The program cannot undertake appropriate and crucial clinical trials research with less than $100 million net. We must guarantee that treatment opportunities are converted from bench to bedside, and clinical trials are necessary for this to happen.

—The program loses just under 20 percent per year to a host of DOD set-asides and program and command overhead, so last year's $75 million netted only about $60 million for the Peer-Reviewed Research Program. Consequently, to net $100 million for peer-review will require a minimum appropriation of $125 million.

—Last year the program could only fund about 19 percent of worthy grant applications. To retain the pool of talented researchers who have committed themselves to solving the problem of prostate cancer, we must improve that statistic dramatically.

Mr. Chairman, in the face of these daunting facts, and as you consider the future investments in this Department of Defense research program, I ask you and your colleagues to be mindful of the impact of prostate cancer on the country as a whole. And I also ask you to consider the potential—and special—impact of prostate cancer on the eight million Department of Defense staff and retirees—and their families—whose well-being is in the care of the Department's worldwide health system.

While costs are involved to increase funding of this important research program, I also ask you to remember the greater costs involved in any further delay to the cure of prostate cancer.

Thank you for your consideration.

Senator STEVENS. How much of that $75 million actually went to research last year?

Mr. SCHWARTZ. Only $60 million got into peer review; 18 percent went for overhead and other sorts of set-asides. That is why, with the problem with clinical trials, the Department of Defense medical program has said, look, we have to have at least $100 million net. That is after all these overhead deductions.

Senator STEVENS. Why didn't they ask for it? They did not ask for that. Their budget does not request that. If they say that, why didn't they ask for it?

Mr. SCHWARTZ. I cannot answer that. I know in their program that they put out in April, they called for a spending program of $200 million a year. And I am not sure why they did not ask for it in this particular appropriation. We will have to look into it.

Senator STEVENS. I would suggest that the people who put out those suggestions get together with those who send us the budgets. You are asking for a 100 percent increase in one item in one year. And I have got to tell you that is going to be next to impossible. Because if we did that, then we have got to increase breast cancer. We have got to increase diabetes. We have got to increase all these other things. Over a half-a-billion dollars now goes into medical research from DOD's budget.

Mr. SCHWARTZ. Well, Senator, I understand what you are saying, and I can appreciate the difficulty. I guess the key thing is really not that we double. The key thing is that we just reach $100 million on a net basis so that we can get to the major clinical trials that are necessary.

Senator STEVENS. How much do you get from NIH?

Mr. SCHWARTZ. Last year was $260 million.

Senator STEVENS. You are saying $100 million net from Defense, but you have already got $260 million net from the other department.

Mr. SCHWARTZ. I understand.

Senator STEVENS. I am a prostate cancer survivor, but I think you have to be reasonable with us, and that is not being reasonable. We will do our very best, but we just cannot pursue an increase every year in defense money for research on a specific dis-

ease of this kind; 100 percent increase is just not possible. I do thank you for the testimony.

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

Senator STEVENS. Next is Mr. Robert Parker, the Coalition for National Security Research.

STATEMENT OF ROBERT PARKER, DEPUTY DIRECTOR, UNIVERSITY OF SOUTHERN CALIFORNIA INFORMATION SCIENCES INSTITUTE, ON BEHALF OF THE COALITION FOR NATIONAL SECURITY RESEARCH

Mr. PARKER. Good afternoon. I would first like to thank the committee for allowing me to speak here today. I do represent the Coalition for National Security Research (CNSR). CNSR is a coalition of approximately 40 organizations across the United States, including a diverse set of universities as well as professional societies that in turn represent research organizations and the industry. The primary goal of CNSR is to advocate for a strong science and technology base supported by the Department of Defense.

We are interested in asking you to stay the course in your support of 6.1 through 6.3 research in the Department of Defense. And we are also requesting that you consider a small increase only to cover the amount of inflation in that budgetary request for this coming year.

My name is Robert Parker. I am Deputy Director of the University of Southern California's Information Sciences Institute (ISI). ISI has done Department of Defense research for almost 30 years, and we have been involved since the early days of the Advanced Research Projects Agency (ARPA) network in creating the advanced protocols that enabled that network to come to fruition and has evolved now into the Internet technology that we have in the United States today.

I have also done Government service through the IPA program. I spent 4 years at the Defense Advanced Research Projects Agency (DARPA) as a Deputy Director of the Information Technology Office. So I understand the S&T process both from the project management side of the organization as well as a researcher from the university.

Given my background in information technology, I wanted to spend a couple of moments today telling you my concerns for funding in this specific area. If you look, as I am sure the committee has looked, at Joint Vision 2010 for information superiority, the Army's digital battlefield, the future combat system, the full spectrum dominance, the Navy's network-centric warfare, and the Air Force's global engagement. These are all visions that the services have brought forward, and they all share one common need. And that is a need for an underlying information infrastructure. That is an infrastructure that does not exist in the United States today. It will be critical if we are to bring those missions to the battlefield.

And there is a danger here, a very serious danger, in the sense that you can look back on investments in S&T that DOD has provided over the years and you can see how specific examples of technology developed in the university base have helped fuel the information technology revolution that the whole United States economy is the beneficiary of today. There is documented evidence of that, and it is very clear.

The danger is in complacency, in saying, well, gee, no matter how much money we raise in DOD, the amount of money provided through the commercial sector just dwarfs that amount, and therefore we will let them provide the information technology investments in the future. There is significant danger in that. I advocate that there is a divergence of interests between the commercial industry and DOD even greater than it has been in the past.

The DOD needs to include in these areas, systems that are highly fault tolerant, and that are responsive to very complex mission scenarios. As we enter battlefield scenarios, where the missions transition from warfighting to peacekeeping, where we have complex force structures that change over time, that involve coalition forces and needs for things like multilevel security. If we look at systems that need to be reactive, responsive to the environment, perhaps gracefully degrade over time, that are solutions that are applicable across multiple missions, if we look at all of these areas of need in DOD, in addition to the fact that there is a tremendous legacy system problem in DOD, we simply do not have the funds to replace all of the systems that are currently fielded.

The only way to introduce information technology is through finding ways for them to coexist in the field with these other systems. These are all problems, for better or worse, that DOD owns uniquely. They are not problems shared by the commercial world. And we cannot expect the commercial world to solve those problems without continuing to invest strongly in the S&T process, through DOD, to create the innovative ideas that will feed the requirements of DOD in the future.

So we are encouraging you to continue the support for 6.1 through 6.3 and to not leave this important area of information technology to chance. That concludes my testimony.

[The statement follows:]

PREPARED STATEMENT OF ROBERT PARKER

I would like to thank the Committee for allowing me to speak to you today about the importance of the Defense Department's support of science and technology to universities, scientific and engineering societies, and industry.

My name is Robert Parker, and I am Deputy Director of the University of Southern California's Information Sciences Institute. ISI is involved in a broad spectrum of information processing research and in the development of advanced computer and communication technologies, and in 1999 received $36.5 million in research support from the Department of Defense.

I am testifying today on behalf of the Coalition for National Security Research (CNSR). CNSR is a broadly-based coalition united by a commitment to a strong defense science and technology base. Participants include scientific, engineering, mathematical and behavioral societies, academic institutions, and industrial associations.

CNSR strongly supports DOD's Science and Technology programs across all defense organizations, especially those defense research programs providing support to our nation's universities. The Department provides a critical investment in several disciplines including engineering, physical, math, computer and behavioral sciences vital to our future security. In addition, defense S&T programs conducted at DOD and private sector laboratories create the technologies and processes that support DOD systems, organization, and personnel. Today's high technology systems are a result of DOD's past investment in research and technological innovation.

Many crucial defense technologies have emerged from research conducted on university campuses and at DOD and private sector laboratories. Among these are: radar, nuclear power, digital computers, semiconductor electronics, lasers, fiber optics, night vision, vaccines and drugs for malaria and other tropical diseases, the Global Positioning System, stealth and other advanced materials, computer-based

visualization systems for training and for planning and conducting operations, and computer networking.

Currently researchers supported by DOD funding are engaged in a wide range of activities. Some examples include developing remotely operated mini-robots that can survey battlefields and urban landscapes without danger to their users and creating highly-sensitive chemical and mechanical sensors that can identify minute amounts of dangerous substances in the environment. Researchers are also using networking, supercomputers and advanced software to develop very large-scale battlefield simulations to improve training, assess new weapons and tactics and analyze battlefield data. In a completely different area, scientists and engineers are working to create protein-based data memory systems, similar to the brain, that can store and retrieve vastly increased amounts of video, audio and other complex data.

The President's budget request for the S&T program at DOD is only $7.6 billion, $700 million less than the appropriation made by Congress for fiscal year 2000. But at the same time, the budget request emphasizes a goal of "Modernizing Weapons Systems." A reality, however, is that weapons modernization is not possible without the research that is the foundation of the technological advances upon which the military depends. The research successes of the past are what now allows the President to propose this goal. Without increased support for DOD's research programs, the ability of the military to modernize its weapons in the future will be severely jeopardized.

For fiscal year 2001, CNSR's Steering Committee strongly urges Congress to strengthen the nation's national security investment by providing $8.4 billion for the Department's Science and Technology Programs. CNSR bases its recommendation on the Report of the Defense Science Board Task Force on Defense Science and Technology Base for the 21st Century, which established a minimum funding level for DOD's 6.1, 6.2, and 6.3 programs. When adjusted for inflation, their recommended minimum for fiscal year 2001 is $8.4 billion.

$8.4 billion for DOD's fiscal year 2001 S&T program would support the scientific and engineering research that has produced today's preeminent U.S. forces, demonstrated most recently during Desert Storm and various peacekeeping missions. Continuing a stable investment in DOD's S&T programs will maintain this technologically superior force in the 21st Century.

With continuing threats to national security so uncertain, maintaining technological superiority will require a strong continuing research effort. The armed forces today not only must be ready to fight in conventional regional wars like the Gulf War; they also must be ready to undertake peacekeeping missions in hostile situations and to defend against unconventional threats such as terrorism, biological and chemical agents, and computer sabotage.

In summary, in accordance with the recommendations of the Defense Science Board, CNSR hopes that you will agree to provide $8.4 billion total for 6.1, 6.2, and 6.3 within the R,D,T & E title of the DOD appropriation for fiscal year 2001. Although the total budget request for these programs was only $7.5 billion, we believe it is crucial for our national security that there should not be a decline in funding for these important programs. Thank you for giving me the opportunity to testify today. I would be happy to answer any questions you may have.

Senator STEVENS. I appreciate that. And I think you are right. We were disappointed that the President's request did not at least keep the level of last year or this current year. And I personally authored the amendment to add $4 billion to Defense, with the idea that part of that would go into basic research. But it has already been eaten up by these things we have discovered since the budget was passed. So, I do not know. We will do our best to find the money. We should keep up at least the level of the current research, and I am sure we agree with that.

Mr. PARKER. We appreciate your support.

Senator STEVENS. I thank you for taking the time. Thank you very much.

Ian Volner, Ovarian Cancer National Alliance, and Clark Rook. Thank you, gentlemen.

STATEMENT OF IAN VOLNER, LAWYER, ON BEHALF OF THE OVARIAN CANCER NATIONAL ALLIANCE

ACCOMPANIED BY E. CLARK ROOK, RETIRED NAVAL OFFICER, ON BEHALF OF THE OVARIAN CANCER NATIONAL ALLIANCE

Mr. VOLNER. Mr. Chairman, members of the committee, my name is Ian Volner, and I have testified before the chairman in other capacities than my professional capacity. This is the first time I have ever testified in a personal capacity. My purpose today, on behalf of the Ovarian Cancer National Alliance, is to express my family's appreciation. As a representative of the thousands of women and families in the military and in civilian life, for the support that Congress has given to the Department of Defense's Ovarian Cancer Research Program, and we ask that the funding level for this vital and very successful program be increased to $20 million for fiscal year 2001.

I wish I could say that my family is survivors of ovarian cancer because my wife's cancer was detected early, when the prospects for successful treatment were good, but that unfortunately was not true. Martha survived despite the odds because of the skill and dedication of doctors who treated her. And she is among the very small population, 28 percent, who survive ovarian cancer when it is detected at a late stage.

There is unfortunately a simple answer to the question of why more than two-thirds of the ovarian cancer cases in the United States are not diagnosed until an advanced stage. The current diagnostic tools are imprecise and there is no reliable and easy way to administer a screening mechanism for the general population. My wife's declining health was ascribed variously to hormonal changes that occur in women of a certain age, to stress, to the flu, and, when Captain Rook testifies, you will see that though we did not coordinate, his wife suffered the same problem. It simply was not diagnosed early.

In my wife Martha's case, it was not finally detected until she took herself off to an emergency room here in Washington and simply refused to leave until they told her what was wrong with her. For other cancers, there are screening mechanisms: the Pap smear for cervical cancer, the mammogram for breast cancer. For ovarian cancer, no such equivalent exists. And that is why the Department of Defense Ovarian Cancer Research Program is so critically important.

The program is young. It was not initially funded until 1997. But I am sure that the subcommittee will find, when they examine the work that has been done to date, that the money has been spent wisely and well. Among the very first research grants made was one for a study that is looking for molecular markers that can help detect ovarian cancer at an early stage.

We appreciate the support that the committee has given to this very important program and we ask that you seriously consider our request to increase the funding to $20 million for fiscal year 2001. I would like to have Captain Clark explain his, unfortunately, less happy experience with this disease.

Senator STEVENS. Yes, sir.

Mr. ROOK. My name is Clark Rook. I am a retired Naval officer residing in Northern Virginia, and I am here today as a volunteer

for the Ovarian Cancer National Alliance to briefly describe my personal involvement and concerns with what has been described as the deadliest cancers of the female reproductive tract, ovarian cancer. My testimony will focus on my wife, Elaine, who recently succumbed to the disease.

However, before I continue, I would like to respectfully request each of you on this subcommittee develop an awareness of ovarian cancer, share this awareness with your family and friends, and hopefully ensure you will not have to experience what I am about to describe. Ovarian cancer has not received the notoriety other cancers have, but I can assure you that it is just as deadly.

Elaine died at home this past New Year's Eve, after an almost 5-year battle with ovarian cancer, which she fought with grace and optimism. Briefly, she had three major surgeries, maximum radiation and essentially eight different types of chemotherapy. While the medical care she received once the cancer was diagnosed was outstanding, I am personally left with two very basic but frustrating questions: Why is there not some type of procedure for identifying ovarian cancer similar to the Pap smear used to detect cervical cancer, or the "grab and smash it" test, as Elaine described the mammogram, for detecting breast cancer? Also, why is there a significant lack of awareness in this country about ovarian cancer?

One of the first doctors Elaine saw with her medical problems attributed them to a female who was aging. At that time, she was 57. Ironically, that doctor was a female gynecologist. Subsequently, in early 1995, after numerous tests, none of which gave any indication of ovarian cancer, a computer aided tomography (CAT) scan revealed a malignant tumor, the genesis of her problems. Elaine was diagnosed with ovarian cancer, and her tumor was the size of a 22-week fetus.

I was recently asked if I was bitter at having lost my wife of 37 years. Yes, but my real bitterness, if you want to call it that, lies with the almost total lack of awareness of the female population of this country, as it relates to ovarian cancer, and the fact that unless they are directly or indirectly involved in oncology, my personal observation is that most of the medical profession are not far behind.

While the development of a better awareness of ovarian cancer is a primary goal of all those concerned with ovarian cancer, it is only one of two primary goals. The other goal is increased research. I personally feel, through the loss of my wife, that not enough is being done in the area of ovarian cancer research or, if it had, Elaine's cancer might have been identified earlier.

The American Cancer Society states that if ovarian cancer is diagnosed and treated early, the survival rate is 95 percent. However, only about 25 percent are detected at this stage. The lack of awareness of ovarian cancer is presently being aggressively addressed on two fronts. The Ovarian Cancer National Alliance has launched an initiative to educate women and health care professionals across the Nation about symptoms, risks, and treatments of ovarian cancer. At the same time, the Gynecological Cancer Foundation is developing a teaching slide presentation of all gynecological cancers, with an emphasis on ovarian cancer.

As you might guess, until her cancer was identified, Elaine was not aware of the symptoms of ovarian cancer, nor the potential impact cancer would have on her life and that of her family. Perhaps that may be the reason I am involved in volunteering with the Ovarian Cancer National Alliance, to maximize the awareness of ovarian cancer.

In closing, there are several thoughts I would like to leave you with. This year alone, while it is estimated there will be 23,100 new cases of ovarian cancer, it is also estimated there will be 14,000 deaths due to ovarian cancer. The deaths in the States represented on this subcommittee alone comprise approximately one-third of these 14,000 deaths.

The final thought I would like to leave with you concerns age. The National Cancer Institute addresses the age of ovarian cancer this way: The risk of developing ovarian cancer increases as a woman gets older. Most ovarian cancer occur in women over the age of 50; the risk is especially high for women over 60.

On one occasion, while my wife was getting her chemotherapy, a young lady who had ovarian cancer was getting her chemotherapy. She was only 14 years old.

Mr. Chairman, I thank you for your time.

[The statements follow:]

PREPARED STATEMENT OF IAN VOLNER

Mr. Chairman and Members of the Committee: My name is Ian Volner and I am a lawyer here in Washington, DC. Over the years, I have testified in my professional capacity before Congress on numerous occasions on various public issues. This is the first time that I have ever testified in my personal capacity. I do so because my wife, our two sons and I are "survivors" of ovarian cancer. My purpose, simply, is to express my family's appreciation—as representative of the thousands of women and families—for the support Congress has given the Department of Defense's Ovarian Cancer Research Program and to ask that the funding level for this vital and very successful program be increased to $20 million for fiscal year 2001.

I wish I could say that we are among the survivors because my wife's cancer was detected early when the prospects for successful treatment are good, but that is not true. My wife is among the tiny population, less than 28 percent of women who survive ovarian cancer that is not detected until an advanced stage. Martha survived despite the odds because of the skill and dedication of Doctors James Barter and Jeffrey Hines (then both with the Lombardi Clinic here in Washington) and in no small measure because of their courage and hers. I will never forget, however, the doctor's comment when, after the surgery, I asked whether or not there was reason to hope for a successful recovery so that I could tell my then thirteen and eleven year old sons. The doctor's reply that the best reason to hope was because the cancer had not yet reached the "Gilda Radnor stage." The Subcommittee may recall that Gilda Radnor was a very talented and young actress whose ovarian cancer was not detected until it was too late.

There is, unfortunately, a simple answer to the questions why more than two-thirds of the ovarian cancer cases in the United States are not diagnosed until an advanced stage. The current diagnostic tools are imprecise and there is not reliable and easy to administer screening mechanism for the general population. My wife's poor health was ascribed variously to hormonal changes that occur in women of a certain age, to the flu to simple stress. The cancer was not detected until one morning when Martha took herself off to the emergency room of a local hospital and simply informed the staff that she was not going to leave until they provided her with a hard and clean diagnosis of what was causing her to fell so unwell. For other cancers, there are reliable screening mechanisms: Pap smear for cervical cancer; the mammogram for breast cancer. For ovarian cancer, no such equivalent exists.

And that is why the Department of Defense's Ovarian Cancer Research Program is critically important. The program is young; it was not initially funded until 1997. However, I am sure that when the Committee views the work that has been done to date, it will find that the money that Congress has appropriated for this program is being spent wisely and well. Among the first research grants is a study that is

looking for molecular markers that can help detect ovarian cancer at an early stage. As someone who has had to share the horrors of this terrible disease, I want to express my appreciation for the support that Congress has given the DOD Ovarian Cancer Research Program and to request that this Committee increases the funding level to $20 million for fiscal year 2001. In that way, millions of women at risk in this country for ovarian cancer do not have to go through the ordeal that our family suffered, and in a real sense continues to suffer, because of this insidious disease.

I want to thank the members of the subcommittee for the opportunity to testify at this important hearing today. I know it has been a long day for you. I am ready to answer any questions you may have at this time.

PREPARED STATEMENT OF E. CLARK ROOK

Mr. Chairman: My name is Clark Rook and I'm a retired naval officer residing in Northern Virginia. I'm here today as a volunteer for the Ovarian Cancer National Alliance to briefly describe my personal involvement and concerns with what has been described as the deadliest of cancers of the female reproductive tract—ovarian cancer. My testimony will focus on my wife, Elaine, who recently succumbed to the disease.

Elaine died at home this past New Year's Eve after an almost five year battle with ovarian cancer which she fought with grace and optimism. Briefly, she had three major surgeries, maximum radiation, and essentially eight different types of chemotherapy. While the medical care she received once the cancer was diagnosed was outstanding, I am personally left with two very basic but frustrating questions. Why isn't there some type of procedure for identifying ovarian cancer similar to the Pap smear for cervical cancer or the "grab and smash it" test as Elaine described the mammogram for detecting breast cancer? Also, why is there a significant lack of awareness in the country about ovarian cancer?

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I was recently asked if I was bitter at having lost my wife of 37 years. Yes, but my real bitterness, if you want to call it that, lies with the almost total lack of awareness of the female population of this country as it relates to ovarian cancer, and the fact that unless they are directly or indirectly involved in oncology, my personal observation is that most in the medical profession aren't far behind.

While the development of a better awareness of ovarian cancer is a primary goal of all of those concerned with ovarian cancer, it is only one of two primary goals. The other goal is increased research. I personally feel through the loss of my wife that not enough is being done in the area of ovarian cancer research, or if it had, Elaine's cancer might have been identified earlier. The American Cancer Society states that if ovarian cancer is diagnosed and treated early, the survival rate is 95 percent. However, only about 25 percent are detected at this stage.

The lack of awareness of ovarian cancer is presently being aggressively addressed on two fronts. The Ovarian Cancer National Alliance has launched an initiative to educate women and health care professionals across the nation about the symptoms, risks, and treatments of ovarian cancer. At the same time, the Gynecologic Cancer Foundation is developing a teaching slide presentation of all gynecological cancers with an emphasis on ovarian cancer. This presentation will be directed at primary care physicians as well as the lay public.

As you might guess, until her cancer was identified, Elaine was not aware of the symptoms of ovarian cancer nor the potential impact ovarian cancer would have on her life and that of her family. Perhaps, that may be the reason I'm involved in volunteering with the Ovarian Cancer National Alliance—to maximize the awareness of ovarian cancer.

In closing, there are several thoughts I would like to leave with you. This year alone, while it is estimated that there will be 23,100 new cases of ovarian cancer, it is also estimated that there will be 14,000 deaths due to ovarian cancer. The deaths in the states represented on the subcommittee alone comprise approximately one third of these 14,000 deaths.

The final thought I would like to leave with you concerns age. The National Cancer Institute addresses the age for ovarian cancer this way—"The risk of developing ovarian cancer increases as a woman gets older. Most ovarian cancers occur in women over the age of 50; the risk is especially high for women over 60." On one

occasion while my wife was getting her chemotherapy, a young lady who had ovarian cancer was getting her chemotherapy. She was only 14 years old!

Mr. Chairman, I thank you for your time and am ready to try and answer any questions you may have.

Senator STEVENS. Thank you very much, gentlemen. I appreciate your testimony.

The next witness is Dr. William Strickland, the American Psychological Association.

STATEMENT OF WILLIAM STRICKLAND, PH.D., AMERICAN PSYCHOLOGICAL ASSOCIATION

Dr. STRICKLAND. Good afternoon, Mr. Chairman. As you noted, I am Bill Strickland, and I am speaking here today on behalf of the American Psychological Association (APA). APA is a professional and scientific organization of more than 159,000 members, many of whom conduct behavioral research relevant to the military.

I would like to address two main issues of relevance to this subcommittee. First, the dangerous trend within the Department of Defense of cutting funds for its science and technology budget; and second, the critical need to invest in psychological research in DOD's service laboratories, including the particular need to sustain support for human systems programs in the Air Force. I have discussed each of these topics in some detail in my written testimony.

I know that this subcommittee is very concerned with both of these issues, and I thank you and your colleagues in the Senate for adding funds to DOD's science and technology budget in fiscal year 2000, bringing it in line with the Defense Science Board's minimum recommendations. Clearly, our military superiority and success in recent years can be traced to substantial funding for basic and applied research that occurred decades ago.

Similarly, our ability to maintain near-term and future global superiority depends on reinvesting in science and technology now. For fiscal year 2001, we ask that the subcommittee increase funding for the overall DOD science and technology budget to at least $8.4 billion. This represents only a 0.03 percent increase over last year's appropriated funds, but it is a 12 percent increase over the current administration request.

I know that most of you are very familiar with the work being done in our military laboratories, which provide a mission-oriented focus for defense science and technology. Especially at the basic and applied exploratory development levels, research programs that are eliminated from the labs as cost-cutting measures are not likely to be picked up by industry, because industry typically focuses on short-term, profit-driven product development. Once the expertise is gone from the service laboratories, there is absolutely no way to catch up when mission needs for critical human-oriented research develop. And those needs will develop.

APA supports the administration's fiscal year 2001 request for behavioral research programs within both the Army Research Institute and the Office of Naval Research. However, we urge the subcommittee to restore to the Air Force research laboratory funds that are now planned to be cut. Specifically, the funding for applied human-oriented research in the manpower, personnel, training, and crew technology programs. Restoring those funds would require an increase of $7.809 million over the administration request.

APA is concerned about the cuts planned for applied behavioral research within the Air Force, especially since Congress restored funds to these very programs in fiscal year 2000 in order to ensure continuation of this vital work. These programs are responsible for developing products relevant to an enormous number of acknowledged Air Force mission needs, ranging from weapon system design, improvements in simulator technology, improving crew survivability in combat, and improved and less expensive training programs.

I know that many of you are familiar with the situation at Brooks Air Force Base in Texas, where world-renown personnel and technical training research facilities basically no longer exist, having been reduced from a level of 130 people a few years ago due to funding cuts and resulting reductions in force.

In January of this year, the Air Force Association issued a special report, "Shortchanging the Future." That report's primary conclusion was: Within the Air Force today, near-term readiness and modernization concerns are not balanced with the investment in science crucial for meeting the demands of future threats. As this subcommittee has noted repeatedly this year, and this morning, this is a critical mistake. We ask your help in making sure that the Air Force does not continue on this course by restoring funds for crucial human-oriented research within the Air Force research laboratory.

Chairman Stevens, thank you very much.

[The statement follows:]

PREPARED STATEMENT OF WILLIAM STRICKLAND, PH.D.

My name is William Strickland, Ph.D., and I am speaking here on behalf of the American Psychological Association (APA). APA is a professional and scientific organization of more than 159,000 members and associates, many of whom conduct behavioral research relevant to the military. I would like to address two main issues of relevance to this Subcommittee: first, the dangerous trend within the Department of Defense (DOD) of cutting funds for its Science and Technology budget; and second, the critical need to invest in psychological research in DOD's service laboratories, and the particular need to sustain support for human systems programs in the Air Force. Once again, the Administration's request would cut the Air Force's applied behavioral research budget for fiscal year 2001, despite Congressional action restoring funds to this budget last year.

DANGEROUS UNDER-INVESTMENT IN DOD SCIENCE AND TECHNOLOGY

I know this Subcommittee shares the science community's strong concern about DOD's declining overall investment in science and technology. Our military superiority and success in recent hostilities can be traced to substantial funding for basic and applied research several decades ago, and our ability to maintain near-term and future global superiority depends on re-investing in science and technology now.

APA thanks this Subcommittee and colleagues in the House for adding funds to DOD's requested Science and Technology budget in fiscal year 2000, bringing it in line with the Defense Science Board's minimum recommendations. For fiscal year 2001, we ask that the Subcommittee increase funding for the overall DOD Science and Technology Budget to at least $8.4 billion; this represents only a 0.03 percent increase over last year's appropriated funds, and a 12 percent increase over the current Administration request.

NEED FOR BEHAVIORAL RESEARCH IN THE MILITARY

Our military faces a host of current challenges around the world, including renewed hostilities, the emergence of non-traditional conflict situations, new peacekeeping missions, increased operational tempo and longer deployments for military members, at the same time that forces face continuing recruitment and retention problems. In addition, the sophistication of weapons and information technology has

dramatically changed the skills required of military personnel. What hasn't changed is that success in military operations still depends on people—at every level, in every unit. We simply cannot afford to let hardware and software get too far ahead of the "humanware." As the Secretary of the Air Force recently stated before this Subcommittee, training and education in particular are the essential keys to successful command and employment of military power when technology becomes more sophisticated and when the complexity and pace of operations increase.

Psychological research addresses the most critical mission issue facing our armed services—maintaining readiness in an ever-changing national security climate—by providing policy-relevant data on the selection and assignment of personnel, skills-training, design of the human-machine interface, and efficient and safe operation of complex systems. Unfortunately, behavioral research is at a particular disadvantage in the current decision-making atmosphere, which favors easily identifiable research "products," such as new hardware; the fact that behavioral research can determine whether personnel will be able to use that hardware is not obvious until something goes wrong.

THE MILITARY BEHAVIORAL SCIENCE PROGRAMS

The military service laboratories provide a stable, mission-oriented focus for defense science and technology, conducting and sponsoring basic (6.1), applied/exploratory development (6.2) and advanced development (6.3) research. Especially at the 6.1 and 6.2 levels, research programs which are eliminated from the mission labs as cost-cutting measures are extremely unlikely to be picked up by industry, which focuses on short-term, profit-driven product development. Once the expertise is gone, there is absolutely no way to "catch up" when mission needs for critical human-oriented research develop.

Army Research Institute for the Behavioral and Social Sciences (ARI)

ARI works to build the ultimate smart weapon: the American soldier. ARI was established to conduct personnel and behavioral research on such topics as minority and general recruitment; personnel testing and evaluation; training and retraining. ARI is the focal point and principal source of expertise for all the military services in leadership research, an area critical to the success of the military. Research that helps our armed forces identify, nurture, and train leaders is critical to their success. ARI also investigates how particular aspects of Army culture and/or larger societal issues influence recruitment, retention, morale and performance.

Office of Naval Research (ONR)

The Cognitive and Neural Sciences Division (CNS) of ONR supports research to increase the understanding of complex cognitive skills in humans; aid in the development and improvement of machine vision; improve human factors engineering in new technologies; and advance the design of robotics systems. An example of CNS-supported research is the division's long-term investment in artificial intelligence research. This research has led to many useful products, including software that enables the use of "embedded training." Many of the Navy's operational tasks, such as recognizing and responding to threats, require complex interactions with sophisticated, computer-based systems. Embedded training allows shipboard personnel to develop and refine critical skills by practicing simulated exercises on their own workstations. Once developed, embedded training software can be loaded onto specified computer systems and delivered wherever and however it is needed.

Air Force Research Laboratory (AFRL)

APA is extremely concerned about the significant cuts anticipated for applied behavioral research (6.2) within AFRL, especially since Congress restored similar cuts to these research programs in fiscal year 2000 to ensure continuation of vital work. These programs are responsible for developing the products which flow from manpower, personnel, and training and crew technology research in the Air Force, products which are relevant to an enormous number of acknowledged Air Force mission needs ranging from weapons design, to improvements in simulator technology, to improving crew survivability in combat, to faster, more powerful and less expensive training regimens.

As a result of recent cuts to the AFRL behavioral research budget, for example, the world's premier organization devoted to personnel selection and classification (formerly housed at Brooks Air Force Base) no longer exists. This has a direct, negative impact on the Air Force's and other services' ability to efficiently identify and assign personnel (especially pilots). Similarly, reductions in support for applied research in human factors have resulted in an inability to fully enhance human factors modeling capabilities, which are essential for determining human-system re-

quirements early in system concept development, when the most impact can be made in terms of manpower and cost savings.

In January of this year, the Air Force Association issued a special report, "Short-changing the Future," in which retired Generals and scientists outlined the dangers of the declining Air Force science and technology budget (both in terms of real dollars and percentage of total Air Force spending). APA strongly supports the report's primary conclusion: at critical decision-making points within the Air Force today, near-term readiness and modernization concerns are not balanced with an investment in science and technology to meet the demands of future threats. As this Subcommittee has noted repeatedly this spring, this is indeed a critical mistake.

APA supports the Administration's fiscal year 2001 requests for behavioral research programs within both the Army Research Institute (ARI; $21.974 million) and the Office of Naval Research (ONR; $39.264 million). However, we urge the Subcommittee to restore the planned cuts to the Air Force Research Laboratory (AFRL), specifically the funding for applied, human-oriented research in the Manpower, Personnel, and Training and Crew Technology programs (for a total of $99.498 million, an increase of $7.809 million over the Administration request).

SUMMARY AND RECOMMENDATIONS

It is sometimes easy to overlook the important contributions of behavioral research to the missions of the Army, Navy and Air Force because the results usually do not translate directly into new weapons systems or hardware. Yet behavioral research has provided and will continue to provide the foundation for tremendous savings through increased personnel efficiency and productivity. This work is vital to the military for identifying critically needed improvements in human resources development, training and human error reduction.

Increasing demands for qualified recruits place huge demands on the military to more efficiently target and train personnel; increasingly sophisticated weapons systems place more, not fewer, demands on human operators. We must ensure that military personnel are as well prepared as their machines to meet the challenge. Our servicemen and women deserve no less from us. This is not possible without a sustained investment in human-oriented research.

APA thanks the Subcommittee for its leadership in bringing the fiscal year 2000 DOD Science and Technology budget in line with the minimum recommendations of the Defense Science Board, and we ask that you increase funding for DOD's overall Science and Technology budget to $8.4 billion for fiscal year 2001.

In terms of the military service laboratories, we support the Administration's fiscal year 2001 requests for the Army and Navy behavioral research programs, but we urge you to restore the Air Force's funding for applied, human-oriented research to its fiscal year 2000 level.

Senator STEVENS. Thank you very much, Doctor. I appreciate you coming.

The next witness is Robert Morris, Executive Director of the Fort Des Moines Black Officers Memorial.

STATEMENT OF ROBERT V. MORRIS, EXECUTIVE DIRECTOR, FORT DES MOINES BLACK OFFICERS MEMORIAL

Mr. MORRIS. Senator Stevens, am I able to hand you a photo?

Senator STEVENS. Sure.

Mr. MORRIS. Thank you for the opportunity to testify once again this year. And thank you for the kind support that you gave our project last year. As we drive toward preserving a critical part of America's military history for youth to see and learn from at Fort Des Moines, the park's rehabilitation and development costs continue to grow. No military installation has played as great a role in the racial and gender integration of America's armed forces as Fort Des Moines, which we are preserving through the development of a 6-acre memorial park project, featuring a 20,000-square-foot museum at Clayton Hall.

Unfortunately, the rehabilitation costs of the museum at Clayton Hall will exceed the $2 million operations and maintenance (O&M) appropriation received last year, which was ambushed by a series

of Government agencies, including the Department of Defense, who took $37,000 before it even left town, the U.S. Army Reserve Engineers' out of Atlanta, and the U.S. Corps of Engineers, which are currently levying their administrative fees out of that money, as well.

Senator STEVENS. What do they ask for, do you know how much?

Mr. MORRIS. The Defense Department said that, that was administrative costs, and the Reserve Engineers and Corps of Engineers say that theirs will be administrative costs, and they set some aside for a contingency fee that they take out of the amount. So what we are going to end up with is about 75 percent of what we started with.

Senator STEVENS. We have just got to stop that. That is just nonsense. How much do you need this year?

Mr. MORRIS. We are hoping for $2 million this year. You are aware of the story of this monument, so I do not need to go through all of that.

Senator STEVENS. I have talked to other people about it, and we certainly will support it. But I am disturbed to hear that the money we put up does not get to the project we put it up for. This has got to stop. They get administrative costs. They pay their salaries from other items. They just are robbing these accounts.

Mr. MORRIS. Yes, sir.

Senator STEVENS. I do not like that at all. We will do our best to get you the money you asked for, Mr. Morris. And we will also consider putting some limitations on these grants for specific projects so they cannot hit them with administrative costs.

Mr. MORRIS. Thank you.

Senator STEVENS. You let us know if they do, all right?

Mr. MORRIS. I appreciate that, and I will do that, sir. Thank you.

And just to show you the picture I gave you, the black and white pictures are what the building looks like now, and the color photo on the brochure is what it used to look like and what it will look like again, once it is rehabilitated.

Senator STEVENS. I think that is wonderful. You can have these back if you would like. I have discussed that project with other members, and I think it is a wonderful project.

[The statement follows:]

PREPARED STATEMENT OF ROBERT V. MORRIS

As we drive towards preserving a critical part of military history for America's youth to see and learn from at Fort Des Moines, Iowa, the park's rehabilitation and development costs continue to grow.

No military installation has played as great a role in the racial and gender integration of America's Armed Forces than Fort Des Moines which we are preserving through the development of a six acre memorial park project featuring a 20,000 square foot museum at Clayton Hall. Unfortunately, the rehabilitation cost of the museum will exceed the $2 million O&M appropriation received last year which was ambushed by a series of government agencies (Department of Defense $37k, U.S. Army Reserve Engineers and U.S. Corps of Engineers) on its way to Fort Des Moines. Therefore, we request an additional $2 million to finish the rehabilitation and development of the memorial park.

As I noted last year, during the First World War, the U.S. Army established its first officer candidate school open to black Americans at Fort Des Moines in 1917. Although three black officers had previously graduated West Point, the Fort Des Moines OCS became the first class open to black candidates.

Of the 1,250 black officer candidates that became the 17th Provisional Training Regiment at Fort Des Moines, 1,000 were college graduates and faculty and 250

were non-commissioned officers called representing the famous 9th and 10th Cavalry "Buffalo Soldiers" and the 24th and 25th Infantry who were in service on the plains. Many of the graduate officers went on to lead the 92nd Division against Imperial Germany on the battlefields of France in 1918.

Three decades before formal military desegregation, the graduate officers of Fort Des Moines racially integrated the command structure of America's Armed Forces and set the standard for all who would follow.

THE WAAC

Some 25 years later, the very thought of female soldiers offended many Americans but the Army was determined to try yet another experiment and once again conduct it at Fort Des Moines.

The Women's Army Auxiliary Corps (WAAC) was formed at Fort Des Moines in 1942 where 65,000 women would receive non-combat training during World War Two. As part of the WAAC, Fort Des Moines hosted the first officer candidate school open to women graduating 436 officers, including 39 black females, on 29 August 1942. WAAC units served with distinction in England and France during WW II and created a standard of excellence followed by female troops serving in America's Armed Forces today.

It is astonishing that these two critical events were held at the same location 25 years apart and that Fort Des Moines launched the racial and gender command integration of the United States military. The unique historical importance of our project is reflected by our advisory board members including: Gen. Colin L. Powell, USA (ret), former Chairman of the Joint Chiefs of Staff; B/Gen. Elizabeth Hoisington (ret), the military's first female General Officer; Lt. Gen. Russell Davis, the first black Chief of the National Guard; M/Gen. Evan Hultman, AUS (ret), former Executive Director of ROA.

As part of our memorial park project at Fort Des Moines, an active Army Reserve post which is named on the Endangered National Historic Landmark list, the rehabilitation of the museum at Clayton Hall (Bldg. 46) must receive top priority. The dilapidated 20,000 square foot Clayton Hall building is deteriorating rapidly through Iowa's brutal winters and must be saved. To this end, we request $2 million O&M funding to further rehabilitate and develop this critical part of our nation's history.

Thank you.

Senator STEVENS. Thank you very much.

Now, Master Sergeant Smith, you have been a patient man. We will not even run the lights on you. You have waited so long, you just tell us what you want us to hear.

STATEMENT OF DON C. SMITH, MASTER SERGEANT, U.S. AIR FORCE (RETIRED), LEGISLATIVE ASSISTANT, MILITARY AND GOVERNMENT RELATIONS, AIR FORCE SERGEANTS ASSOCIATION

Master Sergeant SMITH. This is quite a different environment from when we first met. I used to fly the blue and whites out of Andrews.

Senator STEVENS. Yes.

Master Sergeant SMITH. I know I have seen you out there.

Mr. Chairman, thank you once again for this opportunity to briefly highlight the items that are important to the 150,000 active, Reserve and retired enlisted members of the Air Force Sergeants Association. As we have travelled around the Air Force, it is very clear that our efforts last year to formulate the current defense bill were met with great appreciation by those you worked so hard to protect. Quality-of-life issues, such as pay increases and retirement reform, will have a long-term impact on the challenges of recruiting, retention and readiness.

As you move toward the fiscal year 2001 appropriations in the area of defense, we ask that you pay particular attention to the following matters:

Although last year's pay raise, the new formula for future pay raises, the targeted pay adjustments upcoming in July, and the elimination of the reducts system were welcome changes, more needs to be done.

Because mid-career non-commissioned officers (NCO) pay adjustments for July fell short of equity for these NCO's, we request further targeted increases within the enlisted chart, particularly for the grades of E–5, E–6 and E–7. And I am sure the FRA, Fleet Reserve Association, hit that pretty hard earlier.

The basic allowance for housing (BAH) should be fully funded, to minimize out-of-pocket expenses for military members, and it needs to be increased for enlisted members, as well. Again, housing allowances are paid through two very different pay charts, with the enlisted chart considerably lower. We request help for enlisted members in this area.

Military health care continues to be a challenge as the Department of Defense works to minimize its health care offerings, and as Congress works to protect those who serve. As you know, retiree health care is a major challenge this year. Several bills have been introduced, including one by the chairman of the House Armed Services Committee, and we respectfully request your full funding of the lifetime health care commitment.

As the Veterans Affairs people work to build up the Montgomery G.I. Bill, we ask that you also provide considerable funding in the area of tuition assistance, which is the primary tool of active duty military members. We also ask that you once again provide impact aid dollars to protect military families from the administration's program shortfalls in Department of Education dollars in this area.

Finally, we urge that the payment of special pays to Reserve component members be funded in parity with the payment policies for active duty. The concept of the weekend warrior is absolutely inaccurate in this age, when half of the military force used to carry out missions of this Nation are made up of Reserve component members.

Once again, Mr. Chairman, thank you for all that you do for those who serve this Nation. Your commitment and that of the members of this committee is a great message for us to share with the wonderful young men and women who devote part of their lives to the service of their Nation. Thank you. And I would be pleased to answer any questions you have.

[The statement follows:]

PREPARED STATEMENT OF DON C. SMITH

Mr. Chairman and distinguished committee members, on behalf of the 150,000 members of the Air Force Sergeants Association, thank you for this opportunity to offer our views on the funding efforts needed to assure the quality-of-life of the military forces. Your efforts last year, particularly in the areas of compensation and retirement, resulted in some great steps forward in beginning to address various features of military life. Your accomplishments during this Congress' first session of providing a good pay raise, retirement reform, the Temporary Lodging Expense for first time permanent change of station moves, the mandate that DOD implement a program similar to the Women, Infants, and Children food nutritional supplement/education program for overseas members, Career Enlisted Flyer Incentive Pay, and further improvements in military health care are some of your major accomplishments on behalf of those who serve. Now, we ask that you build on those efforts to continue to ensure the military as a viable instrument to achieve national security objectives and, at the same time, continue to draw the best and the brightest

young people from our society to devote a period of their lives to the preservation of liberty.

What are some of the dynamics that act as challenges to recruiting and retaining men and women to serve? In this testimony, we will limit the focus of this statement to items important to meeting the Air Force's quality-of-life needs: current and future life benefits and, for Reserve Force members, support of the unique contingencies of the "Citizen Soldier."

THE QUALITY OF THE MILITARY LIFE

The men and women in the Armed Forces work very long hours in extremely difficult environments to protect this nation. They are generally selfless and devoted to get the job done to the detriment, at times, of their own well-being. What are some factors that contribute to the quality of the military life style that need to be regularly addressed?

Contemporary military forces have faced significantly greater missions with considerably fewer people, increasing family separations, declining health care programs, curtailed pay and allowances increases, deteriorating military housing, less opportunity for educational benefits, and more out-of-pocket expenses with every military relocation. It is amazing that so many continue to selflessly serve the military "company." They obviously do so because of their dedication to a higher, patriotic ideal. However, it is time to take certain actions to provide the necessary funding needed to enhance the quality of enlisted military lives.

Workload Versus Available Workforce.—This nation's changed strategy from projecting America's military force only when in support our "vital national interests" to one of global engagement and full participation in police actions and humanitarian efforts has had its toll on maintaining an all-volunteer force. The population of the military services has greatly decreased since the fall of the Berlin Wall, the collapse of the Soviet Union, and the emergence of the United States as the world's only "super power." At the same time, the global missions of these forces (with far fewer people) have increased several fold. On top of that, while increased deployments take a toll on those who must deploy, those left behind now must assume even more tasks because the job that needs to be done at home has not gone away.

This mathematical contradiction, i.e., far few people, far greater tasks, has resulted in longer hours, significant family separations, higher levels of stress, and the creation of a physically challenged force. Many military members wonder if they might have healthier, happier lives on the "outside" as a participant in the fruits of the booming economy they helped to create. The Air Force, in particular, has taken moves to help alleviate this "spent force" situation by transitioning to an Expeditionary Aerospace Force (EAF). Within the EAF, the predictability of long-term deployments promises to be far more visible, and members should be better able to plan their individual responses to mitigate the impact of deployments and family separations.

While we applaud this effort, it will only be successful if manning levels are maintained or increased. Many officials call for further bases realignments and closures to eliminate unnecessary infrastructure. The contention is that as these unneeded facilities close, the manning can be transferred to the remaining bases, with the promise that the workload and pace of deployments will lessen. If this is not done, more and more military members will leave, and fewer and fewer will choose to enter any of the services. This is a situation we have created, and it is one we can and must correct. We urge this Congress to increase the quality of the lives of the all-volunteer force by taking this action:

—Establish manpower levels to match the missions this nation has chosen to levy on those who serve—both those deployed and those at home.

Military Pay.—Building on the gains made in the fiscal year 2000 Defense Authorization, it is important to realize that the work is not finished. We applaud the 4.8 percent pay raise effective January 1, 2000, and the pay adjustments to be made in July 2000 are a first step in readjusting the pay charts. Further, tying annual future military pay raises through the year 2006 to a half percentage above the Employment Cost Index was a wise move that sent a strong signal to those serving. However, some realities must be examined about the way we pay our military members. There are two pay charts for the military: one for commissioned officers, and a significantly lower-compensation one for enlisted members. The net effect of across-the-board pay raises over the years has served to pull these charts further apart. Yet both groups of members continue to face the same "survival" challenges in the same economic environment. This pay disparity is similar to what you would encounter in civilian industry between white collar and blue collar workers. However, there are two dynamics in the military that seem to have been ignored when

considering how we pay our people: in recent years, many roles that were formerly handled by commissioned military members are increasingly being assumed by enlisted members, and the education level of the enlisted corps has increased considerably. Indeed, middle-range noncommissioned members handle many tasks formerly carried out by their superiors and, in fact, often assume as one of their duties the training of junior commissioned officers. Also, an increasing number of enlisted members enter service or take actions to move toward higher education during their careers. As AFSA representatives travel around United State Air Force bases, it is gratifying to note the innumerable cases where relatively low-ranking enlisted members are handling technologically awesome tasks and making day-to-day, life and death decisions. It is time that military compensation be re-examined and a new model be established to move the two compensation tables closer together to reflect the changing enlisted roles in relation to the overall military establishment. This will work to help us sustain the all-volunteer force. Additionally, we must establish minimum payment levels to ensure that no military member falls below this nation's poverty threshold that entitles them to Food Stamps.

—Ensure adequate future pay raises.

—Establish a new model for military pay recognizing modern enlisted responsibilities.

—Establish minimum pay and compensation levels to place all members above the national poverty (Food Stamp eligibility) level.

The Basic Allowance for Subsistence (BAS) is designed to pay for food for military members. Because the cost of food parallels the cost of goods and services in our economy, over the years Congress has increased the BAS by the same percentage each year as the growth of basic military pay until two years ago when BAS was frozen at one-percent growth per year for the next several years. This change resulted from the contention that military members, enlisted in particular, were receiving more than they needed for food, and (some claim) DOD's desire to provide alternate funding to pay for meal cards—payment for the dormitory dwellers' to eat in base dining facilities. Also, DOD maintained that limiting the growth of BAS would allow the provision of BAS to those residing in the dormitories—a reality that has come about in a very limited way. It is time to once again tie the annual growth of BAS to military pay increases.

—Increase enlisted military pay to reflect the relative increased responsibilities of enlisted members.

—Re-establish BAS increases to parallel military pay increases.

Housing and Housing Allowances.—Where a military member lives is dictated by a number of factors, not always by choice. Those deploying, of course, live where (and under what conditions) the location of the mission dictates. At home base, factors include the member's rank, the number of accompanying family members (if any), the availability of on-base housing, dormitory space, and other factors. Those living on base generally face a variety of models of on-base housing ranging from a half-century old, to very modern structures. Some homes meet the quality muster some are substandard. In an effort to achieve efficiencies, DOD has entered into arrangements with private industry for the construction and maintenance of on-base facilities. The goal of construction outsourcing and privatization is to cut down on the backlog of the number of homes that are dilapidated and must be upgraded or replaced. AFSA supports this effort toward privatization with the caveat that we must ensure that privatization should not infringe on any military benefits.

For those who must live off base, the provision of the Basic Allowance for Housing is intended to account for the average of 85 percent of their out-of-pocket housing expenses. This committee has taken strong recent steps to provide funding to achieve that goal. Indeed, BAH is based on an independent assessment of the cost of housing for given areas based on certain parameters, including an arbitrary standard of housing (square footage, number of bedrooms, and whether an apartment/townhouse or stand-alone dwelling) determined by rank. For example, the only enlisted grade under the BAH standard that is authorized a stand-alone dwelling is the very highest rank the E–9. AFSA supports full funding of BAH, but maintains that it has created significant consternation among the military members because of the unrealistic standard used to determine where military members may live. Their allowance generally dictates the neighborhoods where they reside and the schools their children may attend. Ironically, in order to protect their families from the limitations of the standard, the lowest ranking (who are obviously paid the least) must expend additional out-of-pocket dollars. While the benefits increases following the achievement of higher rank is part of the military institution, BAH as it is structured needs to be re-examined to protect all of the military family members regardless of rank.

—Re-examine the standard upon which BAH levels are determined.

Military Health Care.—Military health care and readiness are inseparable. This state of health must be assured no matter where our members serve. In that sense, the provision of TRICARE Prime Remote for military members stationed away from a military treatment facility was a wise move. Our nation must also provide such an assurance of health to the families of those who serve. In recent years, military family member medical and dental care has evolved from fully funded coverage to member-subsidized coverage. Members have noted this erosion conscious choices on the part of the Department of Defense to lessen the overall benefit for family members. This communicates a negative inference on the judged importance of military families to those who make up the all-volunteer force. Additionally, DOD has closed many military hospitals and transformed them to limited-service, outpatient "clinics." In most locations, members and their families must travel to a local civilian hospital for serious health care, or must travel a distance to a health care facility for specialized care. At this time, there is no mechanism to reimburse members of the military community who can no longer find such care locally. This association supports most funding provisions of the administration's fiscal year 2001 Defense Budget health plans and congressional legislation that would help to sustain the all-volunteer force in meeting its readiness needs. In particular,

—Provide fully funded health care for military retirees regardless of age.
—Extend TRICARE Prime Remote to military family members.
—Eliminate family member TRICARE Prime Co-Payments.
—Provide reimbursement for out-of-pocket expense for military members and their families when health care must be obtained away from their local military facilities.

Education.—We should take action now to raise the value of the Montgomery G.I. Bill (M.G.I.B.), the military's primary tool for a successful post-military readjustment into civilian society, to cover the cost of an average university, instead of an arbitrary dollar figure that has little to do with actual education costs. This would include adequate funding to cover books, tuition and fees toward a higher education for those able to take classes while in the military. Also, we ask this Congress to immediately provide an opportunity, an open window, for all of those who are not enrolled in the Montgomery G.I. Bill to join that program. Additionally, we ask you to support legislation to change the policies that tend to push members away from the educational benefit such as requiring military members to contribute $1,200 toward their own educational "benefit" and providing solely a one-time enrollment opportunity during basic training when they can little afford to enroll. A better move would be to eliminate the $1,200 member contribution; this would affirm that military members "earn" the benefit by putting their lives on the line for this nation's citizenry. We ask you to allow military members to enroll in the M.G.I.B. any time during their careers—or, better yet, make enrollment a no-cost automatic feature of military service. Finally, we ask you to consider this benefit as an earned program which the member may choose to transfer, in whole or in part, to immediate family members. In summary, there must be funds appropriated to accommodate the following educational actions necessary to provide our military members with an incentive to serve.

—Create a new G.I. Bill Model tying the value of the MGIB to an annual educational benchmark that reflects the actual cost of tuition, book, and fees at an average four-year college.
—Establish an open window to allow all currently serving military members to enroll in the new M.G.I.B.
—Eliminate the member's $1,200 benefit enrollment fee.
—Make enrollment in this benefit an automatic part of being in the military or, at the least, allow members to enroll at any time during their careers.
—Allow beneficiaries to transfer the educational benefit, in whole or in part, to immediate family members.

RESERVE COMPONENT MEMBERS

Our nation's military is now truly a "Total Force." We simply could not accomplish the many tasks levied by our national military authority without the members of the Guard or the Reserve. These citizens are singular in demonstrating a love of nation and a level of patriotism and service that is admirable. In addition to facing many of the same challenges listed above for active duty members, additional funding must be made available to provide the reserve component members with adequate health care, full benefits, reduction in out-of-pocket expenses, and protection of their families. Their readiness is critical to our nation's defense.

While the attainment of these goals for reserve component members is important, competing realities makes their accomplishment very difficult. Increasing mission

tasking is coming despite plans for continued cutbacks in Reserve forces paralleling the mathematical contradiction faced by the active duty portion of the force. Secondly, because of the nature of the use of America's military forces, today—more than ever—reserve component members face challenges of accomplishing increasingly long-term military deployments while at the same time hoping to continue to enjoy the support of their civilian employers. These employers must see gestures on the part of the nation for their forbearance; employer tax credits for those who serve would be a step in the right direction. In order to meet the readiness needs of today's reserve forces, we should:

—Provide full benefits and protection of the families of reservists.
—Ensure proper manning levels to allow home land missions and the ability to participate in military tasking abroad.
—Pass significant, genuine legislation to promote Employer Support of the Guard and Reserve with provisions such as employer tax credits.

As Secretary Cohen noted, "To attract and retain the best, we've got to offer a satisfactory quality of life. It is a moral obligation, but it is no less a practical necessity." Mr. Chairman, AFSA echoes that sentiment and respectfully submits that the suggestions above would enhance the quality of the lives of military members and, at the same time, go a long way towards helping the Air Force meet its readiness commitment by assuring a secure, positive force of servicemembers.

Mr. Chairman, we ask that while you're deliberating the appropriation requirements of the fiscal year 2001 Defense Bill, its personnel programs, and its role in attracting and retaining those who serve, that you pay particular attention to the quality of a military lifestyle, including current and future benefits, and toward measures that would inspire trust in the military institutions of this nation. Additionally, for reserve force members, please include a realization of the unique sacrifices and contingencies these Americans face. On behalf of this association I want to thank you and the members of this committee for your dedication to those who serve. We are proud to work to complement your efforts and are ready to support you in matters of mutual concern.

Senator STEVENS. Thank you, Master Sergeant. I do not have any questions. We appreciate your patience with us. We do intend to markup this bill as soon as possible. I am sure we will get to it this month and get it done as quickly as we can. We are going to try to work first on the supplemental requests and put them on the military construction bill as it goes forward. We appreciate your courtesy in waiting and we appreciate your suggestions. We have gone over the full statements.

Master Sergeant SMITH. Thank you, sir.

ADDITIONAL SUBMITTED STATEMENTS

Senator STEVENS. The subcommittee has received a number of statements from witnesses who could not be heard and they will be placed in the record at this point.

[The statements follow:]

PREPARED STATEMENT OF THE AMERICAN SOCIETY OF TROPICAL MEDICINE AND HYGIENE

Mr. Chairman and members of the Committee, the American Society of Tropical Medicine and Hygiene (ASTMH) greatly appreciates the opportunity to present its views on fiscal year 2001 program priorities for the record.

ASTMH is a professional society of 3,500 researchers and practitioners dedicated to the prevention and treatment of infectious and tropical infectious diseases. The collective expertise of our members is in the areas of basic molecular science, medicine, vector control, epidemiology, and public health. We hope that our recommendations are helpful to you in determining the annual funding levels for DOD's infectious disease research programs.

I know every member of the Subcommittee appreciates the staggering burden of tropical and infectious diseases and the impact on global health. However, with globalization has come an increased realization that infectious diseases represent not only a humanitarian concern but also a bona fide threat to the national security of the United States. Poor health and the spread of infectious disease across borders has profound impacts on the social and economic development and stability of na-

tions around the globe. With the enormous volume of travel and trade today, and with the expanded deployment of American troops, infectious diseases can impact populations around the globe within 24 hours.

In June 1996, President Clinton issued a Presidential Decision Directive calling for a more focused U.S. policy on infectious disease. The State Department's Strategic Plan for International Affairs lists protecting human health and reducing the spread of infectious diseases as U.S. strategic goals, and Secretary Albright in December 1999 announced the second of two major U.S. initiative to combat HIV/AIDS. The unprecedented UN Security Council session devoted exclusively to the threat to Africa from HIV/AIDS in January 2000 is a measure of the international community's concern about the infectious disease threat.

Furthermore, the CIA's National Intelligence Council issued a hard-hitting report this past January entitled "The Global Infectious Disease Threat and Its Implications for the United States." The report concludes that infectious diseases are likely to account for more military hospital admissions than battlefield injuries. The report assesses the global threat of infectious disease, stating "New and reemerging infectious diseases will pose a rising global health threat and will complicate US and global security over the next 20 years. These diseases will endanger US citizens at home and abroad, threaten US armed forces deployed overseas, and exacerbate social and political instability in key countries and regions in which the United States has significant interests."

Mr. Chairman, consistent with the standard set by our nation's armed forces and the men and women who selflessly serve in our military, it should come as no surprise that the Defense Department's medical research programs are second to none. DOD medical research fills a unique role in the spectrum of our nation's biomedical research enterprise, and plays a critical role in our nation's infectious disease efforts.

As the leader in tropical and infectious disease research, DOD programs have been vital for the successful outcome of military campaigns. It was the DOD research program that developed the very first effective treatment for malaria in 1836. Indeed, virtually all of the important discoveries in malaria drugs have resulted from the efforts of this program. Every American tourist or visitor who is prescribed preventive drugs for malaria is benefitting from DOD research.

The DOD investment in malaria vaccine development is not only good public health policy, but it also makes good sense from an economic standpoint. Malaria is estimated to cause up to 500 million clinical cases and up to 2.7 million deaths each year, representing 4 percent to 5 percent of all fatalities. Malaria affects 2.4 billion people, or about 40 percent of the world's population. Tragically, every 30 seconds a child somewhere dies of malaria. Malaria causes an enormous burden of disease in Africa and is considered a primary cause of poverty.

The achievements and contributions to medical science from DOD infectious disease research are many. DOD researchers also identified and established the cause of yellow fever and dengue in the early 1900s, developed an attenuated vaccine against Venezuelan Equine Encephalitis in 1960, established the AIDS diagnosis in 1986 and developed a rapid diagnostic test for tuberculosis meningitis in 1990.

Working with other U.S. public health agencies, DOD scientists at the U.S. Army Research Institute for Infectious Diseases (USAMRIID), the Walter Reed Army Institute of Research (WRAIR), the U.S. Naval Medical Research Institute (NMRI), and in DOD medical laboratories abroad are helping us to better understand, diagnose, and treat infectious and tropical diseases such as malaria, AIDS, dengue fever, leishmaniasis, yellow fever, cholera, and diarrheal diseases.

The primary mission of the DOD research program is to protect and maintain the health of our troops in the theater. With world-wide deployment of our military personnel, the need for protection from infectious disease epidemics in other areas of the globe is imperative. Often our troops are exposed to new strains of a disease that do not exist within our own borders. Two prime examples of this are malaria and AIDS. Vaccines and therapeutic interventions may prove to be highly effective treatments at home and yet unsuccessful when utilized abroad, which is why the research conducted by the DOD is unique and essential for the health and safety of our troops.

REQUEST

ASTMH urges a stronger national commitment to the DOD infectious disease research programs to accelerate the discovery of the products that protect American soldiers and citizens at home and abroad, and improve global health and economic stability in developing countries. The DOD infectious disease research program has proven to be a highly successful, cost-effective program. However, the ASTMH is

concerned that recent DOD budgets reflect a low priority for these military infectious disease research programs. The total DOD infectious disease research program has been gradually declining in recent years. The impact of declining funds in the face of rising research costs has constrained basic research efforts, impeded the advancement of promising vaccines and drugs into clinical trials, and completely stifled the recruitment of young researchers into the DOD's infectious disease research program.

Some important DOD programs have been canceled outright, such as Epidemiological Research on Infectious Diseases. Another casualty of budget restrictions has been the DOD's Leishmania Research program. Leishmania is a parasitic disease transmitted by biting flies common in the tropics, including the Arabian Gulf countries. However, the Society is pleased to note that the DOD proposes to use $1.5 million of Gulf War Funds for Leishmaniasis therapeutic drug development. Particularly hard hit have been funds for advanced development of research products such as vaccines and drugs. Research opportunities that have been slowed or postponed include the testing of vaccines for dengue viruses and for diarrheal diseases such as E. coli and Shigella.

ASTMH urges you to reverse past funding trends and provide a total of $150 million in fiscal year 2001 for DOD infectious research efforts. We believe an increased commitment is absolutely critical to protect American soldiers and citizens at home and abroad against the threat posed by global infectious diseases.

HIV Research

Congress mandated that the DOD establish the HIV Research program in 1987 because of the significant risk of active-duty personnel in acquiring the HIV infection. Today, in all branches of the military, approximately 400 military personnel become newly infected each year, with as many as one-third of these infections acquired during overseas deployment.

The DOD's HIV Research program is a world leader in the study of HIV genetic variation world-wide and in the development and testing of new vaccines to be used against HIV strains anywhere in the world. The DOD HIV Research program is moving forward with AIDS vaccine trials in Thailand and is preparing for clinical trial of AIDS vaccines in Rakai, Uganda and Cambodia. Unique among federally-supported HIV research efforts, the DOD HIV Research program has the facilities, resources and personnel to produce novel candidate AIDS vaccines and test them in international locations.

ASTMH would like to thank the members of this Subcommittee for demonstrating their support for the DOD's HIV Research program last year by restoring the $10 million reduction the program received in fiscal year 1999 and in the President's fiscal year 2000 budget request.

REQUEST

The ASTMH requests that the Subcommittee consider providing a funding level of $50 million for the DOD HIV Research program in fiscal year 2001. This level of funding would permit the program to move forward with planned vaccine testing despite rising costs associated with developing and maintaining international infrastructure for conducting overseas clinical trials, maintaining field readiness for drug and vaccine testing, and the increasing costs associated with conducting international field trials. A reduced commitment to this program will halt important clinical trials and impede the search for a preventive HIV vaccine.

OVERSEAS LABORATORIES

The ASTMH believes the military's overseas laboratories also deserve special mention. The U.S. Army and the Navy currently support medical research labs located in developing countries around the globe. These research laboratories serve as critical sentinel stations alerting military and public health agencies to dangerous infectious disease outbreaks and increasing microbial resistance. Regrettably, the Army recently closed its lab in Brazil. With this closure, the US DOD now supports just five overseas laboratories, located in Thailand, Indonesia, Egypt, Kenya, and Peru. These research stations are an important national resource in the ongoing battle against emerging infectious disease. They should be strengthened with increased funding and increased opportunities for collaborations with civilian scientists.

The Society is disturbed to note that the US government supports NO research laboratories in the tropical rain forests of the world, where the high biodiversity render these regions the crucibles for the emergence of new and exotic diseases such as Ebola and AIDS. The US DOD should not only fully support existing laboratories

but should establish new laboratories in these strategic ecological regions in Africa and South America.

The military's overseas laboratories play an important role in our domestic infectious disease research efforts through collaborations with academia, industry, and civilian governmental agencies. The DOD overseas laboratories have established in-country research facilities, field study sites at the locations of known high disease transmission, and trained local national staff. Unfortunately, the maximum potential for collaboration has not been realized. A significant increase in the DOD infectious disease research budget, such as the Society is suggesting, would permit enhanced research and training opportunities for both military personnel and civilian scientists at the DOD's overseas laboratories.

CONCLUSION

ASTMH requests your strong support for the DOD Infectious Diseases Research programs. Our nation's commitment to this research is critically important given the resurgent and emerging infectious disease threats which exist today. As the world's only superpower and the global leader in biomedical research, the United States has an obligation to lead the fight against infectious disease. Our efforts in this area will lead to improved global health and the economic stability of developing nations. By helping others, we are mounting our own best defense against infectious diseases.

ASTMH urges Congress to make infectious disease research a priority in fiscal year 2001 by funding the DOD infectious disease research budget at $150 million for fiscal year 2001. ASTMH also requests that the DOD HIV Research program receive an additional $20 million, resulting in a total of $50 million for fiscal year 2001, for the development of HIV experimental therapeutics and vaccines.

If we don't make these important programs a priority, the health of our troops will continue to be at risk, we will continue to experience increased health costs, and infectious diseases will flourish around the world, prolonging economic and political instability in developing nations.

Thank you for the opportunity to present the views of the American Society of Tropical Medicine and Hygiene and for your consideration of these requests.

PREPARED STATEMENT OF THE RESERVE OFFICERS ASSOCIATION OF THE UNITED STATES

Mr. Chairman and Members of the Subcommittee: On behalf of the members of the Reserve Officers Association from each of the uniformed services, I thank you for the opportunity to present the association's views and concerns relating to the Reserve components and the National Defense Appropriations Act for fiscal year 2001.

First, I would like to thank you for your past support of the Reserve components. By consistently promoting Reserve component programs, you have contributed directly to morale and to the high state of Reserve component readiness.

In the National Defense Authorization Act for fiscal year 1991, the Congress stated that "the overall reduction in the threat and the likelihood of continued fiscal constraints require the United States to increase the use of the Reserve components of the Armed Forces. The Department of Defense should shift a greater share of force structure and budgetary resources to the Reserve components of the Armed Forces. Expanding the Reserve components is the most effective way to retain quality personnel as the force structure of the Active components is reduced. . . . The United States should recommit itself to the concept of the citizen-soldier as a cornerstone of national defense policy for the future."

ROA was very pleased, therefore, when DOD decided to defer the final reduction of 25,000 members of the Army's Reserve components that had been recommended by the Quadrennial Defense Review (QDR) in 1997. We believe that the decision to have the next QDR in 2001 review those proposed reductions in light of the larger issue of shaping our force structure to meet ongoing and emerging requirements made great sense. To persist in reducing our already overtaxed Reserve force structure based upon old, outdated assumptions that are universally acknowledged to have been overtaken by unforeseen events was clearly unacceptable to all concerned.

Greater Reliance on Reserve Components.—The 50 years of reliance on a large, Cold War, standing military has ended. Confronted with sizeable defense budget reductions, changes in the threat, and new missions, America's military answer for the future must be a return to the traditional reliance on its Minutemen—the members of the Reserve components. Can America's Reservists fulfill their commitment to the Total Force—can they meet the challenge?

Operations Desert Shield and Desert Storm proved that the Reserve components were ready and able. During the Gulf War, more than 245,000 Reservists were called to active duty. Of the total mobilized, 32 percent were from the National Guard and 67 percent from "the Reserve." More than 106,000 Reservists were deployed to Southwest Asia. About 20 percent of the forces in the theater were members of the Reserve components.

In Bosnia and Kosovo, more than 43,000 Reservists have provided nearly 4.9 million duty days of support, again demonstrating their readiness and their capability to respond to their nation's call.

Reserve Component Cost-Effectiveness

ROA has long maintained that a proper mix of Active and Reserve forces can provide the nation with the most cost-effective defense for a given expenditure of federal funds. Reservists provide 35 percent of the Total Force, but cost only 8.2 percent ($23.9 billion) of the fiscal year 2001 DOD budget. They require only 23 percent of active-duty personnel costs, even when factoring in the cost of needed full-time support personnel. We need only consider the comparable yearly personnel (only) costs for 100,000 Active and Reserve personnel to see the savings. Over a 4-year period, 100,000 Reservists cost $3 billion less than 100,000 Active duty personnel. If the significant savings in Reserve unit operations and maintenance costs are included, billions more can be saved in the same period. ROA is not suggesting that DOD should transfer all missions to the Reserve, but the savings Reservists can provide must be considered in force-mix decisions. It is incumbent upon DOD to ensure that the services recognize these savings by seriously investigating every mission area and transferring as much structure as possible to their Reserve components.

ARMY RESERVE

While providing 46 percent of the Total Force, today's Army is smaller than at any time since before WWII. Since 1989, the Army has reduced its ranks by more than 690,000 soldiers and civilians. While this downsizing has taken place, the soldiers of America's Army have experienced a 300 percent increase in the number of deployments. The Army has conducted operations in such places as Kuwait, Saudi Arabia, Iraq, Haiti, Rwanda, Somalia, Bosnia, Honduras, and Kosovo and conducts these and similar missions at a level 16 times that of the much larger Army in place prior to 1990. In 1999, on an average day, there were 146,000 soldiers, from all Army components, stationed or forward deployed, participating in joint and combined exercises, and conducting operations in more than 70 countries.

As missions increased, available budget resources, regrettably, did not keep pace. For fiscal year 2001 the Army's total obligation authority (TOA) for its Active, Guard, and Reserve components is $70.8 billion, only 24 percent of the total $291.1 billion defense budget. Since fiscal year 1989 as the Army's OPTEMPO increased 300 percent, its buying power has decreased by about 37 percent in constant fiscal year 2001 dollars.

Since 1995, more than 13,000 Army Reservists have participated in Operations Joint Endeavor, Joint Guard, and Joint Forge in Bosnia. Included in these numbers are more than 2,000 Army Reserve civil affairs soldiers and more than 600 Army Reserve psychological operations soldiers. USAR soldiers are now serving in Kosovo and more than 200 Army Reservists replaced Germany based soldiers who deployed to Kosovo.

The Army Reserve is a full partner in every Army operation. It is 20 percent of the Total Army and is structured and missioned to perform 43 percent of the Army's combat service support and 26 percent of the Army's combat support missions. Approximately 350 Army Reserve units are part of the Force Support Package—Active, Guard, and Reserve units that support America's Army Crisis Response Force and Early Reinforcing Force—and are required for every contingency operation.

This increased reliance now requires the Army Reserve to maintain many units at substantially higher levels of readiness and to be ready to deploy these "first-to-fight" units on very short notice. However, this increased reliance has not generated adequate funding in the Defense budget.

The Army Reserve's share of the Army budget request in the fiscal year 2001 DOD budget request is $3.9 billion or 5.5 percent of the entire $70.8 billion request. Separated into the Reserve Personnel, Army (RPA) and the Operation and Maintenance, Army Reserve (OMAR) accounts, the request is for $2.4 billion RPA and $1.5 billion OMAR. Both accounts require considerable plus-ups to fully fund known requirements—requirements that were identified during the development of the president's budget, but because of insufficient funding fell below the line and were not

resourced. Critical/executable funding shortfalls identified in the RPA and OMAR areas alone exceed $330 million.

Reserve Personnel, Army

The president's RPA budget request for $2.4 billion fails to provide adequate funds to train, educate, man, and support Army Reserve personnel and units at levels required for immediate mobilization and deployment. We believe the fiscal year 2001 Defense budget request critically underfunds the Army Reserve by over $157 million in several Reserve Personnel, Army accounts. Listed below are the critical shortfalls that the Army Reserve could execute in fiscal year 2001:

[In millions of dollars]

Full Time Support	60
Recruiting and Advertising	1
Enlisted incentives	22
Funeral Honors	4
Reserve Education and Learning	1
Information Operations	1
Weapons of Mass Destruction Training	4
Collective Training	41
CINC Support	8
Training Support Divisions	15
Total	157

ROA believes the RPA budget request understates the actual executable/critical shortfall by at least $157.0 million. Listed below are several examples.

Full Time Support (FTS)

FTS personnel give units the ability to maintain a high-level of readiness by providing the additional training, command and control, technical functional, and military expertise required to efficiently and effectively transition from peacetime to a wartime posture. The Army Reserve has the lowest percentage of FTS of all the Reserve components and yet is the component most frequently called and deployed. There is a critical Army Reserve shortage of 1,800 Active Guard and Reserve personnel (AGRs) and 1,418 military technicians (MILTECHs). The AGR FTS needed to improve readiness for fiscal year 2001 is 1,800 Active/Guard Reserve soldiers at a cost of $60 million. The Army Reserve has a critical/executable-funding shortfall of $60.0 million in its AGR FTS program.

Enlisted Incentives Program

Recruiting and retention of quality soldiers in this period of a booming economy is becoming one of the major challenges facing the Army Reserve. Without adequate incentives to attract and retain new and existing soldiers in the Army Reserve, the Army Reserve will be severely challenged and possibly unable to reach its end strength goals. The USAR has a shortfall of $22 million in its enlisted incentives program, which is critical to Army Reserve recruiting and retention. The Army Reserve uses non-prior service (NPS) and prior service (PS) enlistment bonuses, the MGIB-Selected Reserve kicker and the Student Loan Repayment Program (SLRP) in combination to attract soldiers into the most critically short military occupational specialties (MOS) and high priority units. The Army Reserve has a critical executable funding shortfall of $22 million in its Enlisted Incentives program.

Collective Training

The Army Reserve collective training account provides essential mandays above annual training to support planning, preparation, participation and recovery from unit training. It supports collective training strategies to maintain unit training readiness and funds mobilization exercises, IRR training, and short tours directly affecting unit readiness. Collective training is critically underfunded by $41.0 million. The executable/critical shortfall for Army Reserve collective training is $41.0 million.

Army Reserve CINC Support

CINC support missions (overseas deployment training) provides forward presence and nation-building activities in support of commander in chief (CINC) engagement strategy missions for Army Reserve soldiers and units. ODT maintains the Army Reserve overseas warfighting, mission training, operational mission support, nation assistance, and exercise capability for CINC validated requirements. The known fiscal year 2001 critical/executable shortfall in CINC support is $8.0 million. In previous years over 18,000 soldiers from 40 units deployed to more than 50 countries

providing over 378,000 mandays of cost-avoidance in PERSTEMPO and OPTEMPO for the Active component. The executable/critical shortfall for CINC Support is $8.0 million.

RC Training Support Divisions (TSD)

The training support concept plan was approved by the vice chief of staff of the Army in March 1997, and the FORSCOM commander approved the implementation plan in August 1998. The TS XXI implementation plan dramatically increases the role of the five TSDs and its subordinate organizations from the five divisions (Exercise) by expanding the scope of training support.

Low funding in fiscal year 2001 for this program limits the TSDs' ability under the AC/RC Integration Program to execute training for priority and early deploying RC units. The executable/critical shortfall for RC training support divisions is $15 million.

RPA Summary

Funding these identified shortfalls of $157.0 million in the RPA budget request will provide required educational, skill qualification, and mobilization training opportunities for soldiers in units and the IRR as well as provide essential support to recognized CINC requirements and the training base. ROA urges the Congress to add $157.0 million to the Army Reserve RPA budget to fund critical training and manning shortfalls for Army Reserve personnel.

Operations and Maintenance, Army Reserve (OMAR)

The fiscal year 2001 DOD budget request for the Army Reserve Operations and Maintenance (OMAR) account is $1.5 billion. We believe there is at least a $175 million executable/critical OMAR shortfall in the fiscal year 2001 budget request that will force the Army Reserve to compensate by further reducing equipment and facility maintenance, and supply purchases. Backlogs for maintenance and repair continue to grow and necessary support to essential training continues to deteriorate, decreasing readiness.

Currently the OMAR appropriation is experiencing serious resourcing shortfalls in FTS, recruiting and advertising, information operations, and the backlog of maintenance and repair. Some critical shortfalls are shown below:

[In millions of dollars]

Full Time Support (MILTECHS/PCS)	42
Recruiting and Advertising	23
USAR Military Funeral Honors Duty	1
Reserve Education and Learning Program	1
Information operations	17
Medical and Dental Readiness	19
Weapons of Mass Destruction	1
CINC Support	3
Real Property Maintenance	45
BASOPS	23
Total	175

Full Time Support—MILTECH

The lack of adequate numbers of military technicians (MILTECHs) in USAR maintenance facilities jeopardizes equipment readiness due to depot maintenance backlog. The increase in the MILTECHs' portion of the essential full time support needed to improve unit readiness for fiscal year 2001 is 1,418 MILTECHs, costing $42 million. The executable/critical shortfall for the USAR MILTECH program is $42.0 million.

Medical and Dental Readiness

The USAR fiscal year 2001 medical and dental readiness shortfall is $19 million. This funding shortfall severely limits the Army's ability to ensure that Reservists meet medical and dental readiness requirements. This validated amount is for Army Reserve Selected Reserve (SELRES) only (IRR Requirements are being developed). In 1999 an analysis was conducted that determined that 15 percent of the SELRES had outdated physical exams and that other statutory and directed requirements (e.g., dental screening, treatment for early deployers, and immunizations) had not been completed. Funding in the fiscal year 2001 budget request will support 56 percent of the early USAR early deployer population and none of the remaining USAR force (including the IRR). This results in a critical shortfall of $5 million to support the early deployers and an overall shortfall of $19 million.

National Guard and Reserve Equipment Request

The Office of the Secretary of Defense in its February 2000 "National Guard and Reserve Equipment Report for Budget Year 2001" states that the Army Reserve has 89 percent of its Equipment Readiness Code A (ERC A) equipment items and 87 percent of its ERC–P items on-hand for all units. This represents a projected shortfall of equipment through fiscal year 2005 that exceeds $2.1 billion. Realistically, the equipment on hand (EOH) includes substituted equipment—some that is not compatible with newer equipment in the Active Army, Army National Guard, and Army Reserve equipment inventory and may not perform as required

The greatest source of relief to Army Reserve equipment shortages is the National Guard and Reserve Equipment Appropriation (NG&REA) that funds equipment requirements identified by the services but not resourced due to funding shortfalls in the FYDP. Since 1981 the Army Reserve has received, through the oversight of Congress, nearly $1.5 billion in equipment through the NG&REA. Without the appropriation the Army Reserve would still be struggling to reach 50 percent equipment on hand (EOH). The NG&REA works, and works well.

Due to the interest of Congress and the success this appropriation has made in increasing the level of EOH in the Army Reserve, the readiness of the Army Reserve has increased significantly over the past decade. We urge the Congress to continue the NG&RA and to fully fund the Army Reserve $892 million fiscal year 2001 Equipment Modernization Requirement.

Military Construction, Army Reserve.—The organization, roles, and missions of the Army Reserve dictate the need for a widely dispersed inventory of facilities. It provides a military linkage to 1,315 communities throughout America, its territories, and overseas locations. It occupies 1,150 facilities, consisting of more than 7,600 buildings and structures that average 37 years old. Army Reserve-operated installations add another 2,600 buildings and structures to the total inventory. The average age of facilities on these installations is about 48 years. The replacement value of Army Reserve facilities and installations nears $10.6 billion.

The Army Reserve continues to have a $1.9 billion backlog of known construction requirements. The Army Reserve fiscal year 2001 Budget requests for appropriations and authorization of $73,396,000, will fund the construction of: five new Army Reserve centers in Louisiana, Texas, and Virginia to accomplish essential facility replacements; revitalization of existing facilities in Florida and Washington; and land acquisition to support a future project in Rochester. It also requests $1,917,000 for Unspecified Minor Construction to satisfy critical, unforeseen mission requirements; and $6,400,000 for planning and design funds to provide for a continuous, multiyear process of designing construction projects for execution in the budget years and beyond.

The fiscal year 2001 budget request is for appropriations and authorization of $81,713,000 for Military Construction, Army Reserve, and $114,704,000 for Real Property Maintenance funding which funds 72 percent of Army Reserve real property maintenance requirements. Long term resource constraints in both military construction and real property maintenance have a combined effect of increasing the rates of aging and deterioration of our valuable facilities and infrastructure. Historically, the budget has provided RPM resources to only fund the most critical maintenance and repair needs. ROA urges the Congress to authorize and fully fund the Army Reserve fiscal year 2001 $81,713,000 MCAR request and its fiscal year 2001 $114,704,000 Real Property Maintenance request.

AIR FORCE RESERVE

Air Force Reserve Command, the Air Force's second largest major command (MAJCOM), makes up 11 percent of the total Air Force—Active, Guard and Reserve. It is composed of 74,000 Reservists and 5,300 civilians. Its aircrews are 93 percent prior service, while 86 percent of its support force has served on active duty previously. It operates 400 aircraft all over the world on a daily basis in support of Air Force and DOD missions. It is allocated 4 percent of the Air Force budget and provides 20 percent of the Air Force combat capability. It is a good deal for the service and for the country.

Air Force Reserve Command C–141s

The Air Force will retire all of its C–141 aircraft by 2006. This is in accordance with a drawdown plan, which will ensure the elimination of an aging and worn aircraft from the inventory by the year 2006. If there is no follow-on aircraft for Air Force Reserve Command units, the country will lose approximately 5,000 flight crew personnel, maintainers and support personnel—all of whom were trained at great expense and are among the most highly experienced personnel in the Air Force. The

retirement will close units at March ARB, CA; Wright-Patterson AFB, OH; Andrews AFB, MD; Charleston AFB, SC and McGuire AFB, NJ. It will eliminate the economic contribution these units make to the local community.

Also eliminated will be the huge ton-mile airlift capacity produced by 240 C–141s, a need detailed by the JCS during readiness hearings in September 1998. Though 134 C–17s have been contracted for to help fill the strategic airlift shortfall being created, that figure is far from an adequate replacement for the departing capability. Even though we fully support and are hopeful that DOD will take advantage of Boeing's offer of reduced pricing on 60 more C–17s, the delivery schedule will leave our nation seriously under-resourced in strategic airlift assets. ROA urges the Congress to direct DOD to keep a minimum of 60 C–141C aircraft in AFRC until sufficient numbers of C–17s are acquired to fulfill the ton-mile requirement of the National Military Strategy.

KC–135R Re-Engining Kits

AFRC needs 11 re-engining kits to convert its remaining KC–135s from "Es" to "Rs." This conversion will ensure compliance with environmental restrictions on noise and other pollution, while increasing the speed, range and payload of our KC–135 tanker fleet. Failure to convert these remaining aircraft in a timely fashion will decrease the capability of the Air Force tanker fleet, affecting planning, production, and through-put of airborne receivers during hostilities. This, in turn, will affect the length and outcome of any contingency operation. ROA urges the Congress to fully fund re-engining kits for the 11 remaining AFRC KC–135E aircraft.

C–130J

The 403rd Wing at Keesler AFB, MS has 14 C–130J aircraft assigned. Its usual complement in its 2 squadrons is 18. In the midst of a modernization/conversion program begun several years ago, the unit is now faced with the task of maintaining 2 different aircraft in pursuit of its missions of weather reconnaissance and tactical airlift. This is inefficient and very costly, as maintenance procedures and tools for the aircraft are different, thereby requiring redundant resources. ROA urges the Congress to provide funding to complete the 403rd Wing modernization to the C–130J.

Selected Examples of AFRC's Fiscal Year 2001 Executable Unfunded Requirements (in thousands of dollars)

Flying Hours—$7,800: programmatic changes within the CPFH (cost per flying hour) models; e.g., C–5 engine thrust reverser repairs are estimated to cost $1.5M more this year than last. Total F–16 engine overhaul costs will increase by $4.3M, and an additional $2M cost growth will be experienced for other weapon systems within the total flying hour program.

DPEM/CLSS/Sustaining Engineering—$31,100: Materials costs and engine overhaul price increases, particularly for the C–5 and F–16 weapon systems, plus DPEM (Depot Purchased Equipment Maintenance) factor changes and out-of-cycle increases in programmed depot man-hours, will result in substantial cost growth in these cost areas. AFRC benefited greatly from a congressional addition of $10M in fiscal year 2000.

Associate TTF—$10,100: The $10.1M shortfall in TTF (Testing, Training & Ferrying) is a compilation of rate disconnects for flying hours for the various associate weapon systems (C–5, C–17, C–141). Training rate costs charged by HQ TRANSCOM (HQ AMC) differ substantially from the approved reimbursement rates which we must use in budgeting. The disconnect is attributable to the 19full cost recovery" policy for working capital funds established by OSD in 1995.

ART Pilot Retention Allowance—$5,000: AFI (Air Force Instruction) 36–802 and 5 CFR Section 575.301 provide guidance for group retention allowances. This allowance is being paid to increase ART pilot base pay by 10 percent for GS–12s–13s and 5 percent for GS–14s in order to assist the command in retaining an experienced and capable pilot force.

Facility Projects—$35,000: Funds activity above the 1 percent of plant replacement value (PRV) in the current program/budget to try to stem the tide of further facility and infrastructure deterioration at units throughout the Air Force Reserve Command. These projects range from repair and maintenance efforts on existing structures to renewal of parking aprons, airfield lighting systems, and base infrastructure. The compelling need for repair and maintenance dollars is a direct result of limited military construction investment. The current Air Force estimate is that at least 1.75 percent of PRV would be required to stop the growth of the backlog. AFRC benefited greatly from a $10M congressional addition in fiscal year 2000 and a transfer of $12.2M in quality of life funding. Current funding will only accomplish "Band-Aid" repairs—few major repairs or minor construction, and little progress on

the backlog. The overall facility and infrastructure condition continues to deteriorate. The situation constitutes a quality of life and recruitment/retention issue for the Air Force Reserve Command.

Information Technology—$15,000: Funding is required to provide sustainment of AFRC computer hardware and software. Implements a lifecycle management strategy by providing a 3-year (33 percent per year) replacement of hardware and software (24,000 desktops, 4,500 notebooks, and 250 network servers) and a more systematic renewal of networking and communications infrastructure.

Personnel Separation Costs—$11,100: Outsourcing and privatization efforts are creating unfunded costs for retraining and relocation of civil service personnel, lump sum leave payments, and other entitlements and benefits due to employees affected by reductions-in-force.

A–76 Contract Cost—$24,600: This is also an outsourcing and privatization issue. The budget process would not allow extensive programming for contract costs without documented experience. Essentially, the costs of base support at four locations, which have been outsourced, are unfunded. These include Dobbins, Niagara Falls, Gen. Mitchell, and Westover.

Total O&M, AFR—$144,500,000

Selected Examples of AFRC's Fiscal Year 2001 Reserve Personnel Accountable Unfunded Requirements (thousands of dollars.)

AGR Pilot Bonus—$3,750: Funds a pilot retention bonus program for the AFR AGR pilots comparable to that offered by the AF.

Tuition Assistance—$13,000: This program helps Reservists with educational expenses (officers as high as 75 percent and enlisted as high as 90 percent).

Montgomery GI Bill Kicker—$5,500: This program aids in the retention and recruitment of high quality men and women in critical skills in the part-time service in the Selected Reserve. Unlike previous Reserve component programs and the Active program, it provides for receipt of benefits before the qualifying military service is complete (funds 1,800 people).

Medical Bonus Increases—$4,350: Increased costs of approved bonus program enhancements.

ROA urges the Congress to fully fund AFRC's RPA requirements.

Total RPA: $28,050

AFRC's Fiscal Year 2001 Unfunded Equipment Requirements.—ROA is pleased to thank Congress for its past support of Air Force Reserve Command (AFRC), the second largest major command in the Air Force. Those efforts have made the command a ready and able partner in the Total Force, while making it an excellent value for the country at the same time.

However, as Congressman Steve Buyer (R-IN), co-chairman of the House National Guard and Reserve Caucus, pointed out at the caucus's annual breakfast with Reserve component leaders on February 17th, distribution of modernization funds among the Reserve components has not been equitable. Where Air Force funding of Air National Guard programs totaled$237.8 million, AFRC received only $17.1 million. Where National Guard and Reserve Account (NGREA) money for the ANG totaled $30 million, AFRC received $20 million.

AFRC's unfunded equipment requirements for fiscal year 2001 total $420 million.

NAVAL RESERVE

Thanks to Congress, funding for fiscal year 2000 enabled the Naval Reserve to fund peacetime contributory support, bonuses, a substantial pay raise, real property maintenance, base operating support, and recruiting advertising/support. In this regard, it is clearly evident that Congress has given full recognition to the significant and well-recognized compensating leverage offered by today's Naval Reserve, which represents 20 percent of the Navy, yet expends only 3 percent of the budget.

Unfortunately, the fiscal year 2001 budget submission falls short with reference to information technology, recruiting, ship depot maintenance, real property maintenance, base support operations, peacetime contributory support, annual training, and bonuses.

Selected Naval Reserve IT Infrastructure Requirements

The Naval Reserve has developed an Information Technology Strategic Vision that enables this transformation. Its goal is a seamless information and communications systems/capabilities integration, both within in the Naval Reserve and with the active duty Navy. It fully complies with the Navy's Navy/Marine Corps Intranet (N/MCI) initiative. However, current funding remains a barrier to integration preventing the Naval Reserve from adopting advanced network-centric initiatives. ROA

urges the Congress to support full compliance by providing a dedicated investment—one of just over $100M in the next 6 years ($30.5M in fiscal year 2001: $27.8M OMNR, $2.7M RDT).

Reserve Recruiter Support & Advertising

Recruiter support and advertising remain a top priority for the Naval Reserve. Its budget remains the lowest of all the services. The $10M fiscal year 2000 congressional addition enabled the Naval Reserve to establish its first ever national advertising campaign, and operations support for 45 additional Reserve recruiters. The advertising campaign includes media and market research, and placement of advertising in television, print, radio, direct mail, and PSAs. In fiscal year 2001, Navy added $3.7M to advertising and recruiter support, but is still short of the fiscal year 2000 baseline. ROA urges the Congress to provide an additional $6.7M for the Naval Reserve to maintain its national advertising campaign and support for 45 additional recruiters in fiscal year 2001 (total of 90).

Ship Depot Maintenance

Funding for ship depot-level maintenance in support of operational readiness and ship material condition continues to be a significant concern for the Naval Reserve. Current funding of 94 percent of programmed requirements has greatly improved material readiness of the NRF ships, however, continued deferral of depot maintenance continues. ROA urges the Congress to provide an additional $20M in fiscal year 2001. If this additional funding is not provided, 5 CNO depot-level availabilities will be cancelled, and 4 other availabilities will be reduced in scope.

Reserve Base Support, Real Property Maintenance & Base Operating Support

Base support continues to be a big concern for the Naval Reserve. Since most of its buildings were built back in the 1940s/50s, the cost of repairing them continues to escalate. Although the backlog of critical maintenance (BMAR) growth has slowed, thanks to recent congressional support and a Navy program growth increase in PR–01, the projected fiscal year 2001 End of Year BMAR is $121.0M. ROA urges the Congress to provide an additional $15M in RPM funds to help arrest growth of the critical backlog.

Base Operating Support funding has also benefited recently from congressional plus-ups and Navy program growth. However, in fiscal year 1999, in an effort to save money, the Navy transferred custody of its A-N government vehicles to GSA with the intent of leasing them back, with 20 percent being replaced annually. However, lease rates only include the cost of capitalization, fuel, maintenance, and mileage, with no funding for procurement.

The cost of providing Collateral Equipment (CE) for Naval Reserve MILCON projects is also an area of concern. CE includes the furnishings required to complete a construction project. CE costs vary depending on the project, but a historical planning figure of 10 percent of project costs for the entire construction budget has been used. ROA urges the Congress to add $6.0M to help properly fund the GSA A-N vehicle conversion and to cover MILCON CE costs.

Selected Funding Shortfalls—Personnel

Annual Training (AT)

$23.5M to support AT tour lengths increase from 14 days to 15 days (inclusive of travel) as desired by ASD/RA to meet Title 10 requirements, and will mirror that of the Marine Corp Reserve Force. The additional day will provide for an increase in the amount of peacetime contributory support that Commander, Naval Reserve can provide to gaining commands, particularly in OCONUS operations. Funds travel cost escalation. First quarter fiscal year 2000 costs have been coming in at 12 percent above budgeted amount.

Active Duty for Training (ADT-Fleet Support)

$13.5M to fund greater direct and indirect support for CINC requirements. It will allow Commander, Naval Reserve to increase the amount of peacetime contributory support that can be provided to gaining commands for exercises, mission support, conferences, exercise preparations, and unit conversion training. Funds travel cost escalation.

ACtive Duty for Training (ADT-Schools)

$14.5M to increase mandays essential to meet individual training plan goals that are based upon mobilization requirements that include "A" and "C" school completion. SELRES in commissioned hardware units and those performing contributory support require training whose manday requirements are over and above the an-

nual two-week period. This provides training due to a change in unit, unit mission, or new equipment.

Inactive Duty Training Travel (IDTT)

$3.5M to continue providing airlift support missions, operational missions, aviation proficiency skills training, refresher skills training, exercises, and training at mobilization sites. This is the primary status in which Reservists travel to their gaining commands to perform high priority work meeting peacetime contributory support requirements and perform training required by Navy training plans.

ROA urges the Congress to provide an additional $60 million to support unfunded Naval Reserve personnel requirements in fiscal year 2001.

Equipment Modernization

Despite the encouraging trends in the fiscal year 2000 budget, continuing budgetary constraints have resulted in no new equipment for the Naval Reserve. In this regard, over the past years, much of the progress made in improving the readiness and capability of Naval Reserve units has been the direct result of congressional action—to designate new equipment for the Naval Reserve in the National Guard and Reserve Equipment Appropriation (NGREA) to earmark funding for the Naval Reserve in the traditional procurement appropriations. Accordingly, ROA has identified unfunded fiscal year 2000 Naval Reserve equipment requirements for consideration by Congress for addition to the administration's request for fiscal year 2001, in either the NGREA or as earmarked additions to the Navy's traditional procurement appropriations.

SELECTED NAVAL RESERVE FISCAL YEAR 2000 EQUIPMENT NEEDS

[Dollars in millions]

Unfunded equipment requirement	Cost	Quantity
C–40A Transport Aircraft	$175.0	3
IT–21 Fleet Readiness Infrastructure Support	30.5	.....
P–3C AIP/Block Mod Update III Kits	50.0	6
Naval Coastal/Expeditionary Warfare	35.0	.....
F/A–18 Mod, ECP 560 & AN/AAS	55.0	12
FLIR Targeting Pod	55.0	12
F–5 Avionics Modernization	47.0	12
CH–60 Helicopter	84.0	4
Joint Forces Air Component Commander Units	.6	3
C–130 Avionics Modernization Program	2.5	.....

ROA urges the Congress to provide $479.4 million to support fiscal year 2000 Naval Reserve unfunded equipment needs.

Fiscal Year 2001 Selected Naval Reserve Equipment Requirements

Fiscal year 2001 has shown a sharp decline in procurement of equipment for the Naval Reserve. Total funded Naval Reserve equipment procurement has steadily declined from $260M in fiscal year 1997 to about $12M in fiscal year 2001.

The Naval Reserve's Top Ten Equipment needs are as follows: 1. C–40A Transport Aircraft; 2. COMNAVRESFOR Information Technology Infrastructure; 3. P–3C AIP/BMUP Kits; 4. Naval Coastal Warfare/Expeditionary Warfare Equipment; 5. F/A–18A Upgrade (ECP–560R1) and NITE Hawk Targeting Pods (AN/AAS–38); 6. F–5 Avionics Modernization; 7. Joint Forces Air Component Commander (JFACC) Units; 8. C–130T Avionics Modernization Program (AMP); 9. Forward Looking Infrared (FLIR) Kits for SH–60B; 10. HH–60H Night Vision Goggles (NVG)/Forward Looking Infrared (FLIR)/Hellfire Missile Trainer.

C–40A aircraft have been at the top of the Naval Reserve's equipment priority list for the past few years, and it was the number one priority last year as well. Currently, four C–40A's are funded and delivery will begin in fiscal year 2001. These aircraft will replace the aging C–9 transport aircraft, which handle 100 percent of the Navy's in theater airlift requirements. The average Navy C–9 aircraft is approximately 27 years old, about twice the commercial fleet DC–9 age.

Information technology infrastructure is essential in bringing the Naval Reserve to the 21st century for Information Technology, and for ensuring the Naval Reserve is fully compatible with the rest of the Navy regarding internet connectivity.

The P–3C Avionics Improvement Program provides over the horizon missile targeting capability, improved communications and makes Reserve P–3s compatible with most of the fleet.

Coastal warfare equipment is needed to modernize various support equipment used by construction battalions, harbor defense units, and expeditionary logistics units.

F/A–18 upgrades will provide precision munitions capability for Reserve F/A–18A aircraft.

In summary, given the force-multiplying effect of today's Naval Reserve and its proven potential as a cost-effective force multiplier to assist in additional missions, the Naval Reserve must continue to receive sufficient funding and to hold and receive updated warfighting equipment if the United States is to be expected to have a well-trained contingency force ready to respond in the event of national emergency.

MARINE CORPS RESERVE

The Administration's budget proposes an end strength of 39,467 Selected Marine Corps Reserve (SMCR) personnel for fiscal year 2001, down slightly from the level of 39,624 in fiscal year 2000. Similar to the Navy, there is also increased funding for the Marine Corps Reserve personnel, at $436 million, an increase of almost $24 million from fiscal year 1999.

Funding Shortfalls

The request to support the Marine Corps Reserve appears to be underfunded in the Operation and Maintenance, Marine Corps Reserve (O&MMCR) and Reserve Personnel, Marine Corps Reserve (RPMC) appropriations. Maintaining the necessary funding to pay, educate, and train our Marine Reservists, and to enable the units of the Marine Forces Reserve to conduct appropriate training and operations is the vital first step to combat readiness and sustainability.

An additional $20.2 million in O&MMCR funds is needed for initial issue of equipment, replenishment and replacement of equipment, exercise support, and organizational and depot maintenance. Only by equipping and maintaining equally both the Active and Reserve forces will Total Force integration be truly seamless. Foremost is the maintenance of aging equipment. The Marine Corps Reserve armored vehicles' age, coupled with increased use, contribute to this requirement. The Initial Issue Program also continues to be a top priority. This program provides Reserve Marines with the same modern field clothing and personal equipment issued to their Regular Marine counterparts. Quite simply, in the extremes of climate and temperature where Marines conduct combat operations, all Marines need this initial issue to survive and sustain themselves.

The Marine Corps Reserve personnel appropriation also appears underfunded. Much of the nearly $24 million increase is consumed by pay raises and pay table reform, accelerated BAH reform, and military funeral honors funding. The major deficiency in this appropriation is $3 million in the area of active duty for special work (ADSW). This valuable individual training is directly related to probable wartime tasking. The Congress's strong support to maintain ADSW funding allows Reserve Marines to sustain wartime skills while directly reducing the operating tempo of their Active counterparts.

A delay of the fiscal year 2001 Quadrennial Defense Review 1997 (QDR97) reductions in the Active Reserve program is required for the Reserve to continue to meet its augmentation and reinforcement mission. The QDR directed reductions of Active Duty support of the Marine Corps Reserve, particularly the Active Reserve program, are undermining the Marine Corps Reserve's ability to maintain readiness and meet requirements for Reserve employment. To date, the Marine Corps Reserve has taken the cuts directed by QDR97 as planned and will continue with reductions through fiscal year 2003, but every cut taken in the Marine Corps Reserve decreases the operational or tactical capabilities of the Marine Corps. Delay of the fiscal year 2001 reductions in the Active Reserve program will cost $1.9 million and is essential to increased readiness and employment of Marine Corps Reserve units. ROA strongly urges the Congress to direct DOD to defer any further QDR97-recommended reductions in the Marine Corps Reserve until they can be reviewed by QDR01.

Equipment Modernization

Modern equipment is critical to the readiness and capability of the Marine Corps Reserve. Although the Marine Corps attempts to implement fully the single acquisition objective philosophy throughout the Marine Corps Total Force (Active and Reserve), there are some unfilled Reserve equipment requirements that have not been met because of funding shortfalls.

To achieve the readiness necessary to quickly mobilize and augment the Active Marine Forces in time of national emergency, Marine Forces Reserve units must be equipped in the same manner as their Active force counterparts. The top modernization requirement of Marine Corps Reserve is ECP–583, which will make its F/A–18A aircraft compatible with the F/A–18 Cs and Ds utilized by the Active force.

Acceleration of V–22 fielding is critical to the future readiness of Marine Corps aviation. Reserve CH–46Es will not be replaced for at least another 10 years at the current planned production rate. Further, until the V–22 is fielded to the Reserve, the Marine Corps Reserve will not be able to take full advantage of the skills of V–22 trained Marines who separate from the Active forces. The increasing cost of CH–46E maintenance and this potential loss of V–22 expertise can be avoided by accelerated production and earlier fielding of the V–22 across the Total Force.

ROA Recommendations for the Fiscal Year 2001 NG&REA—Marine Corps Reserve

[Dollars in millions]

AVIATION EQUIPMENT (funded through Aircraft Procurement Navy appropriation):	
F/A–18A ECP–583 (10 USMCR aircraft)	$43.5
MISCELLANEOUS RESERVE EQUIPMENT	59.7

ROA urges the Congress to provide $103.2 million for procurement of equipment for the Marine Corps Reserve.

Real Property Maintenance in the Marine Corps Reserve

There is a particular need for additional funding for real property maintenance in the Navy and Marine Corps Reserve. For example, as a result of BRAC closures and a reduction in force structure the Naval Reserve now has the smallest number of demographic centers since World War II and one third fewer than were in operation in 1978 when the number of drilling Reservists was just slightly above what it is today.

Some states have only one Naval and Marine Corps Reserve center, resulting in the further lessening of the integration of the nation's armed forces with the civilian population. In addition, the concentration of personnel resulting from Reserve center consolidation makes it even more important that our sailors and Marines have access to modern, efficient and cost-effective facilities. Despite the reduction in facilities, the backlog of military construction and the critical backlog of essential maintenance and repair of Naval and Marine Corps facilities have continued to rise dramatically. The continuing shortage of funds for the orderly maintenance, repair and equipment replacement of these facilities is obvious. Accordingly, additional funds from the Congress are necessary to address these critical problems. ROA urges the Congress to provide at least $2 million of additional funding is needed to keep the critical backlog of real property maintenance from increasing above the current level. This appropriation also needs approximately $2.8 million in additional funding for base operating support and $8.7 million for Reserve military construction for the Marine Corps.

Conclusion

Thank you for the opportunity to present the Reserve Officers Association's views on these important subjects. Your support for our men and women in uniform, both Active and Reserve, is sincerely appreciated.

PREPARED STATEMENT OF THE NAVAL RESERVE ASSOCIATION AND THE NAVAL ENLISTED RESERVE ASSOCIATION

Mr. Chairman and Members of the Subcommittee: On Behalf of the Naval Reserve Association, and the Naval Enlisted Reserve Association, we would like to thank you for the opportunity to submit testimony. Combined, the NRA and NREA have 37,000 members. They are representative of the 89,000 Selected Reservists, the 4,500 non-pay Drilling Reservists, and the 91,000 Individual Ready Reservists, as well as the Retired Reserve community. Collectively, we thank you for your support of the Navy and Naval Reserve in the past.

INTRODUCTION

The Post Cold War era has brought a period of disorderly agitation where petty despots are no longer contained by super power rivals. The United States, the visible survivor, has been challenged by tempestuous tyrants who wanted to conquer feelings of impotence.

As confrontation became crisis, the United States Navy has been called upon as the first choice in response by a number of Commanders in Chief. With a forward-deployed arsenal, which includes the Marine Corps, its own Air Force, and precision cruise missiles, the Navy provides the option to project a military power or a political influence into areas of concern.

Since the end of the Cold War, the Navy, like other services has gone through subsequent downsizing. The vision of a 300-ship fleet is insufficient to meet the existent demands being asked of the Navy. Fleets are faced with longer deployments, higher OPTEMPO, and postponed maintenance. When joint air support was needed over Kosovo and Northern Iraq, aircraft carrier coverage of the West Pacific was gapped for 98 days. In April of this year, 151 ships (48 percent) in our fleet were underway, with 71 percent of those vessels being deployed overseas.

The Navy CINCs freely admit that they can no longer do their mission without the Naval Reserve. The Naval Reserve has actively participated in the four Presidential Call-ups. Reservists are deployed to Europe, Asia, South America, and have also played a key role in helping to resolve Vieques, PR. Within the prescribed budget, the Fleet CINCs could only be provided with 14 percent of the mandays that they requested in support from the Naval Reserve.

In addition to constrained budget, the cost of Naval Reserve support is going up. Higher demand for personnel by the Fleet has increased the amount of overseas Annual Training. Overseas A.T. for fiscal year 2000 has increased from 20 to 25 percent of the Annual Training budget. Travel and lodging expenses increased by 12 percent for the first half of this fiscal year. P–3C flight hours have fallen short 1,701 thrs. Twenty-two of thirty USNR/USMCR series aircraft are flying 9.7 percent more.

OPTEMPO and PERSTEMPO are impacting recruiting and retention. Congress has been quite generous in funding recruiting and advertising support. But aging equipment is a retention issue too. In addition to other concerns, young men and women are leaving the Fleet because of the material and readiness state of its ships and aircraft.

Because of forward deployment, battle group independence, and the need for ongoing replenishment, the Navy has unique problems and costs. The Naval Reserve is playing a greater role with some of the solutions. Naval Reserve requirements need to be supported, as should those of the Navy as a whole.

NAVAL RESERVE MODERNIZATION REQUIREMENTS

Table one provides a breakdown of the top twenty funding requirements requested by the Chief of Naval Reserve Force. Fourteen of these items have been included on the CNO's letter to Congress listing unfunded items. NRA and NERA most strongly support funding of the CNRF list. NRA Resolution #06–00 was passed on March 24, 2000 at our National Convention.

NAVAL RESERVE MODERNIZATION REQUIREMENTS—PR–01

[Dollars in millions]

Unfunded equipment requirement	Fiscal year 2001		Fiscal year 2002		Fiscal year 2003		Fiscal year 2004		Fiscal year 2005		Fiscal year 2006		Remarks
	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	
C–40A Transport Aircraft	171,500	3	170,500	3	172,000	3	134,700	2	183,000	3	195,000	3	Replace aging C–9 with C–40A.
CNRF Information Technology Infrastructure	30,500	.....	20,112	.....	18,374	.....	9,491	.....	9,965	.....	10,515	.....	Improvements to NR LAN, SIPERNET, system and infrastructure.
P–3C AIP/BMUP Kits	49,468	2/3	52,350	2/3	53,143	2/3	45,008	2/2	45,809	2/2	28,500	2/0	Achieve commonality w/ Active P–3C UD III Squadrons.
Naval Coastal/Expeditionary Warfare Forces	35,050	.....	31,700	.....	30,280	.....	11,400	.....	10,720	.....	10,660	.....	Fulfill CB/ELSF/NCW unit TOA for CESE, Comm Equip, Sup Equip.
F/A–18 Mod, ECP 560 & AN/AAS–38 Targeting Pods.	55,750	12	53,500	12	.....	.....	.....	.....	.....	.....	.....	.....	Upgrade Reserve F/A–18A precision guided munitions capability.
F–5 Avionics Modernization	47,000	12	47,000	12	47,000	12	.....	.....	.....	.....	.....	.....	Upgrade the 25 year old F–5 avionics package.
Joint Forces Air Component Commander (JFACC) Units.	615	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Equip JFACC units w/ hardware/software for SIPERNET connectivity.
C–130T Avionics Modernization Program	2,352	.....	3,352	.....	19,256	.....	41,756	4	85,732	6	90,732	10	Standardize cockpit configuration of all NR/MCR C–130T aircraft.
FLIR kits (AAS–51Q) for SH–60B	7,000	4	700	.....	800	.....	800	.....	900	.....	900	.....	Procure 4 Forward Looking Infra-Red (FLIR) (AAS–51-Q) for SH–60B.
HH–60H NVG/FLIR/Hellfire Trainer	2,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Procure HH–60H trainer.
P–3C CDU Upgrades	3,000	.....	3,300	.....	3,600	.....	.....	.....	.....	.....	.....	.....	Increase counter drug capabilities of P–3C w/ AIMS & 2 APG–66s for trng.
P–3C Synthetic Aperture Radar (SAR)	3,000	1	6,000	2	6,000	2	.....	.....	.....	.....	.....	.....	Procure Synthetic Aperture Radars (SAR) for NR P–3C aircraft.
F–5 Global Positioning System (GPS)	8,100	12	6,900	12	3,800	12	450	.....	.....	.....	.....	.....	Procure GPS for F–5. All Military Acft require GPS by 2005.
F–5 Radar Upgrade	3,726	3	7,452	6	11,178	9	11,178	9	11,178	9	.....	.....	Replace APQ–153/159 radar with APG–66 radar.
Computer Based Training	7,300	.....	5000	.....	6200	.....	.....	.....	.....	.....	.....	.....	Develop computer based maintenance/aircrew training for NR aircraft.
Operational Flight Trainer (OFT) Upgrade/Mod.	5,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Upgrade 2 P–3C OFTs to match current NR P–3C configuration.
P–3C Update III Simulator	1,000	1	2,000	2	.....	.....	.....	.....	.....	.....	.....	.....	Procure 3 Deployable Embedded Tactical Trainer Sys (DETTS) units.
P–3C Trainer Upgrade	4,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Upgrade ESM suites w/ ALR–66(V)III.
Reserve Aircraft Modernization	2,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Upgrade various avionics systems on NR P–3C and Helo.

C–9 Upgrades	1,400	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Upgrade PA, Ext Lights, Lndg Gear and Cabin Pressurization sys.
February 24, 2000	440,761	.....	409,866	.....	371,631	.....	254,783	.....	347,304	.....	336,307	.....	

(a) Item #1 on the list is the C–40 aircraft procurement to replace the aging C–9 fleet. The Naval Reserve is the logistic airlift for the Navy. The department of the Navy has a fleet of (29) C–9's needing replacement. The first twelve aircraft were purchased used from commercial airlines, and are older than the Air Alaska airframe that crashed off of California. Others are from the same manufacturing lot as the ill fated Air Alaska aircraft. While inspected, air safety is still an ongoing concern.

With five C–40's already authorized the Navy tried to sell its first C–9 aircraft, and was only offered $200,000. Obviously, the commercial airline industry views these airframes as fully depreciated. Besides age, these aircraft are handicapped by noise and exhaust pollution. The sooner we replace C–9's, the less we will have to spend on item #20 which are C–9 upgrades.

The other argument for accelerated C–40 procurement is business-oriented. The aircraft is a cargo combo Boeing 737–700 with 800 style wings, providing an aircraft with more effective lift, and longer range. To buy single planes every other year maximizes the price. Further, the production line, with this model, will be run for only for eight to ten years, before Boeing changes model design. Extending the purchases of 737 cargo-combo model over a longer time horizon will mean mixing models. This will complicate ground support and aircrew training, and will also increase costs. With an extended procurement timeline the Navy may be forced to seek 737–700s from the used market, with a high cost of conversion to cargo-combo, and with a reduced airlift and range. The conversion cost might exceed the original purchase price.

An optimum would be purchasing three aircraft each year, over the next eight years. In the long run it will save money. With a larger order, Boeing will discount the price, and we would also have model consistency.

(b) Money is also being requested for the #2 item which is the CNRF Information Technology Infrastructure (IT–21). Different from the Navy/Marine Internet, this money would be earmarked to get the Naval Reserve out of the mire of DOS, upgrading its legacy software. The NSIPS was an attempt. The Naval Standard Integrated Personnel System (NSIPS) was intended to eliminate the USNR legacy pay system. Problems arose because this conversion was attempted within the existing budget, with costs kept on the margin. The overall cost has ballooned with selected reservists missing pay. The Naval Reserve learned a hard lesson that upgrades in hardware, memory, software, data flow, and staffing are needed. This was an exercise that Corporate America has already learned, you can't upgrade computers on the cheap.

(c) Items #3, 11, 12, 16, 17, 18, and 19 are P–3 Upgrades. The Naval Reserve P–3 aircraft and avionics are not as updated as those being flown by active duty are. A commonality with active P–3C UDIII squadrons must be achieved to help maintain the Total Force. Missions for the Lockheed P–3 Orion are being expanded to include counter drug counter drug capabilities, and ESM.

(d) Funding in #4 is needed for the Naval Coastal, Seabees, MIUW's, NR Expeditionary Warfare Forces to provide CESE, communications, and field support equipment. Existing equipment is aged, and worn, often being to commercial specifications, rather than military. Some of this equipment has been borrowed by active units for deployment overseas. Naval Coastal Warfare is growing in importance with the Navy's focus on littoral operations. Home Defense multiplies the importance. Newer equipment needs to be procured in an ongoing schedule to be able to upgrade unit readiness.

(e) Upgrading the Naval Reserve F/A–18A with precision guided munitions capability is item #5. With greater emphasis being placed on combat support and precision combat air strikes, there is a requirement to upgrade USNR capabilities to match the active squadrons.

(f) Items #6, 13, and 14 are needed to modernize the F–5. The F–5 role is as the Navy's adversarial aircraft. The Naval Reserve operates the only dedicated adversarial squadron with the mission of preparing the Navy's tactical pilots prior to deployment. The F–5 is twenty-five years old. Without upgrades in avionics, navigation, and radar detection, a keen edged adversarial performance can not be maintained. Our deploying pilots would be handicapped.

(g) To play joint, Item #7 asks for funding to equip our Joint Forces Air Component Commander (JFACC) units with hardware and software for SIPERNET connectivity.

(h) The Naval Reserve has acquired C–130's over numerous budget years. Cockpit configurations differ between airframes. Item #8 is funding to standardize cockpit configuration of all NR/MCR C–130 T aircraft.

(i) Items 9, and 19 provide funding for infrared FLIR kits, and upgrades for USNR helicopter forces.

(j) Aircrew training is an ongoing requirement. Reduced air hours prevent in-flight training. Items 10 and 15 request specialized trainers to support maintenance and aircrew training.

UNFUNDED REQUIREMENTS READINESS SHORTFALLS

Tables two and three outline unfunded readiness requirements for fiscal year 2000 and fiscal year 2001.

FY-00 Naval Reserve Emergency Supplemental Unfunded Requirements

Priority	Issue	APPN	FY-00 ($M)	Comments
1	Flight Hour Program	OMNR	$15.0	Funds P-3C flight hour shortfall (1,701 hrs) for CINC contributory support, NAVICP LECP P-3C/C-130 Replacement Inertial Navigation Unit (RINU), and AVDLR price increases for the P-3C, UH-1N, F/A-18, and F-5E/F.
2	Ship Depot Maintenance	OMNR	$13.0	Funds critical deferred CINCPACFLT/LANTFLT NRF ship depot level maintenance requirements. Continually deferring maintenance requirements results in a downward spiral of declining material condition that impacts readiness. Funds emergent repairs required for INCHON, and availabilities for 3 FFGs, 2 MCMs, and 4 MHCs.
3	Reserve Base Support - Real Property Maintenance (arrest critical backlog)	OMNR	$10.0	Arrest $5.0M growth of critical backlog created by FY-00 Congressional Rescission. Also, reduces BMAR growth from $25M to $20M in FY-00.
	Total	**OMNR**	**$38.0**	
1	Reserve Annual Training (AT)	RPN	$5.0	Funds travel cost escalation. Also, it brings back SELRES enlisted participation to 90% and officer participation to 99%.
2	Reserve ADT Special	RPN	$12.8	Funds travel cost escalation and increases direct and indirect support for CINC requirements.
3	Active Duty Special Work (ADSW)	RPN	$1.2	Funds voluntary contingency and peacetime mission support.
4	Reserve ADT (Schools)	RPN	$3.0	Funds increased training and school requirements.
5	Reserve IDTT	RPN	$5.3	Funds 2.5 trips /yr which will increase SELRES drill travel to gaining commands for support and training requirements
	Total	**RPN**	**$27.3**	

FY-01 Naval Reserve Single Year Integrated Unfunded Requirements List

Priority	Issue	APPN	FY-01 ($M)	Comments
1	IT-21 (Naval Reserve Infrastructure)	OMNR OPN RDTE	$30.5	Funds maintenance and life cycle support for newly developed software systems, and system recapitalization to bring IT infrastructure up to IT-21 standards. All infrastructure upgrades will fully complement NMCI and are critical to ensuring its timely integration. Lack of funding will prevent the Naval Reserve from being able to fully operate NMCI when it comes on line.
3	Reserve Recruiter Support and Advertising	OMNR	$6.7	Maintains funding at FY-00 level allowing continuation of first ever national advertising campaign and operations support for 90 additional recruiters.
4	Ship Depot Maintenance	OMNR	$20.0	Funds critical deferred CINCPACFLT/ CINCLANTFLT NRF ship depot level maintenance requirements. Continually deferring maintenance requirements results in a downward spiral of declining material condition that will impact readiness.
7	Reserve Base Support - Real Property Maintenance (arrest critical backlog)	OMNR	$15.0	Arrest growth of critical backlog and hold at FY01 level. In spite of funding increase in FY-01, Asset Protection Index continues to remain below industry standards (<2%). Most of the NR facilities were built back in the 1940s/50s. FY-00 Congressional Rescission exasperated BMAR growth.
8	Reserve Base Support - Other Base Operating Support	OMNR	$6.0	Funds procurement of Navy owned and leased GSA class A-N vehicles. FY99 conversion from Navy owned to GSA leased only included cost of capitalization, fuel, maintenance, and mileage. Also funds Collateral Equipment costs for furnishing MILCON projects, and Utilities Privatization feasibility study for NSA and NAS New Orleans.
	Total	OMNR	$78.2	
5	Non-Prior Service (NPS) Bonus	RPN	$2.4	Will allow Naval Reserve to start up NPS bonus program to meet the Director of Naval Reserve's number one priority in meeting enlisted recruiting goals and endstrength.
2	Reserve Annual Training (AT)	RPN	$16.4	Funds travel cost escalation. Also, it brings back SELRES enlisted participation to 90%, officer participation to 99%, and 15th day of AT (as desired by ASD/RA to meet Title 10 requirements and mirror USMCR level of fleet support).
	Reserve ADT Special	RPN	$13.4	Funds travel cost escalation and increases direct and indirect support for CINC requirements.
	Reserve ADT (Schools)	RPN	$4.4	Funds increased training and school requirements.
6	Active Duty Special Work (ADSW)	RPN	$1.2	Funds voluntary contingency and peacetime mission support.
9	Reserve IDTT	RPN	$3.5	Funds 2.5 trips /yr which will increase SELRES drill travel to gaining commands for support and training requirements
	Total	RPN	$41.3	

FISCAL YEAR 2000 UNFUNDED REQUIREMENTS

OMNR

(a) Flight Hour Program ($15M): Includes P–3C flight hour shortfall of 1,701 hrs to meet CINC contributory support requirements of 40 aircraft forward deployed (3 Reserve aircraft); NAVICP LECP P–3C/C–130 Replacement Inertial Navigation Unit (RINU) costing $4.5M; and, AVDLR price increases for the P–3C, UH–1N, F/A–18, and F–5E/F.

(b) Ship Depot Maintenance ($13M): Includes deferred CINCLANTFL/PACFLT NRF ship depot level maintenance requirements for 3 FFGs, 2 MCMs, and 4 MHCs, in addition to emergent repairs for INCHON on its main condenser.

(c) Reserve Base Support, Real Property Maintenance ($10M): Includes $5.0M growth of critical backlog created by fiscal year 2000 Congressional Rescission, and BMAR growth of $25M in fiscal year 2000.

RPN

(a) Annual Training (AT) ($11.6M): Fiscal year 2000 budget was calculated for a 6 percent travel escalation increase. Due to increasing fuel costs, first quarter fiscal year 2000 travel costs have been coming in at 12 percent and are expected to increase further. This will also allow SELRES enlisted participation to remain at 90 percent and officer participation to remain at 99 percent.

(b) Active Duty for Training (ADT–FLEET SUPPORT) ($12.8M): CINC requirements are greater than available funding. This will allow for greater direct and indirect support for CINC requirements. It will allow Commander Naval Reserve to increase the amount of peacetime contributory support that can be provided to gaining commands for exercises, mission support, conferences, exercise preparations, and unit conversion training.

(c) Active Duty for Training (ADT-Schools) ($3M): Funding will increase mandays essential to meet individual training plan goals that are based upon mobilization requirements which include "A" and "C" school completion. SELRES in commissioned hardware units and those performing contributory support require training whose manday requirements are over and above the annual two-week period. This provides training due to a change in unit, unit mission, or new equipment.

(d) Inactive Duty Training Travel (IDTT) ($5.3M): This is the primary vehicle which Naval Reservists travel to their gaining commands to perform high priority work meeting peacetime contributory support requirements and perform training required by Navy training plans. IDTT is used to provide airlift support missions, operational missions, aviation proficiency skills training, refresher skills training, exercises, and training at mobilization sites.

(e) Active Duty For Special Work (ADSW–RPN) ($1.2M): Funds SELRES officers and enlisted personnel as well as members of the IRR drilling in the VTU providing contingency and peacetime mission support. There has been an upward trend in ADSW RPN requirements.

UNFUNDED REQUIREMENTS FISCAL YEAR 2001

OMNR

(a) Ship Depot Maintenance ($20M): Includes continued deferral of NRF ship depot requirements. Continuing deferring maintenance requirements results in a downward spiral of declining material condition that will impact readiness.

(b) Reserve Base Support, Real Property Maintenance ($15M): Arrests growth of critical backlog and holds at fiscal year 2000 level. Most of the buildings were built back in the 1940s/50s. fiscal year 2000 Congressional Rescission caused BMAR to grow $5M. Projected fiscal year 2001 End of Year BMAR is $121.0M. Also, the Asset Protection Index (Funding/Current Plant Value) of 2.1 percent falls just within industry standards (2–4 percent).

(c) Naval Reserve It Infrastructure Requirements ($27.8M): Funds maintenance and life cycle support for newly developed software systems, and system recapitalization to bring IT infrastructure up to IT–21 standards. All infrastructure upgrades will fully complement NMCI and are critical to ensuring its timely integration. Lack of funding will prevent the Naval Reserve from being able to fully operate NMCI when it comes on line.

RPN

(a) Career Sea Pay ($1.7M): Funds fiscal year 2001 Unified Legislative Budgeting Initiatives(ULB).

Increases sea pay to restore buying power lost since last update in fiscal year 1988. Also pays additional bonus for sailors desiring to remain at sea past the normal sea/shore rotation dates.

(b) Basic Allowance For Housing (BAH) ($1M): Accelerates a proposed fiscal year 2002 ULB initiative into fiscal year 2001. Would allow single E–4s assigned to ships to receive BAH when room is not available at bachelor quarters. Funding requested would support allowing E–4s with more than 4 years of service to qualify for the allowance.

(c) Annual Training (AT) ($23.4M): Additional funding supports AT tour lengths to increase from 14 days to 15 days (inclusive of travel) as desired by ASD/RA to meet Title 10 requirements, and will mirror that of the Marine Corp Reserve Force. The additional day will provide for an increase in the amount of peacetime contributory support that Commander Naval Reserve can provide to gaining commands, particularly in OCONUS operations. Funds travel cost escalation. First quarter fiscal year 2000 costs have been coming in at 12 percent above budgeted amount.

(d) Active Duty for Training (ADT–FLEET SUPPORT) ($13.4M): CINC requirements are greater than available funding. This will allow for greater direct and indirect support for CINC requirements. It will allow Commander Naval Reserve to increase the amount of peacetime contributory support that can be provided to gaining commands for exercises, mission support, conferences, exercise preparations, and unit conversion training. Funds travel cost escalation.

(e) Active Duty For Training (ADT–SCHOOLS) ($4.4M): Funding will increase mandays essential to meet individual training plan goals that are based upon mobilization requirements which include "A" and "C" school completion. SELRES in commissioned hardware units and those performing contributory support require training whose manday requirements are over and above the annual two-week period. This provides training due to a change in unit, unit mission, or new equipment. Funds travel cost escalation.

(f) Non-Prior Service (NPS) Bonus ($2.4M): This required funding would allow the Naval Reserve to implement the enlisted NPS bonus program, which is authorized by 37 USC 308c. As the Naval Reserve increasingly relies on the accession of NPS personnel, it is taking steps to increase recruiting goals that may not be achievable without these additional incentives. This is essential in order for Naval Reserve to be competitive among the services.

(g) Active Duty Special Work (ADSW–RPN) ($1.2M): Funds SELRES officers and enlisted personnel as well as members of the IRR drilling in the VTU providing contingency and peacetime mission support. There has been an upward trend in ADSW RPN requirements.

(h) Inactive Duty Training Travel (IDTT) ($3.5M): This is the primary vehicle which Reservists travel to their gaining commands to perform high priority work meeting peacetime contributory support requirements and perform training required by Navy training plans. IDTT is used to provide airlift support missions, operational missions, aviation proficiency skills training, refresher skills training, exercises, and training at mobilization sites.

RECRUITING SHORTFALLS

Reserve Recruiter Support & Advertising ($6.7M): fiscal year 2000 Congressional adds of $5.0M enabled the Naval Reserve to establish its first ever national advertising campaign. Advertising campaign includes media and market research, and placement of advertising in television, print, radio, direct mail, and public service announcements. In fiscal year 2000, Congress also provided a $5.0M add for recruiter support. This provided support for 45 additional recruiters. In fiscal year 2001, Navy added $3.7M to advertising and recruiter support but is still short of the fiscal year 2000 baseline. The additional support would allow the NR to maintain it national advertising campaign and support for 45 additional recruiters (total of 90).

CONCLUSION

The Naval Reserve and the Naval Enlisted Reserve Associations have stated our interests and concerns. We are all deeply interested in the welfare of the Total Force Navy. We are confident in your support. Feel free to contact us at 703–548–5800 if you have any questions.

PREPARED STATEMENT OF THE ENLISTED ASSOCIATION OF THE NATIONAL GUARD OF THE UNITED STATES

INTRODUCTION

Mr. Chairman, Members of the Defense Subcommittee of the Senate Appropriations Committee: I am honored to have this opportunity to present the views of the

Enlisted men and women of the National Guard of the United States. Our members are very appreciative of the support extended to them in the past, and are very confident that you will, through your diligent and conscientious efforts, give serious consideration to the most critical issues facing the National Guard today.

The citizen soldiers of today are truly the finest ever. You may ask yourself, Mr. Chairman, why are NCOs and Enlisted people so concerned about the budget? This is the bottom line: It is the NCOs' direct responsibility to train the troops that the Administration and Congress deploy around the world. The National Guard must have adequate funding to fully train its soldiers and airmen and protect them from harm. The Guard must be adequately prepared and resourced to complete its varying assigned missions and avoid degrading criticism from its adversaries. Without these additional funds, the National Guard will fall into the hollow force that is being predicted by some individuals in the military community.

Today, the Guard is being called upon more and more to provide peacetime and combat-ready support for contingencies around the world. Shortages in specific areas are becoming acute. While we assert that the use of the National Guard is the most cost effective means of implementing a strong national defense strategy during these financially constrained times, we also believe that we must have adequate funds to maintain the best possible services to our nation.

For years, Army and Air National Guard units have competed with the best of their active duty counterparts and have taken top honors home to their states. The National Guard has proven, time and again, that it is a vital part of the Total Force. For more than 360 years, in every war, the combat records of the National Guard prove that the Guard will fight, and win, if, and when it again becomes necessary.

FULL-TIME SUPPORT

The vast majority of personnel in the Army National Guard (ARNG) are the men and women who serve their country by drilling one weekend a month and two weeks each year. However, the Guard also relies heavily upon thousands of full time employees, Military Technicians and Active Guard/Reserves (AGRs), to ensure unit readiness throughout the ARNG.

These full time employees perform vital day to day functions, ranging from equipment maintenance to essential leadership and staff roles, that allow the drill weekends and annual active duty training of the traditional Guard member to be dedicated to preparation for the National Guard's warfighting and peacetime missions.

The level of full-time support manning has a demonstrated direct influence on readiness and is dictated by mission and equipment levels rather than end strength. Full-time support manning is a critical element in the day-to-day National Guard unit operations such as administration, personnel, maintenance, supply and training management, which enhances the effective and efficient operations of our units during inactive duty training periods and annual training.

The Army National Guard's zero risk requirement for Technicians and AGRs is over 84,000, of which more than 73,693 have been validated as essential field requirements when assessed against deployment criteria. Of this essential field requirement, the Army National Guard has a minimum military technician staffing level of 25,500 and an AGR minimum staffing level of 23,500 to begin on a road to recovery for full time support. Failure to fully fund these full time personnel will have a detrimental effect on the readiness of ARNG units. The Army National Guard will not be able to fully accomplish all requirements without proper full-time manning, thus affecting readiness.

The fiscal year 2001 budget, as submitted by the President, provides resources sufficient for approximately 23,957 Technicians and 22,430 AGRs—end strength shortfalls of 1,543 and 1,052 respectively.

EANGUS urges the Congress of the United Stated to provide an additional $76 million in fiscal year 2001 to the Army National Guard for the addition of 1,543 Military Technicians and 1,052 Active Guard/Reserves.

DISTRIBUTIVE TRAINING TECHNOLOGY PROJECT (DTTP)

The National Guard's distributed learning initiative (DTTP) was established by Congress in fiscal year 1995 as the Distance Learning Regional Training Network Demonstration Project. In each year since 1995, Congress has appropriated funds to continue and expand the initiative.

Improved readiness for the Reserve Components is a cornerstone of the project's objectives. This improved readiness will be realized through the greatly expanded availability, effectiveness and efficiency of training through distance learning. But the project offers much more. Through the establishment of the distributed learning network capabilities, the project has greatly enhanced command and control capa-

bilities for units in the field, ensuring prompt, coordinated response to federal and state emergencies. Even more importantly, through the concept of "shared usage," establishment of the DTTP facilities has broadened the national technology footprint by delivering distributed learning technology and its vast potential to communities across the nation.

To date, DTTP has established over 200 distributed training facilities in communities that reach nearly every state. The Project's fielding plan calls for completion of 453 in fiscal year 2003. In fiscal year 2000, Congress provided $83 million ($41 million, Other Procurement, Army, and $42 million, Operations and Maintenance, National Guard) to support the establishment and operation of the fiscal year 2000 facilities.

For the first year since the Project's inception, funding has been included in the President's Budget Submission for fiscal year 2001. However, funds requested in the budget ($11 million, Other Procurement, Army, and $10.6 million, Operations and Maintenance, Army National Guard), do not support the fielding activities necessary to complete facilities installation in fiscal year 2003, and even more significantly, do not provide adequate funds to keep existing facilities operational.

In order for DTTP to remain on schedule and continue to support the facilities that are currently providing distributed learning capability to soldiers, communities, and local institutions, the fiscal year 2001 requirement is $40.1 million, Other Procurement, Army, and $76.3 million, Operations and Maintenance, Army National Guard for a total of $116.4 million.

FIREARMS TRAINING SYSTEMS

This year, more funding for firearms training is necessary. the U.S. Army's Engagement Skills Trainer (EST 2000) provides training in marksmanship, squad tactical, and close-range "shoot-don't shoot" techniques. The latter training feature is extremely important in the peacekeeping operations in which United States military members are currently participating. EST 2000 is part of the Army's total small arms training strategy that enhances the efficiency of live fire exercises, which are the capstone of small arms training. At the inception of the program in fiscal year 1998, it was fully funded. All Army components were each allocated to receive their share of the initial requirement of 368 trainers.

Unfortunately, there is no funding in fiscal year 2001 for EST 2000 and limited funding for the remainder of fiscal year 2000. National Guard training systems have been reduced from 100 to only 12. The Army National Guard needs $8 million in National Guard and Reserve Equipment to procure ninety (90) EST 2000 systems in fiscal year 2001.

CLOSING

Mr. Chairman, it is our Association's belief that the National Guard, in conjunction with the active component, represents the most cost-effective weapon at our disposal to defend our nation. The National Guard's potential has barely been tapped. Yet, it stands ready, willing and accessible to meet our defensive needs. It is imperative to ensure that the National Guard has the necessary support to fully develop into an integral part of the Total Force. This can only be accomplished through modernization of equipment, a stable force strength, and training. Shortchanging any one of these areas could prove fatal to the effectiveness of the National Guard in defense of our country.

Mr. Chairman, the National Guard is your next door neighbor, he or she may be a truck driver, your lawyer, your son or daughter or your grandchildren's teacher. When the National Guard is called, America goes to war. The National Guard is family, Americans at their best. The National Guard—protectors of freedom. and defenders of peace!

I would like to thank the Chairman and Members of this committee for the opportunity to provide testimony on the fiscal year 1999 funding requirements for the Army and Air National Guard.

PREPARED STATEMENT OF THE NATIONAL MILITARY VETERANS ALLIANCE

INTRODUCTION

Mr. Chairman and distinguished members of the Subcommittee, the National Military Veterans Alliance (NMVA/the Alliance) appreciates the opportunity to appear today and thanks you for holding these important hearings. This testimony represents the collective views of the Alliance's member organizations and NMVA

trusts that the thoughts and recommendations provided will be helpful to the important deliberations the Subcommittee has undertaken.

NMVA is a group of 21 military and veteran associations with a combined membership of 3.5 million members, worldwide. Collectively, NMVA associations represent all seven uniformed services, all ranks and grades, all components, family members and survivors. The Alliance arrives at consensus positions on legislative matters important to its membership. NMVA's testimony today is based on pay and compensation issues mutually supported by all Alliance associations.

NMVA extends its sincere thanks to the Subcommittee for its long-standing interest and support for adequate pay and compensation, as well as important quality-of-life issues. While the fiscal year 2000 National Defense Authorization Act by no means solves all of the personnel and readiness problems facing the uniformed services, it nonetheless represents one of the most significant defense measures in over two decades. Clearly, the guiding hand and seasoned leadership of this Subcommittee was a vital part in the final outcome and the Alliance salutes you for your magnificent work.

NMVA believes the fiscal year 2000 defense measure must be viewed and serve as a building block for additional improvements in fiscal year 2001 and beyond. Equally, important, in NMVA's view, is the requirement to fulfill the commitments and promises made during military service. Intuitively, all of us know that the value and honor associated with active military service is also measured by the way in which promises made during that service are subsequently honored and valued. NMVA believes there is no amount of pay, compensation and quality of life enhancements sufficient to solve the problems in the active force if the Nation continues to ignore the plight of its career warriors. The time is ripe for this Subcommittee, the Full Committee, the Congress and the Administration to address all of these issues in a meaningful way. The cost of doing nothing or delaying further steps is simply too great.

PAY

While the Defense Authorization Act for 2000 provided a welcomed and much needed boost in military pay and benefits, this subject nonetheless remains a major concern to Armed Forces members. The pay raises approved for this year were indeed a positive step in the right direction. It sent an encouraging signal to military people that they should be adequately compensated for their service in providing for the Nation's security. The pay raises help but we all know military compensation still lags behind the private sector.

Without basic patriotism on the part of members of the uniformed services, there would be no armed forces. At the same time, patriotism by itself is not a sufficient motivation for military service in peacetime. Now, more so than at any time in recent memory, the uniformed services are in a manpower battle. If recruiting and retention figures are a reflection of the situation, one would have to conclude that the uniformed services are losing the fight. It is becoming increasingly difficult for the military services to compete with the civilian sector, when the pay and compensation offered is more lucrative, frequently many times over. When military income is compared to income in the private sector for like skills and responsibilities, it's not difficult for military members to do the math. The high quality young men and women we want to recruit can do the math. The high quality mid-career officers and enlisted people we want to retain can do the math also. As many are doing, they easily realize they can do better financially for themselves and their families in another line of work.

NMVA is thankful that future pay raises in the next few years will be equal to the Economic Cost Index (ECI) plus one-half percent. This plan recognizes the seriousness of the pay situation but NMVA is concerned that it may not be enough, quick enough. When the current plan is completed, military pay will still 8–10 percent behind the private sector. The Alliance believes a more aggressive plan will be needed, a plan that will more rapidly eliminate the differential with civilian sector pay.

As with the January 1, 2000, pay raise, NMVA applauds the targeted pay increases scheduled for July of this year. The Alliance certainly does not want to sound unappreciative, but the mid-career noncommissioned and petty officer force is being "short changed" once again. The Alliance believes a great opportunity was missed to address pay inequities in the mid-enlisted grades, inequities that have existed since the early days of the all-volunteer force. When one looks at the pay reform tables set to go into effect in less than three months, the conclusion is clear and dramatic; basic pay rates for grades E–5, E–6 and E–7 are undervalued when compared to other grades. With increased deployments and training requirements,

the cumulative experience of the mid-grade enlisted force has become even more critical to operational readiness. In 1998, the Honorable John Hamre, Deputy Secretary of Defense, stated: "When you get to be an E–5, E–6 or E–7, the gap between military and civilian pay starts to widen." NMVA finds it extremely regrettable that the rates scheduled to go into effect in July failed to address this problem.

With a surging economy and low unemployment, retaining key mid-grade enlisted personnel must be a priority. Today's mid-grade noncommissioned and petty officers are shouldering more responsibility than at any time in our history. They are better educated. They are the keys to the doorway for bringing new recruits into the enlisted ranks. They are integral to training both enlisted and officers. They provide the day-to-day, face-to-face leadership. They are the mentors. With increasing frequency, they are being called upon to assume responsibility and authority that at one time was reserved solely for commissioned officers. Congress must be as equally concerned with retaining these key enlisted leaders as we are with recruiting high-quality candidates for military service.

In the strongest possible terms, NMVA urges Congress to reform the pay for mid-grade enlisted personnel. People will leave if they don't believe they are appreciated and there wasn't much appreciation expressed in the targeted pay raise this year for this group. It will take a strong statement from Congress and the Alliance believes that statement must be made now, in fiscal year 2001.

NMVA strongly supports the proposed 3.7 percent active duty pay increase included in the Administration's budget. This follows the 4.8 percent pay adjustment on January 1, 2000, and the planned increases of one-half percent above the Employment Cost Index (ECI) through 2006. These increases are especially important to uniformed services members and send a positive message to service members about the important and value of their service. NMVA believes all must recognize though that at the end of this six-year period, a pay gap in excess of 8 percent will still remain between military and comparable civilian pay levels. Funding for the pay increase and pay table improvements, which become effective on July 1, 2000, along with the reform of the REDUX retirement system, is of paramount importance. However, as stressed earlier, these improvements must be viewed as and mark the beginning to a longer-term strategy to solve the serious recruiting and retention problems that are undermining military readiness. Any longer-term strategy must also include solutions to address the pay of the mid-grade enlisted force.

HOUSING

Housing remains a top quality-of-life concern among members of the uniformed services and impacts both married and single members. The fiscal year 2000 Defense Authorization Act provided some much needed relief in accelerating the initial Basic Allowance for Housing (BAH) program from what was to be a five-year implementation rate adjustment program. As a result of the BAH rate adjustments that have been implemented this year, many personnel did benefit from a much needed increase in their housing allowances in some parts of the country. As this Subcommittee is keenly aware, other areas of the country realized significant reductions in the housing allowance that imposed an unacceptable inequity on service members moving or transferring on or after January 1st. NMVA is tremendously pleased that on March 1st DOD began paying BAH at the 1999 rate to service members moving into areas where the 2000 housing allowance rates were set lower than the 1999 rates.

The new BAH rates however still are not fully comparable to housing costs in some areas of the country. NMVA is concerned that the survey used to arrive at the new rates did not capture the locations where service members are actually living. It appears to NMVA that the survey focused on areas immediately surrounding bases and installations, areas that are oftentimes the least desirable and which service members try to avoid because of safety and security concerns for their families. Consequently, the new BAH rates do not, in many cases, reflect the costs that service members are incurring to obtain adequate, safe quarters in desirable neighborhoods.

NMVA remains concerned about the inequity of the requirement to include an additional out-of-pocket expense averaging nearly 19 percent, which is presently incorporated with the BAH rates as being a "fair housing cost." This additional expense is perceived as unfair because those who reside in government assigned housing are not, nor should they be, required to pay any out-of-pocket expenses.

As you are aware, Secretary Cohen proposed a multi-year plan, as part of the DOD Budget proposal for fiscal year 2001, to eliminate out-of-pocket housing expenses and which seeks to repeal the current law that requires service members to pay at least 15 percent of their housing costs. NMVA salutes this initiative and

urges the Subcommittee to support DOD's request. NMVA believes enactment of this initiative will provide equity for those who must live on the economy to be on par with those in government housing who do not incur such additional expenses. Also, DOD has stated they will ask Congress to authorize a retroactive hike to January 1st for those who received a lower BAH rate for the months of January and February 2000. NMVA urges the Subcommittee to support this initiative also.

HEALTH CARE

Among quality-of-life issues, none ranks higher in importance to NMVA than the availability, quality and timeliness of health care to uniformed services beneficiaries. Active duty, National Guard, reserve, military retirees, their dependents and survivors consistently cite health care as their number one quality-of-life concern. Base and hospital closures and the continued reduction in the number of health care professionals and military treatment facilities is seriously impacting the primary mission of the Military Health System, that of caring for active duty personnel and maintaining military medical readiness, readiness training and contingency operations. The reductions in health care infrastructure and personnel has further eroded the ability of the Military Health System to provide care for active duty family members and for all practical purposes has eliminated the care for military retirees and their beneficiaries in the Military Health System. This entire situation has been complicated by successive years of funding shortfalls.

In NMVA's view, the greatest challenge before this subcommittee and Congress is the restoration of fair treatment and trust of service members, past and present. The experience of the "hollow force" of the 1970's is occurring again. Force reductions have gone too far. The force is overworked, over deployed and under paid. And, it will take more than mere laudatory speeches to reverse and fix this situation. It will take a sustained long-term commitment in pay and quality-of-life enhancements, and perhaps none more important than a resolve to fairly and equitably fix the Military Health System. The Alliance recognizes the cost will be high but the NMVA is convinced that the current situation cannot continue without further unacceptable long-term consequences.

MILITARY HEALTH SYSTEM FUNDING

Nowhere has the erosion of benefits been more pronounced or serious than in the military health care system. In slightly over two decades, military members and retirees have seen this important benefit deteriorate from fully funded coverage to member-subsidized coverage. As a result of Base Realignment and Closure (BRAC) actions, 58 military treatment facilities (MTF) and numerous military treatment clinics have closed. Numerous other facilities were downsized to clinics and today 16 states have either no MTF or clinic with inpatient capability. Today, only one MTF or Uniformed Services Treatment Facility exists in 12 other states. With two additional rounds of base closures being sought by the Defense Department, the erosion of the health care benefit, inarguably the most important quality-of-life benefit, will continue to worsen.

Despite the substantial savings, realized from actions already taken, military health care continues to be seriously under funded. Every action taken to improve the health care benefit—be it a test or demonstration—has been done with one underlying theme, save the Department of Defense money. In that process, the cost to members on active duty has soared. The cost on retirees, specifically retired noncommissioned and petty officers, is nearly unbearable. Today, the typical enlisted retiree pays between 25–30 percent of their retired pay and as much as 33 percent more than federal civilian retirees as the "cost of the health care promise."

Adequate funding is not only necessary to lower the cost on DOD beneficiaries, adequate funding is essential to keep providers in the TRICARE networks. Most TRICARE managed care support contractors have reimbursement rates that are lower than Medicare. In many areas, health care providers are unwilling to accept TRICARE Standard (CHAMPUS) patients at all. The low TRICARE payment rates combined with untimely reimbursements after care has been provided are giving physicians two disincentives for not signing up in the TRICARE networks.

NMVA is grateful for provisions in the fiscal year 2000 National Defense Authorization Act authorizing the Secretary of Defense to exceed the CMAC rates. In the Alliance's view, this should help attract providers into TRICARE networks. But these provisions can help only if they are implemented and DOD has shown no signs of taking these provisions seriously. When CHAMPUS (now TRICARE Standard) was enacted in 1966, Congress directed DOD to provide a benefit at least equal to FEHBP high option Blue Cross/Blue Shield, without imposing a premium. The fiscal year 2000 Defense Bill also provided enhanced opportunity for TRICARE con-

tractors to use electronic processing for claims and streamlining the information flow, thus providing authority for two pieces of the claims debacle to be fixed. DOD has decimated the TRICARE Standard benefit and now seems reluctant to even implement the provisions that might attract physicians into TRICARE networks. Likewise, DOD has not unveiled any proposal or plan to implement electronic claims processing. Less and less money is being channeled into patient care while DOD fails to address its soaring medical administration overhead. NMVA strongly urges Congress to hold DOD accountable to its wishes.

The Alliance firmly believes greater efficiencies in the military health system are achievable and their implementation will produce savings, which should be redirected to patient care. Administrative costs are excessive in comparison with other government-sponsored programs and the adoption by DOD of "best industry standards" would produce efficiency and savings. However, all of the potential savings from these and other initiatives such as reducing fraud and abuse cannot make up the ground lost to successive years of under funding. It will take a strong statement from Congress, backed up with adequate appropriations, to restore the military health care to a system that is fair to all beneficiaries, one that beneficiaries can rely on and trust.

TRICARE PROGRAM IMPROVEMENTS

NMVA is sincerely grateful that DOD has recommended important improvements to the TRICARE program for active duty members and their dependents and asks the Subcommittee to support these initiatives:

—Eliminate out-of-pocket expenses for active duty members enrolled in TRICARE Prime, and

—Extend TRICARE Prime Remote to military family members.

Both of these initiatives respond to the needs of uniformed services' members and will reduce the extraordinary out-of-pocket cost-sharing expenses experienced by some. As you consider these initiatives, the Alliance asks that you be particularly sensitive as to the importance of these improvements to Coast Guard personnel.

TRICARE Prime is the most attractive and sought after plan of the three TRICARE options. Under Prime, the majority of care is provided at military treatment facilities. According to the 2000 TRICARE Stakeholders Report, approximately 80 percent of DOD family beneficiaries are enrolled in the Prime option. Unfortunately, as a factor of the locations where most Coast Guard members serve, the numbers are reversed to where less than 50 percent of eligible Coast Guard families are able to take advantage of Prime. Consequently, the majority of Coast Guard members are forced to rely on the lowest program option, TRICARE Standard.

For outpatient treatment, TRICARE Standard involves a $300 per year deductible per family, plus an additional 20 percent out-of-pocket cost-share, which is defined as an allowable charge. The allowable charge is a standard amount established by TRICARE Management. The fact that very few medical care establishments accept the "allowable charge" means that the uniformed services' member must pay the cost-share, plus the difference of the amount from the "allowable charge." Depending on where the member is assigned, these cost differences can be substantial and Coast Guard personnel are adversely affected disproportionately to the other uniformed services. Many young enlisted personnel with a spouse and child making less than $15,000 per year of basic pay simply does not have the discretionary income to absorb these extraordinarily high costs for medical care. Although TRICARE Extra allows a smaller out-of-pocket expense than the Standard option, this option too is quite limited to Coast Guard families. Extra entails using designated health care providers, which usually are not in the remote locations where Coast Guard units are located.

Successful and full implementation of TRICARE Prime Remote would greatly enhance the quality of life of uniformed services' members and their families by reducing the out-of-pocket expenses for members and their families who do not have access to military treatment facilities or access to the TRICARE Prime program. It is needed for all uniformed services and especially for the Coast Guard. NMVA requests the proactive involvement of the Members of this Subcommittee to ensure the successful and complete implementation of TRICARE Prime Remote.

The Alliance recommends additional improvements to the TRICARE program and requests this Subcommittee provide the funding to support the following:

—Reduction of the catastrophic cap for TRICARE Standard from $7,500 to $3,000, the same as TRICARE Prime. The present cap penalizes beneficiaries unable to access TRICARE Prime.

—Reimbursement of expenses incurred for transportation by TRICARE beneficiaries who travel over 100 miles to obtain specialty care.

—Elimination of the 115 percent billing limit when TRICARE Standard is second payer to other health insurance.
—Restoration of "coordination of benefits" for TRICARE Standard claims.
—Acceleration of claims processing by reducing the number of claims set aside for audit and the aggressive expansion of electronic claims processing.
—Updating of CHAMPUS maximum allowable charge (CMAC) rates more frequently to ensure a more accurate reflection of actual health care costs as a means to attract and retain quality TRICARE providers.
—Full and complete implementation of portability and reciprocity for TRICARE Prime enrollees.
—Relaxation of the requirement for TRICARE Standard beneficiaries to obtain non-availability statements or pre-authorizations before seeing private health care providers.

MILITARY RETIREE HEALTH CARE

For individuals who dedicate the majority of their adult working life, often in harms way while providing for the nation's security, honoring the health care promise upon which many based career military decisions represents a breach of faith that defies description. In the Alliance's view, there is no amount of pay, benefits and quality-of-life enhancements sufficient to solve the problems in the active forces as long as Congress continues to ignore the plight of elderly, sick career warriors. Members on active duty and their families, as well as potential recruits, have witnessed this tragic breach of trust and honor, and in increasing numbers are electing to leave or not join at all.

It is not NMVA's intention to seem inappreciative for the efforts Congress has made in recent years to address the health care needs of military retirees, especially those aged 65 and over. The Alliance supported these initiatives and continues to support any effort that will provide the health care that was promised and earned. But NMVA believes everyone must recognize that all of the various test and demonstration initiatives combined when fully implemented will help only a small percentage of the military retiree population and their beneficiaries—and, as implemented by DOD, all are structured to save DOD money.

NMVA is immensely pleased that Congress has under consideration a number of health care proposals for military retirees, particularly for Medicare-eligible military retirees. The Alliance salutes the sponsors and co-sponsors on all of these initiatives for fostering a long overdue synergy for meaningful reform of health care for military retirees.

In the Alliance's view, there is no "one solution" to fix the health care dilemma confronting military retirees and their beneficiaries. The fix to this enormously complex problem will occur only if Congress adopts a multi-faceted approach that will provide military retirees the freedom to choose. NMVA also believes it should be abundantly clear to everyone that the nation cannot afford the cost of further delay and inaction.

Regardless of the promises made and of all the intentions of this Congress, health care for military retirees is not treated as a benefit and it certainly is not viewed as an entitlement. Health care for military retirees, their families and survivors is merely a line item expense in the DOD budget to be squeezed for more pressing needs by comptrollers and budget analysts who do not rely on the Defense Health System for their care. A solution to address this concern is to make the funding mechanism for military retiree health care the same as it is for other federal retirees by adding it to the entitlement portion of the federal budget. Until that step is taken, retiree health care will still have to compete for the same defense dollars used in weapons programs, research and development or operations and maintenance. And, as long as this situation is allowed to continue, health care will continue to be the loser. In the strongest possible terms, NMVA requests the support of this subcommittee in moving military retiree health care to the entitlement portion of the federal budget. If Congress can do it for other federal retirees, Congress surely can and should do it for the nation's career warriors.

Medicare Subvention: TRICARE Senior Prime.—NMVA extends its thanks to the Subcommittee for your support of the TRICARE Senior Prime Test program, Medicare subvention. With the favorable response to this program by military in the six designated test sites, NMVA is seeking nationwide implementation of this program. Many Medicare-eligible retirees have received letters from hospitals stating that "space availability" no longer exists or is extremely limited due to downsizing of staff at MTFs. At other locations, however, space is available and allowing Medicare-eligible military retirees to use their Medicare benefit at MTFs will provide them with yet another option for health care. Though it should be understood that

this is not the complete solution to the current problem, it is nonetheless an important piece to solving the broader health care dilemma for these beneficiaries. The support of this subcommittee is needed and requested to ensure expansion of TRICARE Senior Prime to additional sites with the ultimate goal of national implementation. Your support will help to provide a true health care benefit to military retirees that still reside near MTFs.

In the meantime, there are other difficulties with the TRICARE Senior Prime program. The Health Care Financing Administration (HCFA) has provided $43 million in interim payments to DOD and DOD will be allowed to retain $6 million despite the fact that DOD has already paid out $40 million in claims. In our opinion, the reimbursement rates and rules between HCFA and DOD should be renegotiated. Also, DOD hospitals are providing services of $187 more per enrollee per month than they are receiving in HCFA reimbursements. With over 30,000 enrolled retirees and their family members, this is more than $5.6 million per month. The simple fact is that if health care is to be provided to military retirees, dollars must be provided to the MTFs from HCFA and DOD. Since care provided in MTFs is less expensive than civilian sector care, this is a good investment for retired beneficiaries and the American taxpayer.

FEHBP–65.—Like TRICARE Senior Prime (Medicare subvention), FEHBP–65 represents another of the options that should be available to Medicare-eligible military retirees. Due to the continued downsizing of MTF staff, base closures, decreasing dollars for DOD health care, and capitated budgeting, military retirees continue to be pushed out of the military health care system. Even with full implementation of TRICARE Senior Prime, DOD will only be able to serve about 33 percent of the military retiree population over the age of 65. Some 17 percent of retirees have employer-sponsored health care and another 10 percent are already in Medicare Risk HMOs, leaving between 32 percent to 41 percent (approximately 533,000) to possibly access the FEHBP option.

The continued support of this subcommittee for FEHBP–65 is needed and requested. Costs could be controlled if necessary by capping the program. Estimates indicate that fewer than 30 percent of retirees would elect the FEHBP option. Those that would need access to health care now, not five years from now when it will be too late. For many retirees, FEHBP–65 may very well represent the only available option and NMVA asks for your continued support of this program.

Pharmacy Issues.—NMVA cannot over emphasize the importance of access to pharmaceuticals by military retirees, particularly by those over age 65. Of all the health care issues needing attention and competing for funding, none is more important than providing military retirees access to a uniform, nationwide pharmacy benefit, regardless of the age or location of the retiree. NMVA is requesting additional funding be allocated to expand the BRAC pharmacy benefit to Medicare-eligible military retirees to permit access to the National Mail Order Pharmacy and local retain pharmacy benefit. Further, the Alliance requests funding to provide a complete national formulary that address the drug needs and utilization of the Nation's aging war heroes and heroines. NMVA firmly believes this benefit could and should be provided without the need for any enrollment fee and/or deductibles. The Alliance asks the full support of this subcommittee toward that end.

Medicare Part B Waiver for Military Retirees 65+.—Military retirees were counseled by MTF advisors not to enroll in Medicare Part "B" because they resided near MTFs and would be able to access their free health care. These retirees should not be punished with late enrollment fees due to the fact that the local MTF has now closed. NMVA requests the subcommittee to support funding that would permit the waiver of the penalty for not enrolling in Medicare Part "B" for Medicare-eligible military retirees. NMVA believes that this small investment will enable retirees to enroll in health care programs which require Medicare Part B for eligibility, such as TRICARE Senior Prime and the Fee-for-Service Option plans in FEHBP. Currently, military retirees are paying an exceedingly high penalty for Medicare Part B, or they just cannot enroll because of the steep cost.

CONCURRENT RECEIPT

The Alliance is sincerely grateful for the special compensation provisions, for severely disabled military retirees, included in the fiscal year 2000 Defense Authorization Act. NMVA views these provisions that are yet to be implemented as an interim first step. Very likely, additional interim steps will have to be taken before The Alliance's ultimate goal—that of full concurrent military longevity retired pay and full VA disability compensation without offset from either—is achieved. It is particularly disturbing to NMVA that many Members of Congress believe this entire issue was solved by the "special compensation" when in fact we have yet to attack

the root of this problem. The situation that has prevented a change in law for more than a quarter of a decade remains ever present. For more than two decades, the Veterans Affairs Committees and Armed Services Committees have been passing the buck on this issue. Armed Services says it belong to Veterans. Veterans' says it belong to Armed Services. Mr. Chairman, the charade must stop. These committees in both the House and Senate must work together to approve the change in Title 38 that would eliminate the offset. A corrective measure—or at least a plan and timetable for a corrective measure—must be considered and enacted this year. The concurrent receipt issue is a long-standing example of why so much trust has been lost. Another opportunity exists and this opportunity should not be allowed to pass without correction of this egregious discrimination.

SURVIVOR BENEFIT PLAN

The Survivor Benefit Plan (SBP) continues to be a valuable program to insure that the surviving dependents of military personnel who die in retirement or after becoming eligible for retirement will continue to have a reasonable level of income. As Congress seeks to enact further improvements to this valuable program, NMVA recommends:

—Accelerating the paid up provisions by changing the effective date from 2008 to 2003 (to coincide with the 30th anniversary of enactment of SBP) for participants who are 70 years of age and who have paid premiums for 30 years. The Alliance supports H.R. 601 and urges the Subcommittee to consider identical companion legislation in the Senate.

—Increasing the annuity paid to survivors at age 62 from 35 percent to 55 percent The Alliance supports S.763, The SBP Benefits Improvement Act of 1999.

—Allowing Retired Servicemen's Family Protection Plan (RSFPP) participants to convert to SBP without penalty at any time.

MONTGOMERY GI BILL

When Congress considers education policy, the starting point for that discussion should be the Montgomery GI Bill (MGIB) but that has not been the case for far too long. As a consequence, the MGIB has lost its recruiting power along with its higher education purchasing power. In the process of providing a GI bill for everyone but the GI, Congress has devalued military service and we are witnessing the consequences today. If post-secondary education is the goal of a young man or woman today, services in the Armed Forces is NOT the way to go and some simple comparisons are revealing.

Americorps pays its "volunteers" $4,725 per academic year of service in education benefits, plus health care and a child care benefit, thereby increasing dramatically its overall value. The MGIB now pays $4,828 per academic year with no ancillary benefits, with the overall benefit totaling $19,296. In actuality, the total net educational benefit is $18,096 when the $1,200 enrollment "tax" is considered. Yet last year, the Congress said it believes $50,000 is the amount needed to go to college and provided that amount in non-repayable grants for DC high school graduates in the District of Columbia College Access Act. In academic year 1999–2000, the average undergraduate cost of attending a typical four-year public college or university is in excess of $8,800. Americorps, DC College access grants, Pell grants and other educational assistance have noble societal goals, however none demand anything close to the commitment, dedication and sacrifice required to qualify for the MGIB. Yet, where has Congress placed the greater comparative education value?

Sixty-five percent of high school graduates pursue higher education and these young men and women, across the Nation, are making the comparisons on the grants, loans and programs available to them. A $50,000 non-repayable grant or four years of military service with a $1,200 tax to obtain $18,096 in net educational benefits? Which of these options would the members of this Subcommittee take? Which of these options would the distinguished members of this Subcommittee recommend to their sons, daughters and friends?

Not only has the MGIB lost its recruiting power and higher education purchasing power; it has also lost its value as a readjustment benefit. The MGIB is no longer facilitating and easing the transition to civilian life following military service. Today, fewer than 40 percent of program participants use the benefit even though more than 96 percent of new recruits enroll in the program. There should be no question whatsoever in the minds of the Distinguished Members of this Subcommittee that dramatic action is needed now. The Alliance recognizes however that what should be done must be balanced against what can be done. In the strongest possible terms, NMVA believes a minimum step is needed now, this year. The Alliance believes if Congress does nothing else this year on the MGIB, the basic month-

ly stipend must be raised to a level that will afford military members and veterans a reasonable opportunity to pursue higher education. Bench marking and indexing the monthly stipend to the average cost of a typical four-year public institution would be an important step in the right direction.

It is one thing to debate and consider further a completely new veteran education benefit as recommended by the Congressional Commission on Service Members and Veterans Transition Assistance. It is an entirely different thing to delay any action altogether. While the cost of enacting any improvements must be dutifully considered, NMVA suggests that you must also consider the cost of further inaction. The Alliance is convinced that the cost of doing nothing is much higher, and certainly of greater significance, than the money it would require to enact meaningful improvements.

RESERVE AND GUARD ISSUES

Changing threats and utilization of the Guard and Reserves has created an environment, where our Reservists are being called upon more frequently than any time in the past other than war. Reservists are, more often, being called into service by the CINC's for longer periods of time per year to defer a "hollowing out" process that could draw down the strength, readiness and flexibility of our combat units. Our Commanders in the field realize that they can no longer get the mission done in the long term without the Guard and Reserve. The Department of Defense's plan for the Total Force has emphasized the integration of regular and reserve components of each service. In context with Total Force, the Guardsman and Reservist need to be given the same benefits as the Active Component. Not creating parity with the total force risks creating a second string on our national defense team. Because of OPTEMPO and aging equipment, retention and recruiting are problems in the Guard and Reserve today. If you treat people differently, retaining individuals will become even that much harder. The issues that follow are equity issues that have been highlighted by members of the Guard and Reserve over the last year.

Availability of Bachelor Quarters.—Less time is being spent in Reserve Centers and National Guard Armories. Efforts are being made by the Reserve Service Chiefs to get Guardsmen and Reservists to their mobilization sites or gaining commands. More often, these citizen soldiers, sailors, marines and airmen are spending more training at active bases. In many cases, drilling sites have been relocated to active forts or bases. Members who drill are given a room only if space is available. A drilling member can check in only after five in the evening, if rooms aren't filled, and then must check out in the morning, repeating the cycle the next night. Active duty members on assignment are given a room at time of arrival for the duration of their stay. Most members pay for their own room off base rather than gamble on a room on base. Bachelor Quarter Managers are concerned that the influx of Reservists on a weekend may overwhelm the availability of quarters for everyone. The NMVA suggests that if a Guardsman or Reservist drives over 50 miles (one way) to get to drill, then his or her orders to drill should be treated with the same priority as an Active Duty member

Single Rate Basic Allowance for Housing (BAH).—Currently, Reservists performing active duty tours, for other than declared contingency operations, when billeted in government quarters and who have no dependents, are not entitled to BAH. These individuals still have mortgages or rental obligations. Conversely, Reservists performing comparable active duty tours, with similar billeting, and whose dependents are prevented from occupying those quarters are entitled to BAH. NMVA believes that Reservists performing any type of active duty, who are billeted in government quarters and who have mortgage or rental obligations, should be entitled to BAH.

Thrift Savings Plan.—The House of Representatives and Senate passed legislation signed into law by the President, authorizing a Thrift Saving Plan that would include Guardsmen and Reservists of all services. The director of the board administering this plan does not favor Reservists opening any accounts of this Thrift Savings Plan because of low dollar contributions. Suggested service charges for this plan are .6 percent for federal employees, 1.5 percent for active duty, and 8.4 percent for reservists. The NMVA urges Congress to continue its support for Guard and Reserves by directing that the service charge is no more than what the Active Duty participants pay. Further the small dollar contributions can by counteracted by allowing reservists to donate up to 5 percent of an active duty salary, but not to exceed their amount of drill pay.

Heroism Pay for Guard and Reserve.—Section 3991 (Computation of Retired Pay)(a)(2), Title 10, United States Code, authorized an additional 10 percent for certain enlisted members credited with extraordinary heroism. Two cases have been

noted where this pay may be lost: (A) an active person, qualifying for heroism retirement pay, loses it if they transfer to a branch of the Guard or Reserves. (B) A Reservist while recalled to active duty performs with valor and extraordinary heroics and qualifies for heroism retirement pay, but with their return to reserve status, they lose the 10 percent bonus. NMVA believes the bonus of 10 percent should be paid to any retiree, active or reservist, who qualifies through extraordinary heroism.

Military Funeral Honors.—All Veterans, Active Duty, Guard and Reserve personnel are now entitled to military funeral honors. With the aging veteran population, 146,000 military funerals are anticipated in fiscal year 2000, rising to over 600,000 military funerals by fiscal year 2004. Active duty personnel cannot handle this increased duty assignment by themselves. National Guardsmen and Reservists will be called upon to help provide military funeral honors. A funeral detail honor guard needs to be a stable population, have trained professionals, who are dedicated at honoring the veteran and be reassuring to the veteran's family. Congress has authorized Guard and Reservists to perform Funeral Honor Duty, but with only a $50 dollar stipend, an inactive duty point, and travel reimbursement if mileage is over 100 miles roundtrip. Such reimbursement will encourage participation by Guardsmen and Reservists on occasion, but not be a basis for a committed, long-term honor guard detail. The NMVA feels that current stipend is insufficient. We urge Congress to change the law to provide honor guard reserve members with the same pay and benefits as the active member of the same honor guard duty.

CONCLUSION

Individuals who enlist or reenlist recognize they cannot make large sums of money by choosing the profession of arms. Many join for the experience, excitement, or for the promise of certain post-military service benefits. Some view the military as a higher calling in service to their country, patriotism if you will. Whatever the reason or reasons that may persuade one to service or continued service, all expect to be treated fairly.

More importantly, just the perception of fair treatment elicits trust. But the trust that once bound military members with their nation is waning. Among some, particularly career warriors and their spouses, families and survivors, trust no longer exists. Too many promises have been made and subsequently broken. Last year's Defense Bill was a step in the right direction toward placing fair value on military service and restoring trust that has slowly eroded the fighting fabric of our Armed Forces. It will take an equally strong statement this year and in future years. This year the debate must be about more than equipment, weapons systems, research and development and operations. Although important, individually and collectively, they quickly become meaningless unless we attract and retain the high quality people we desperately need.

The support of this subcommittee is vital to ensure that our Armed Forces are properly staffed and that their level of pay, compensation, benefits and quality of life is comparable with the invaluable service they provide to the Nation's security and prosperity.

PREPARED STATEMENT OF FLORIDA STATE UNIVERSITY

Mr. Chairman, I would like to thank you and the Members of the Subcommittee for this opportunity to present testimony before this Committee. I would like to take a moment to briefly acquaint you with Florida State University.

Florida State University is a comprehensive Research I university with a liberal arts base. The University's primary role is to serve as a center for advanced graduate and professional studies while emphasizing research and providing excellence in undergraduate programs. Faculty at FSU have been selected for their commitment to excellence in teaching, for their abilities to perform research and creative activities, and for their commitment to public service. Among the faculty are numerous recipients of national and international honors, including four Nobel laureates and eight members of the National Academy of Sciences. Our scientists and engineers do excellent research, and often they work closely with industry to commercialize their results. Florida State ranks third this year among all U.S. universities in revenues generated from its patents and licenses, trailing only Columbia University and the entire University of California system. Having been designated as a Carnegie Research I University several years ago, Florida State University currently exceeds $100 million per year in research expenditures. With no agricultural or medical school, few institutions can match our success.

Florida State attracts students from every county in Florida, every state in the nation, and more than 100 foreign countries. The University is committed to high

admission standards that ensure quality in its student body, which currently includes some 192 National Merit and National Achievement scholars, as well as students with superior creative talent. We consistently rank in the top 25 among U.S. colleges and universities in attracting National Merit Scholars. At Florida State University, we are very proud of our successes as well as our emerging reputation as one of the nation's top public universities.

Mr. Chairman, let me tell you about a project we are pursuing this year involving Advanced Propulsion Systems. The Office of Naval Research (ONR) has been actively pursuing opportunities to increase its presence in the Gulf Coast Area by searching our centers of technical excellence which can serve as catalysts for bringing state-of-the-art research and development to the Gulf Coast Area. Particular emphasis has focused on forming partnerships with regional industry. The ONR has identified six areas of research and development that are of interest to the Navy, one of which is the next generation of Naval ship power and propulsion systems, the all-electric ship. This project involves FSU working with the ONR and focuses on supporting research, development, and testing of the next-generation propulsion systems. Such work will include research, simulation, testing, and development of prototype systems. Efforts will also require integration of high-performance computing capabilities, as well as strong partnerships with numerous industrial partners. The engineering and high-performance computing capabilities at FSU, along with the resources and talents National High Magnetic Field Laboratory (NHMFL), have converged to create a center for advanced transportation simulation and design and has resulted in focusing several unique national capabilities not available elsewhere. Our resources in power engineering, materials sciences, and computing sciences converge in providing the Navy with talents to move toward the development of advanced propulsion systems needed for the ships of the future. The combination of these resources and strong industrial collaborations are the key to this endeavor. We are requesting $4 million in fiscal year 2001 to continue our progress in this effort for the Navy and the Department of Defense.

Our next project is also a continuing effort which involves the Learning Systems Institute at Florida State University and the Institute for Machine and Human Cognition (IMHC) at the University of West Florida. Together, the institutions will be involved in assisting the Chief of Naval Education and Training (CNET) with critical technology and training related issues.

CNET has asked the Learning Systems Institute (LSI) at Florida State University to assist in the development of a system to assess the effectiveness of the entire Leadership Continuum. Part of the work is the identification of organizational performance-related data that can be linked to specific program training objectives.

Simultaneously, CNET has also asked for assistance in the development of specific Internet tools for supporting training worldwide. FSU will collaborate with UWF in the further development of appropriate Performance Support Systems for the Navy that will involve the use of World Wide Web and other Internet technologies. This will result in the development of electronic tools that use elements of artificial intelligence and distance learning technologies to provide needed information and training at the moment and place of greatest need, which will simultaneously improve job performance while reducing training time and costs.

The experience and skills of the Learning Systems Institute at Florida State University, specifically the Office of Interactive Distance Learning, and the Institute for Human and Machine Cognition at the University of West Florida are complimentary and synergistic. It is a powerful partnership that brings some of the best expertise available in the world to bear on critical education and training issues.

Continuation funding is being sought at the $5 million level for fiscal year 2001 through the Department of Defense.

Our final project is a new endeavor involving the Department of the Army's Training Support Center and their efforts to provide education and training to their personnel.

Every branch of the armed services is using more advanced technology in everything from motor vehicles to advanced weapons systems. This is putting an increased pressure on training systems. To perform their jobs more effectively, military personnel must be better trained on a broader and broader array of systems. This is being made even more challenging by the current level of staffing which require each person to be able to perform more tasks than in the past. All of the services are developing new models of training and performance support, which depends on a good balance between traditional classroom and textbook methods, continuous distributed learning, and carefully designed, integral performance support systems.

The various network and digital technologies that are available today permit the development of highly effective learning and performance support systems that involve the presentation of information in multi-media formats. One difficulty, how-

ever, is that the design of high quality, effective, media-based materials is expensive and time consuming. One way to address that problem is by maximizing the use and re-use of any developed learning materials. Maximizing reuse of materials is difficult if those materials are developed in whole-course chunks. It is more efficient to break a course down into small pieces granules fundamental concepts, skills, and ideas that can then be more easily used as components in other courses and disciplines.

The Army Training Support Center (ATSC) is pioneering the design of digital, reusable educational objects or granules. There have already been efforts to digitize training objects and place them in a library from which they can be retrieved to be used as components of other training and support systems. Critical to the success of this model is a nomenclature system a way of tagging each object with information about subject, level, specific competencies, and a variety of other characteristics. Only when each object is cataloged using such a system will it be possible to find the appropriate modules when new training is being developed.

One other challenge is to help instructors think in new ways. Designing curriculum that is granular is a new skill requiring new approaches. There is a need for on-line performance support tools that would help instructors design effective granular instruction. What is proposed here is the development of a set of interactive tools, or job aids, that will assist instructors in the systematic and scientific design of reusable educational objects.

Florida State University, specifically the Learning Systems Institute (LSI), is uniquely qualified to work collaboratively with the Army Training Support Center with research on the design and standardization of a nomenclature system for reusable objects and also with the development of tools for instructors to assist in the design of granular training. We seek an initial funding of $2 million for the Army Training Support Center at Fort Eustis, Virginia to contract with Florida State University for this critical research and development.

Mr. Chairman, these are just a few of many exciting activities going on at Florida State University that will make important contributions toward solving some key concerns our nation faces today. Your support would be appreciated, and, again, thank you for the opportunity to present these views for your consideration.

CONCLUSION OF HEARINGS

Senator STEVENS. Thank you very much. If there is nothing further, the subcommittee will stand in recess.

[Whereupon, at 12:50 p.m., Wednesday, May 3, the hearings were concluded, and the subcommittee was recessed, to reconvene subject to the call of the Chair.]

LIST OF WITNESSES, COMMUNICATIONS, AND PREPARED STATEMENTS

Page

American Society of Tropical Medicine and Hygiene, prepared statement 699

Ames, Genevieve M., Ph.D., Associate Director and Senior Research Scientist, Prevention Research Center/Pacific Institute for Research and Evaluation, and Program Director, NIAAA Pre and Post Doctoral Training Program, Prevention Research Center and School of Public Health, and Adjunct Professor, Division of Public Health Biology and Epidemiology, School of Public Health, University of California, Berkeley 602
  Prepared statement 603

Armen, Harry, Senior Vice President, American Society of Mechanical Engineers 655
  Prepared statement 657

Barnes, Joe, Master Chief, USN (retired), Director, Legislative Programs, Fleet Reserve Association 527
  Prepared statement 529

Blanck, Lt. Gen. Ronald R., Surgeon General, U.S. Army, Department of Defense 149
  Prepared statement 150
  Questions submitted to 217

Bond, Hon. Christopher S., U.S. Senator from Missouri:
  Prepared statements 116, 129, 243
  Questions submitted by 79, 85, 209, 221, 229, 234, 317, 327, 427, 435, 510, 522
  Statements of 242, 447

Boudjouk, Philip, Ph.D., Professor of Chemistry and Vice President of Research, North Dakota State University, and Chairman of the Board, Coalition of EPSCoR States 616
  Prepared statement 619

Brannon, Brig. Gen. Barbara C., Director of Medical Readiness and Nursing Services, Office of the Surgeon General, Department of the Air Force, Department of Defense 194
  Prepared statement 195
  Questions submitted to 238

Bursell, Sven, M.D., Joslin Diabetes Center 593

Busch, Daryle, President, American Chemical Society 668
  Prepared statement 669

Byrd, Hon. Robert C., U.S. Senator from West Virginia, questions submitted by 429, 511

Caldera, Louis, Secretary, Office of the Secretary, Department of the Army, Department of Defense 383
  Prepared statement 388
  Questions submitted to 425

Carlton, Lt. Gen. Paul K., Jr., Air Force Surgeon General, Department of Defense 168
  Prepared statement 169
  Questions submitted to 232

Cochran, Hon. Thad, U.S. Senator from Mississippi:
  Questions submitted by 71, 75, 81, 117, 509, 524
  Statement of 447

Page

Cohen, Hon. William S., Secretary of Defense, Office of the Secretary of Defense, Department of Defense 443
Prepared statement 455
Questions submitted to 509
Craig, Hon. Larry E., U.S. Senator from Idaho:
Prepared statement 245
Question submitted by 323

Danzig, Richard, Secretary, Secretary of the Navy, Department of the Navy, Department of Defense 1
Prepared statement 4
Questions submitted to 71
de Leon, Hon. Rudy, Under Secretary of Defense for Personnel and Readiness, Medical Programs, Department of Defense 127
Prepared statement 132
Questions submitted to 208
Domenici, Hon. Pete V., U.S. Senator from New Mexico:
Prepared statement 633
Questions submitted by 71, 120, 212, 234, 315, 326, 430, 638
Statement of 92
Dorgan, Hon. Byron L., U.S. Senator from North Dakota:
Questions submitted by 322
Statements of 245, 385, 447
Duggan, Mike, Deputy Director, National Security-Foreign Relations Commission, The American Legion 660
Prepared statement 662
Durbin, Hon. Richard J., U.S. Senator from Illinois, questions submitted by 86, 124

Enlisted Association of the National Guard of the United States, prepared statement 721

Florida State University, prepared statement 732
Flynn, Joe, National Vice President, Fourth District, American Federation of Government Employees, AFL–CIO 641
Prepared statement 642
Foil, Martin B., Jr., Chairman, International Brain Injury Association 577
Prepared statement, ... 578

Gallo, Betty, Director, Advocacy and Fundraising, The Cancer Institute of New Jersey 622
Prepared statement 624
Goldberg, Joan, Executive Director, American Society for Bone and Mineral Research, on behalf of the National Coalition for Osteoporosis and Related Bone Diseases 547
Prepared statement 549
Gustke, Col. Deborah, Assistant Chief, Army Nurse Corps, U.S. Army, Department of Defense 199
Prepared statement 202
Questions submitted to 237

Hamre, Dr. John J., Deputy Secretary of Defense, Department of Defense 89
Opening statement 93
Harkin, Hon. Tom, U.S. Senator from Iowa:
Prepared statement 449
Questions submitted by 379, 519, 526
Statement of 448
Harmeyer, Rear Adm. Karen A., Deputy Director, Navy Nurse Corps, Reserve Component, and Director, Naval Reserve Medical Program 32, Bureau of Medicine and Surgery, Department of Defense 187
Prepared statement 188
Henderson, Rogene, Ph.D., Senior Scientist, Lovelace Respiratory Research Institute 634
Prepared statement 635
Hollings, Hon. Ernest F., U.S. Senator from South Carolina:
Prepared statement 446
Statement of 446
Hutchison, Hon. Kay Bailey, U.S. Senator from Texas, statement of 385

Page

Inouye, Hon. Daniel K., U.S. Senator from Hawaii:
Prepared statements 91, 149, 242, 334, 384, 445
Questions submitted by 213, 217, 224, 231, 235, 237, 238, 319, 328, 378, 441
Statements of 90, 128, 242, 334, 384, 445, 527

Johnson, Adm. Jay L., Chief of Naval Operations, Secretary of the Navy, Department of the Navy, Department of Defense 1
Questions submitted to 75
Johnson, David, PH.D., Executive Director, Federation of Behavioral, Psychological and Cognitive Sciences 536
Prepared statement, ... 537
Jollivette, Cyrus M., Vice President for Government Relations, University of Miami 645
Prepared statement 646
Jones, Gen. James L., Commandant, U.S. Marine Corps, Secretary of the Navy, Department of the Navy, Department of Defense 1
Prepared statement 40
Questions submitted to 81

Kadish, Lt. Gen. Ronald T., USAF, Director, Ballistic Missile Defense Organization, Department of Defense 333
Prepared statement 340
Questions submitted to 524
Knobbe, Edward T., Ph.D., Associate Dean, Graduate College, Oklahoma State University and Director, Center for Aircraft and Systems Supporting Infrastructure (CASI), on behalf of the Coalition of Oklahoma Institutions of Higher Education 650
Prepared statement 651

Lance, Alan G., Sr., National Commander, letter from 661
Lautenberg, Hon. Frank R., U.S. Senator from New Jersey:
Prepared statement 450
Question submitted by 214
Statement of 450
Leahy, Hon. Patrick J., U.S. Senator from Vermont:
Questions submitted by 73, 80, 86, 331
Statement of 128
Lennie, Peter, Ph.D., Dean for Science and Professor of Neural Science, New York University, on behalf of Cognition, Learning, Emotion, and Memory Studies at New York University 628
Prepared statement 629
Lord, Mike, Commander, JAGC, U.S. Navy (retired), Executive Director, Commissioned Officers Association, U.S. Public Health Service, Inc., Co-Chair, The Military Coalition Health Care Committee 584
Prepared statement 585
Lynn, Hon. William, Under Secretary of Defense (Comptroller), Department of Defense 127
Prepared statement 132
Questions submitted to 211

Martin, Rear Adm. Kathleen, questions submitted to 237
McConnell, Hon. Mitch, U.S. Senator from Kentucky, questions submitted by 123, 437
Miller, Michael H., National Prostate Cancer Coalition 674
Prepared statement 676
Morris, Robert V., Executive Director, Fort Des Moines Black Officers Memorial 692
Prepared statement 693

National Military Veterans Alliance, prepared statement 723
Naval Reserve Association and the Naval Enlisted Reserve Association, prepared statement 712
Nelson, Vice Adm. Richard A., Medical Corps, Surgeon General, U.S. Navy, Department of Defense 161
Prepared statement 162
Questions submitted to 227

Page

Olanoff, Mark H., Chief Master Sergeant, U.S. Air Force (retired), Legislative Director, The Retired Enlisted Association 566
Prepared statement 567

Parker, Robert, Deputy Director, University of Southern California Information Sciences Institute, on behalf of the Coalition for National Security Research 682
Prepared statement 683
Partridge, Col. Charles C., U.S. Army (retired), Legislative Counsel, National Association for Uniformed Services 605
Prepared statement 606
Peters, Hon. F. Whitten, Secretary of the Air Force, Office of the Secretary, Department of the Air Force, Department of Defense 241
Prepared statement 247
Questions submitted to 311
Pilling, Adm. Donald L., U.S. Navy, Vice Chief of Naval Operations and Chairman, Defense Medical Oversight Committee, Department of Defense .. 127
Prepared statement 138
Questions submitted to 214

Queenan, Charles, III, Senior Vice President, PHB Hagler Bailly, Inc., on behalf of the Juvenile Diabetes Foundation International 574
Prepared statement 576

Raezer, Joyce Wessel, Deputy Associate Director, Government Relations, National Military Family Association 554
Prepared statement 556
Reserve Officers Association of the United States, prepared statement 702
Rogers, John C., Parkinson's Action Network 671
Prepared statement 672
Rook, E. Clark, Retired Naval Officer, on behalf of the Ovarian Cancer National Alliance 685
Prepared statement 688
Ryan, Gen. Michael E., Chief of Staff, U.S. Air Force, Office of the Secretary, Department of the Air Force, Department of Defense 241
Prepared statement 247
Questions submitted to 324

Schwartz, William A., member, Board of Directors, Association for the Cure of Cancer of the Prostate 678
Prepared statement 680
Shelby, Hon. Richard C., U.S. Senator from Alabama:
Prepared statement 117
Questions submitted by 123, 231, 318, 439, 511
Statement of 446
Shelton, Gen. Henry H., Chairman, Joint Chiefs of Staff, Department of Defense 457
Prepared statement 463
Questions submitted to 522
Shinseki, Gen. Eric K., Chief of Staff, Office of the Secretary, Department of the Army, Department of Defense 383
Prepared statement 399
Questions submitted to 430
Smith, Don C., Master Sergeant, U.S. Air Force (retired), Legislative Assistant, Military and Government Relations, Air Force Sergeants Association ... 694
Prepared statement 695
Specter, Hon. Arlen, U.S. Senator from Pennsylvania, questions submitted by 83, 425, 430
Stevens, Hon. Ted, U.S. Senator from Alaska:
Opening statements 1, 89, 127, 241, 333, 383, 443, 527
Prepared statements 242, 383, 444
Questions submitted by 208, 211, 214, 217, 227, 232, 311, 324, 376, 430
Strickland, William, Ph.D., American Psychological Association 689
Prepared statement 690

Van Nest, Ronald, Certified Registered Nurse Anesthetist, Federal Government Affairs Office, American Association of Nurse Anesthetists (AANA) 612
Prepared statement 613

Page

Violi, Ronald L., Children's Hospital of Pittsburgh 593
Prepared statement 595
Visco, Fran, President, National Breast Cancer Coalition 551
Prepared statement 552
Volner, Ian, Lawyer, on behalf of the Ovarian Cancer National Alliance 685
Prepared statement 687

SUBJECT INDEX

DEPARTMENT OF DEFENSE

Ballistic Missile Defense Organization

Page

Additional committee questions 375
Airborne laser 370, 375
Arrow Program 378
Ballistic missile defense programs 351
BMD acquisition management steamlining 355
Cost 352
Countermeasures 359
Deployment readiness review (DRR) 336
Discrimination 354
Intercept flight tests 337
International programs 339
Layered defense 335
Lower tier programs 338
National missile defense 335, 379
  Cost estimate 358
  Military construction 364, 377
  System integration 363
  Technology demonstration 360
  Testing 352
  Testing criticism 361
  Tests 356
  Theater wide for 376
  2005 deadline 364
NATO concerns 367
Navy:
  Area program options 377
  Testing of Pacific missile test range 365
  Theater-wide 368
Patriot II and Patriot Gem 371
Patriot PAC–3 capabilities 376
Realistic testing 353
South Korea and Japan 367
Space-based infrared system 374
Technology investment 356
Technology program 339
Test scripting 354
THAAD 366
Upper tier programs 338

Department of the Air Force

Office of the Secretary

Additional committee questions 311
Air Force:
  Exercises and readiness training 314, 325
  Pilot retention 325
  Plans for directed energy 316
  Posture statement 2000 247
Airborne laser 304, 323

Page

Airborne laser—Continued
Program 305
Aircraft maintenance 289
Airlift 303
B–2 bomber 320, 330
B–52 force structure 322
Base closure and realignment (BRAC) 309
Brooks Air Force Base 310
C–17 ..... 293, 297, 317, 327
Military construction in connection with 298
Requirements and pricing 313
Combat proven 255
Decisive fighting force 265
Expeditionary Aerospace Force 246
F–15 327
Foreign military sales (FMS) 317
F–15E 294
Fiscal year 2000 appropriation 318
F–16 296
F–22 ..... 290, 321, 330
Bed down priorities of the 323
Block 3.0 software development 311
Strike impact and cost growth 312
Testing program 292
Global command support system (GCSS) 318
Health care 290
Infrastructure 286
Introduction 248
Joint Strike Fighter (JSF):
Acquisition strategy 313, 324
Open systems 315
JSTARS 320, 330
Kirtland's space vehicles directorate 316
Military construction and real property maintenance 323
Mission focused 256
Modernization 247, 276
Officer:
Shortages 319
Training 319
People 265
Pilot shortage 302, 303
Preparing 260
RDT&E and science and technology budgets, decreases in 326
Readiness 271, 288, 329
Budget 302
Real property maintenance 289
Recruiting:
And retention 246, 289
Concerns 319, 328
Responding 260
Retention 295
Shaping 257
Space based infrared system (SBIRS) 307
High cost increase 315
Spare parts 247
Supplemental requirements 322, 331
Suppression and destruction of enemy air defenses (SEAD) 328, 331
UAE F–16/Air Force F–16 derivatives 314, 324

Department of the Army

Office of the Secretary

Additional committee questions 425
Apache problems 430
Armament Retooling and Manufacturing Support Program 427, 437
Armored gun system 416
Army Heritage Center and National Army Museum 426

Page
Army posture 396
Army Transformation 404
Arsenal utilization 423
Aviation modernization—Blackhawk helicopter 436
Ballistic missile defense acquisition 440
Biometrics initiative 426
"Black Hawk Down" 421, 422
Bradley M2A2 ODS 437
Brigade locations, interim 439
Digitized corps fielding 413
Directed energy master plan 432
Fiscal year 2001 funding 385
Food stamps 410, 432
Force strength 409
Forces Command staffing impact on Training and Doctrine Command 438
Fort Leonard Wood and Army Transformation 435
Full-time support 436
Funding requirements 387
Green to Grad Program 438
High energy lasers 410
    Technologies 440
Information operations vulnerability 432
Infrastructure 417
Joint Stars (JSTARS) 441
Leader development 411
Legacy Force 406
Military housing 418
Mounted urban combat training facility 437
Objective Force 405
OPTEMPO/retention 407
Pay raise 432
Plan Colombia 427
Power projection 424
Recruiting and retention goals, fiscal year 2000 438
Reserve component deployment 412
    And retention 412
School of the Americas 414, 428
Science and technology 413
Solid state laser 431
Supplemental, fiscal year 2000 419
Tactical high energy laser 431
Technology investments 439
Test and evaluation 433
Theater high altitude area defense system fielding 440
Transformation and Army aviation 439
Transformation and biometrics 430
U.S. Army Corps of Engineers, management reforms regarding the 429, 429
Unfunded requirements 419
White Sands/high energy laser weapons 430
Wolverine and Grizzly Program cancellation 425

DEPARTMENT OF THE NAVY

SECRETARY OF THE NAVY

Additional committee questions 71
AV–8B 85
Blount Island, Florida:
    Acquisition brief to the Jacksonville, Florida Chamber of Commerce, March 1, 2000 29
    National strategic asset 36
    Strategic national defense asset 28
Chemical and biological incident response force 53
Department of the Navy 2000 Posture Statement 10
F/A–18E/F 79
Futenma Air Base, Okinawa 63
Joint direct attack munition 80
Joint Strike Fighter 54

Page

Legacy systems and infrastructure 10
LHD–8 71
Marine Corps modernization 27
Navy theater wide 75
Opening remarks—readiness overview 7
Operational readiness 51
Our culture: the qualities of a naval expeditionary force 42
Our direction: new capabilities for a new century 45
Our focus: the operating forces 43
Our future: past is prologue 48
Our legacy: Vanguard of the new American century 41
Our role: A ready and relevant force 40
Readiness/air combat training 72
Recruiting 65
  And retention 9
Roles and missions 86
Sea-based NMD 76
SLAM-ER 80
T–45 80
USMC ECP–583 85
V–22 54

DEPUTY SECRETARY OF DEFENSE

Additional committee questions 117
Airborne laser 117
Army:
  Trailers 115
  Transformation 108
    Air transportability and 112
    Funding 111
Army Vision 123
C–17 113
  Production and costs 113
Defense reform 105
Directed energy 121
Directed energy programs 107
DOD funding increased 96
DOD news briefing, Monday, September 8, 1997, acceptance speech 94
Fiscal year 2000 supplementals 97
Force initiatives, manning the 123
Housing increases 100
Iowa Army Ammunition Plant 114
Kirtland AFB, release of funds 106
Kosovo, police operations in 111
LHD–8 120
Military construction 122
  Funding 107
Missile defense 104
National missile defense (NMD) 119, 123
O&M funding trends 99
Overseas U.S. commitments 110
Pay raises 101
Putting people first 100
Quadrennial Defense Review (QDR) priorities 98
RD–180 rocket engine 119
Readiness, current 98
Recapitalization progress 103
Science and technology 120
Science and technology funding 106
TACCSF, release of $14 million for 122
Technology 124
Theater high altitude area defense (THAAD) 118
Unutilized plant capacity (UPC) 124

MEDICAL PROGRAMS

Additional committee questions 208

Page

Anthrax 142
Medical errors 143
Medicare subvention 213
Military health system 137
Military medicine 130
Patient medical information 214
Pharmaceuticals 140
Pharmacy costs 131
Telemedicine 140
TRICARE 145
TRICARE Senior 141

NURSE CORPS

Additional committee questions 208
Army Nurse Corps 201
Challenges 193
Command opportunities 194, 195
Leadership roles and responsibilities 189
Nurse anesthetists 205
Nurse Corps 187, 238
    Skill sustainment 237
Nurse shortages 207
Nurses:
    In executive or command positions 237
    Leadership training programs for 237
Nursing research 191
Peacetime accomplishments 197
Population health and health promotion 191
Readiness 195
    Accomplishments 196
Recruiting 194
Reserve support 192
TRICARE initiatives, Navy nurses role in support of 189
Triservice nursing research program 206

OFFICE OF THE SECRETARY OF DEFENSE

Additional committee questions 509
Affordability 513
Agriculture, threats against 515
Airborne laser (ABL) 504, 509
Arms control, missile defense and deterrence 490
Base realignment and closure (BRAC) savings and LHD–8 503
Bosnia/Kosovo 486
Building tomorrow's joint force 474
Capability required 513
China-Taiwan 502
Colombia 518
Defense tactical aircraft and carrier procurement 511
European defense capabilities 482
Force structure 513
    Increases 484
Fort Leonard Wood, joint training at 524
Full-time support 510
Healthcare 522
Kosovo 517
    Senator Warner's amendment on 488
    Supplemental appropriations, fiscal year 2000 ..... 455, 516
Military health benefits, expanding 501
Military retirees health care 496
Missile defense and arms control 526
Missile defense system, testing a 499
National Guard and Reserves 494
National missile defense:
    CBO estimate on 525
    Cost of 499
    Deployment, preparing for 491

Page

National missile defense—Continued
Options for a second site 525
Radar construction 524
National security strategy, supporting the 465
Other threats 514
Pacific Asian theater, importance of 501
Peacekeepers forces, dedicated 505
Plan Colombia 510, 523
President Clinton's fiscal year 2001 budget 456
President's budget, priorities in fiscal year 2001 453
Procurement:
Funding 508
Increasing spending 504
Quality force, sustaining a 463
Russian Biological Weapons Program 516
Russian leaders, communicating with 493
Secrecy 519
Secretary Cohen's opening remarks 452
Ship construction 503
START II and missile defense 484
Strategic warhead levels 510
Submarine force structure 512
Supplemental appropriations, fiscal year 2000 453
Theater war capabilities 486
Trailers 520
TRICARE 511
U.S. Balkan deployments, duration of 486
U.S. military excellence, preserving 508
U.S. national missile defense 489
U.S. nuclear deterrent, maintaining 497
Unmanned aerial vehicles (UAV) 514
Welfare, troops on 521

SURGEONS GENERAL

Additional committee questions 208
Alcohol problems 181
Breast and prostate cancer research programs 219
Budget, fiscal year 2001 218
Budget shortfall 183
Fiscal year 2000 217
Care, quality of 221
Clovis and Cannon—medical facility 234
Department of Defense/Department of Veterans Affairs partnerships 222
Health care 161
Managed care support contractors, care sent to 224
Medical:
Errors and patient safety 224
Facilities 235
Medical Service 181
Programs 232
Medicare subvention 233
Cost of 218
MHS, excess capacity in the 224
Military beneficiaries, quality care for 234
Nursing standards 184
Partnerships 234
Pharmacy:
Formularies 223
Restrictions and inconsistencies 235
Research programs, overhead of 220
Supplemental funding for fiscal year 2000 218
Tobacco problem 180
TRICARE improvements 181
Unfunded requirements, fiscal year 2000 and fiscal year 2001 218

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